

THE EFFECT OF ACADEMIC PERFORMANCE AND COUNSELLING
ON CHOICES OF SELECTED STUDENTS IN
BENDEL STATE

By

ADONOWE JONATHAN ADUGBO

A Thesis presented for the Degree of Doctor
of philosophy (GUIDANCE AND COUNSELLING)
in the Faculty of Education
University of Lagos.

October, 1980.

ABSTRACT

Since some secondary schools are known to offer guidance services to their students in Bendel State, it is logical to expect that certain benefits are likely to be derived by the beneficiaries. Already, there is a growing awareness in Nigeria about the usefulness of these services but there is a dearth of concrete data for assessing the role fulfilled by counselling in the growth and development of secondary school students.

It is also known that some Nigerians do not believe in the need for specialized guidance services. The argument put forward by such people is that if effective teaching is occurring and the students are performing well academically, all the necessary classroom activities for the school child in terms of guidance are automatically provided.

The Federal Government has recently placed a high value on 'choice' in all the developmental phases of the school child and guidance services are considered useful in the process of choice-making. This study was therefore designed to determine the relative effects of counselling and academic performance on the choices of West African School Certificate (WASC) subjects, occupations and post secondary institutions by secondary school students. Ten hypotheses were formulated and tested.

The sample for the study was composed of students selected from ten secondary schools in urban areas of Bendel State. While a total of 856 out of the 900 originally selected students participated during the first year of the investigation (1978), the number fell to 724 during the second year (1979) as some subjects dropped out of school and others were absent on the day of data collection. Two occupational interest inventories were used in addition to three questionnaires based on choices of West African School Certificate subjects, occupations and post-secondary institutions. The inventories were the Grand Republic of Zambia (GRZ) Occupational Interest Inventory and the Vocational Interest Inventory (VII).

One major finding is that increased guidance information help secondary school students to make decisions relating to choice of WASC subjects; plan further education; in selecting occupations and in choosing occupations which are consonant with the values they hold. However, counselling has no significant effect on students' knowledge of post secondary institutions related to their WASC subjects; influential factors for choice of post secondary institutions; appropriate choices of post-secondary institutions and occupations.

A second major finding is that academic performance does not significantly distinguish appropriate choices of

WASC subjects, post secondary institutions and realism of occupational choices across achievement categories of secondary school students.

Based on the findings of this investigation, it was concluded that guidance services are useful in the Nigerian educational system. There is therefore the great need for qualified guidance counsellors.

ACKNOWLEDGEMENT

I would like to express my sincere appreciation to Professor M.O.A. Durojaiye, my advisor for his warmth and constructive assistance during all the developmental stages of this study.

My thanks are also due to the 1978 Lecturers at the Department of Counsellor Education, University of New York, U.S.A. They made it possible for me to use the University Library during the review of Literature.

I convey my kind feelings to the University of Benin that granted the scholarship for my three months sojourn at the University of New York.

The Inter-University Council for Higher Education Overseas London, the Lecturers and workers at the Institute of Education, University of Keele, Staffordshire also receive my warm thanks. They made it possible for me to analyze the data at the University of Keele. The same thanks go to the Computer Centre, University of Keele for assistance with some of the Statistical analyses.

I am grateful to the following typists at the Faculty of Education, University of Benin, for their helpful role: Messrs Godwin Umoru, Andrew Apili, Atewe Eribo and Omokaro.

Finally, my thanks go to the Staff and students of the schools which participated in the study.

TABLE OF CONTENTS

	Page
Abstract	I
Acknowledgement	IV
Table of Contents	V
List of Tables	VIII

CHAPTER

I	- STATEMENT OF THE PROBLEM ..	1
	The concern of the study ..	1
	The requirements of the Nigerian educational system ..	2
	Sub-problems investigated ..	3
	Scope and delimitation of the study	5
	Significance of the study ..	7
	Definitions of terms used ..	9
	Limitations	11
	Criteria	13
2	- REVIEW OF PERTINENT LITERATURE ..	15
	Counselling	15
	Academic Performance	28
	Choice of WASC subjects	39
	Choice of post-secondary institutions	52
	Choice of occupations	62
	Factors for choice of occupations	65
	Assumptions	69
	Hypotheses	69

CHAPTER		PAGE
3	- DESIGN AND PROCEDURE	71
	Population of Secondary Schools in Bendel State	71
	Subjects in the sample	71
	Instruments used	74
	Procedure	79
	Procedures for analyzing data ..	81
4	- RESULTS AND INTERPRETATION OF DATA	83
	Actual Participants	83
	Factors for choice of WASC subjects	84
	Appropriateness of WASC subject choice	91
	Factors for choice of post-secondary institutions	97
	Appropriate choices of post-secondary institutions	101
	Congruence between WASC subjects and post-secondary institutions ..	106
	Occupational choices	109
	Factors for occupational choices ..	114
	Appropriateness of occupational choices	118
	Academic Performance	124
	Appropriateness of WASC Subjects choice	125
	Appropriate choices of post-Secondary institutions	127
	Realistic Occupational choices ..	130

CHAPTER		<u>PAGE</u>
5	- DISCUSSION OF RESULTS AND SUMMARY OF CONCLUSION	133
	Effect of Counselling	133
	Effect of academic performance	137
	Summary of conclusion ..	138
	Unhypothesized findings ..	140
	Bibliography	142
	Appendix I	150
	Appendix II	153
	Appendix III	156
	Appendix IV	160
	Appendix V	166

LIST OF TABLES

<u>TABLE</u>		<u>PAGE</u>
1	School sampling Design	71
2	Student distribution in Schools ..	72
3	Student distribution in academic categories	73
4	1978 Participants by class and group ..	83
5	1979 Participants by class and group ..	84
6	1978 Counsellled and noncounsellled students choosing WASC subjects on the basis of each factor	85
7	1979 Counsellled and Noncounsellled students choosing WASC subjects on the basis of each factor	88
8	1978 students making appropriate choices of WASC subjects in both counsellled and noncounsellled groups	92
9	1979 students making appropriate choices of WASC subjects in both Counsellled and Noncounsellled groups	94
10	1978 Counsellled and noncounsellled students choosing institutions on the basis of each factor	98
11	1979 Counsellled and Noncounsellled students choosing institutions on the basis of each factor	100
12	1978 students who planned to continue their education	102
13	1979 students who planned further education	103
14	1978 students whose WASC subjects were congruent with their post secondary institutions	107
15	1979 students whose WASC subjects were congruent with their post secondary institutions	108

<u>TABLE</u>	<u>PAGE</u>
16	1978 students choosing each occupation 110
17	1979 students choosing each occupation 112
18	1978 students choosing occupations on the basis of any value 116
19	1979 students choosing occupations on the basis of any value 117
20	1978 students making appropriate occupational choices 122
21	1979 Students making appropriate occupational choices 123
22	1978 Students per academic category making appropriate choices of subjects .. 125
23	1979 students per academic category making appropriate choices of WASC subjects 126
24	1978 students making appropriate choices of post-secondary institutions in each academic performance category.. .. 128
25	1979 students making appropriate choices of post-secondary institutions in each academic performance category .. 129
26	1978 Students per academic category making realistic occupational choices .. 130
27	1979 students per academic performance .. category making realistic occupational choices 131

To 'Zumo, my wife who gave me ardent
zeal and encouragement.

CHAPTER I

STATEMENT OF THE PROBLEM

1:1 The Concern of the Study

This study is concerned with the effect of counselling and academic performance on the choices of West African School Certificate subjects (WASC), occupations and post secondary institutions. It is in response to the growing awareness about the importance of "choice" in the development of every individual. Guidance services which are assumed to improve the process of decision-making have recently been given emphasis in the Nigerian educational system. In support of this cognizance, the Federal Government¹ has pointed out that education is incomplete if the beneficiary does not have the particular feeling of self-fulfilment which goes with the right choice of career. That statement indentifies the secondary school stages as notable choice-points and attributes frustrations observed among many of the nation's young men and women to absence of career counselling. Nigeria is not precluded from modern societies which are characterized by technological change. This change is replete with difficulties

1. Federal Republic of Nigeria, Federal Ministry of Economic Development. Third National Development Plan. 1975 - 1980, Vol. 1, Lagos. 1975, P. 250.

for the young and inexperienced especially in formulating future plans. Since the society is continuously becoming more complex in social, economic and educational aspects, each individual needs to specialize in a particular field where he is most likely to do his best. If a young man must have the satisfaction that follows successful effort, he has to develop the ability to choose between alternatives.

1:2 Requirements of the Nigerian Educational System

The educational system in Nigeria requires every secondary school student to choose at least six subjects for the WASC examinations. Even though there is confusion about the relationship between educational interests and occupational goals, yet research evidence confirms that the former tend to be significantly related to the latter. Thorndike's study² singularly typifies the contradiction regarding the relationship between educational interests and occupational choices. Further supportive evidence is provided in the studies by Dole³, Miller and his associates⁴ which show no relationship on the one hand

2. Thorndike, R.L. The Prediction of Vocational Success. Vocational Guidance Quarterly, Vol.II, 1963, P.180.

3. Dole, A. Educational Choice is not Vocational Choice. Vocational Guidance Quarterly, Vol.12, 1963, Pp.30-34.

4. Miller, C. Dean et.al. Relationships between Educational and Vocational Interests. Vocational Guidance Quarterly Vol.16, 1966. Pp.113-118.

and the studies by Okeke⁵ and Super's assertion⁶ which confirm the relationship.

Whenever there is a constellation of services called Guidance Programme, the society expects that students should be assisted towards maximum potential development. On the other hand, educational and occupational choices of students in schools without organized guidance services could depend upon other factors. Thus this study is directed at the determination of the choice-making process of counselled and noncounselled secondary school students. A second concern is the impact of academic performance on the sequence of events which lead to choices of West African School Certificate (WASC) subjects, occupations and post-secondary institutions by secondary school students in Classes II to V.

Basically therefore, the main problem of this research investigation is to find solutions to those two unresolved issues. However, an attempt is also made to replicate some of the related older studies especially in the area of occupational choice.

1:3 Sub-Problems Investigated

The main problem has been broken down into the following sub-problems -

5. Okeke, A. The Impact of School Subjects on the Choice of Occupations and Professions. West African Journal of Education, Vol.17, 1973, Pp.5-16.

6. The Nigerian Observer. November 28, 1978, P.3.

- (1) Is there a difference between counselled and noncounselled students as regards the influential factors for choice of WASC subjects?
- (2) Do counselled secondary school students make more appropriate choices of WASC subjects than do noncounselled students?
- (3) Is there any difference between the influential factors for choice of post-secondary institutions by counselled and noncounselled students?
- (4) Is it counselled or noncounselled secondary school students that are more likely to make appropriate choices of post-secondary institutions?
- (5) Do the occupations chosen by students in the counselled group differ from those of students in the noncounselled group?
- (6) Is there a difference in the factors which influence the occupational choices of counselled and noncounselled students?
- (7) Do students who are counselled make more appropriate occupational choices than students who are not counselled?
- (8) Do students in a higher category of academic performance make more appropriate choices of WASC subjects than those who belong to a lower category?

- (9) Is there any likelihood that appropriate choices of post-secondary institutions will increase with higher levels of academic performance?
- (10) Is there a difference between the counselled and noncounselled groups as regards realistic occupational choices with higher levels of academic performance?

1:4 Scope and Delimitation of the Study

This study covers the choices of West African School Certificate (WASC) subjects, post-secondary institutions and occupations by selected students in some secondary schools in Bendel State. A total of 166 secondary schools existed in the State at the time of this study. This number of secondary schools was indicated in a list made available by the Ministry of Education, Benin City. The fifteen newly commissioned secondary schools were excluded because they lacked students who had taken a consistent course in subjects or received counselling benefits.

Guidance services were considered adequate in only twenty secondary schools by the Ministry of Education in the State. The concept of adequacy relates to the availability of certain essential characteristics of a guidance programme. Such characteristics include the existence of

at least four guidance services⁷ which are meant to meet students' needs. The second element is the availability of careers-masters who attain the professional stature as specified by Bendel State. Third element stipulates that adequate support should be given to the programme in each school. It was the Ministry of Education that initiated the guidance programme in the secondary schools and caters for its continued existence. The Ministry also expects school principals to be deeply involved.

Eleven (55%) out of the twenty secondary schools with adequate guidance services were located in urban areas. Based on this distributive rate of schools with guidance services in urban areas, it was decided to confine the study to schools in this geographical location. As one of the two independent variables for the investigation is "counselling", the counselled group was selected from the eleven secondary schools. There were other twenty-six secondary schools in urban areas from which the noncounselled group was selected so as to provide comparison with the counselled group.

7. Adugbo, A.J. An evaluation of the guidance services in selected secondary schools in the Delta Province of Bendel State. Unpublished Masters Thesis, 1975, P.37.

While each student in the counselled group should have received the benefit of counselling for almost two years, there is no consistence concerning the particular class in which subjects were selected for WASC examinations. Although the end of Class III is considered as the most appropriate time, some schools may want to do it much earlier and some others much later at the end of Form IV.

This study covered from Form II through IV during the first year and Form III to V during the second year. The period covered by the study could expand knowledge about the choice-making process of secondary school students. An important question which would be answered is whether secondary school students develop an aim regarding the choice of WASC subjects, occupations and post-secondary institutions early in their educational development.

1:5 Significance of the Study

There is no more doubt about the existence of guidance services in some secondary schools in Bendel State. A point on which to focus attention concerns the achievements by students as a result of counselling services particularly in the choice-making process.

Although an evaluation of guidance services in the Delta Province⁸ proved the need for such services yet there

8. *ibid.*, Pp.3-11

is necessity to ascertain that this is true in all the divisions of the State. As it were, this study provides further evaluation of the guidance services in Bendel State secondary schools. Since an inadequate projection of guidance role in the educational system of this country has led to slow development of guidance services, this study could give knowledge of some facts upon which the future of these services depends.

Guidance programmes throughout the country are faced with the teething problem of acute shortage of qualified personnel. In addition to this, a good percentage of the support personnel are inactive due to a variety of reasons⁹. It is hoped that the findings of this investigation would reveal the aspects of guidance in which the personnel have been ineffective. An effort to improve the programme beyond its present status would be more meaningful.

Finally, Pierson¹⁰ once declared that it is difficult for classroom teachers to accept the need for specialists (guidance personnel) in human relations in the school.

9. Adugbo, A.J. The Development of School Guidance in Bendel State . EDUCATION, Vol.14 No.2, April, 1980, P.10.

10. Pierson in Shertzer and Stone. Fundamentals of Guidance. Second Edition. Houghton Mifflin. Boston, 1971, P.160.

This negative opinion about guidance personnel could be eliminated through the findings of a study such as the present investigation.

1:6 Definitions of Terms Used

In order to ensure clearness of the report, certain terms used in this study are explained below:

Class: It denotes the year of a student at any secondary school. The term "class" is used synonymously with "form" and thus a student in his first year in the secondary school is referred to as a "class one student" or a "form one student".

Guidance Services: These are the constellation of school activities offered by counsellors and directed towards assisting students to know, accept and develop their potentialities to capacity. This idea is consistent with the meanings of guidance services as conceived by Roeber and others¹¹ on the one hand, and Shertzer and Stone¹² on the other hand.

Adequate Guidance Programme: This refers to the availability of commonly accepted characteristics of guidance

11. Roeber.et.al. Organization and Administration of Guidance Services. 2nd Edition. McGraw-Hill, N.Y.1955,P.4

12. Shertzer and Stone. Fundamentals of Guidance. 2nd Edition. Houghton Mifflin. Boston. 1971, P.41.

programmes which enable students to be assisted both personally and educationally. It also implies that students are to profit from guidance services. The Bendel State Ministry of Education, Benin City uses the adjective "adequate" to designate guidance programmes with such characteristics¹³.

Counselling: A relationship between a client with a psychological problem and a counsellor who is trained to help clients with such problems. It also implies that students in schools with counsellors have advantage over their counterparts who are not given the benefit.

WASC Subjects: An abbreviation which refers to West African School Certificate. This certificate is obtained after passing the final examination of the Secondary School. Only students in their fifth form are allowed to sit for the final examination, and the subjects selected by any individual student for the examination are known as WASC subjects.

Occupation: Work which occupies one's time permanently or as a hobby and referring to a group of jobs. It is further viewed as work chosen after a thorough consideration of one's capabilities and weaknesses and involves training in a post-secondary institution.

13. Adugbo, A. J. op.cit. P:37.

GPA: A student grade point average obtained from two successive terminal results in secondary school subjects.

Academic Performance Categories: Groups of students in a class according to academic performance. The three groups in this study are 'low', 'average', and 'high-achievers'. The selection of a student into any category depends upon his GPA.

Post-Secondary Institutions: It refers to educational institutions beyond the secondary school and includes higher school certificate course, preliminary courses, basic studies, or entry into professional training studies or institutions such as Polytechnic, School of Agriculture, School of Survey, School of Nursing, School of Medicine to do para-medical courses, Advanced Teacher Training Colleges or Colleges of Education.

1:7 Limitations

Students in Nigerian secondary grammar schools have limited range of subjects from which they can make choices for the WASC examination. There is the structural problem of staffing the schools with qualified teachers and this as a matter of course, reduces the number of subjects offered in any one secondary school. In view of the little or no choice open to an individual student and since the process of choice-making of subjects terminates for him soon after he is given admission, appropriate

occupational choices as considered in this study would be difficult to determine for some students.

The concept of a longitudinal study as applied to this investigation is not borne out. A period of one year between the two sessions of data collection was too short for changes to occur in students' choices of WASC subjects, post-secondary institutions and occupations. In addition, many of the students would still be in the tentative choice period described by Ginzberg and his associates¹⁷. According to them, adolescents do not commit themselves firmly and irrevocably to a decision.

Guidance services have been shown to be helpful towards students' adjustment, both socially and emotionally¹⁸. This implies that counselled students have less personal and emotional problems which interfere with their academic performance. Students who participated in this investigation were categorized into low, average or high-achievers by use of student grade point average (GPA) which is considered to be a suitable estimate of intelligence and academic performance. However, other factors such as quality of teaching and selection criteria for incoming students which certainly are not attained to the same

17. Ginzberg, Eli et.al. Occupational Choice. An Approach to a General Theory. Columbia University Press, New York, 1951, P.66.

18. Adugbo, A.J. op.cit., P.97.

degree in all schools, may introduce error variance into results. A high-achieving student in one school might be an average or even an under-achieving student in another school. Since these factors were distributed more or less randomly, they were ignored as variables.

Another point for consideration concerns the composition of both counselled and noncounselled students. The amount of counselling received by students was unknown to the investigator and certainly it varied from school to school. Some students in the noncounselled group probably received help from parents, teachers, relatives and friends in making their choices of WASC subjects, occupations and post-secondary institutions. These situations could twist results.

1:8 Criteria for Assessing the Role of Counselling and Academic Performance

Some of the criteria suggested by Cramer¹⁹ have been employed for assessing the outcome of counselling and academic performance on choices of WASC subjects, occupations and post-secondary institutions. Congruence between WASC subjects and post-secondary course and an indication to study three subjects of highest interest even if teachers were disliked was the criterion for testing "appropriate choice of WASC subjects".

19. Cramer, Stanley H. et.al. Research and the Counsellor. Houghton Mifflin, Boston: 1970, Pp.90-91.

Two criteria were used for the assessment of "appropriate choice of a post-secondary institution". The first was a decision to continue education beyond the secondary school and the other was congruence between WASC subjects and post-secondary institution.

The criterion that was employed for testing "appropriate occupational choice" was a relationship between WASC subjects, occupational choice and the results of the Grand Republic of Zambia Occupational and Vocational Interest Inventories. Such a relationship is manifested by fulfilment of the rigid subject requirements for any particular occupational area. The results of the occupational interest inventory must also correspond with the occupation chosen by each participant in the investigation.

CHAPTER 2

REVIEW OF PERTINENT LITERATURE

2:1 Introduction

This chapter is a report of views of other researchers on closely related problems and a discussion of studies which have a direct bearing on the present investigation. Five variables are selected for study. Counselling and academic performance are the independent variables while choices of WASC subjects, choices of occupations and choices of post-secondary institutions are the dependent variables. The five variables form the sub-sections of the literature review.

2:2 Counselling

A search of the literature revealed that counselling is a term used in many professions and settings. Even within educational settings, counselling does not seem to have the same meaning to specialists. There are therefore numerous definitions some of which have been cited under the definition of terms used in this study. Counselling is generally recognized as a necessary service in educational settings. For instance, while writing about some of the needs for counselling and guidance in Nigeria, Durojaiye²⁰ mentioned among other needs that each student

20. Durojaiye, M.O.A. Psychological Guidance of the School Child. (ed.) Evans Brothers Ltd., Ibadan: 1972. P. 79

will need to be helped to strengthen his own abilities, to make wise choices and to face problems encountered in society. Other writers have also pointed out why guidance services should be implemented in our schools. Beck and Mansoor²¹ specified the various needs of any individual student. According to them, a student needs

- (a) to be able to study effectively;
- (b) to make a wise choice of elective subjects;
- (c) to devise a plan for some form of further education;
- (d) to learn about vocational opportunities and requirements;
- (e) to work cooperatively with others.

To confirm the view that everybody has problems and therefore needs assistance, Patterson²² quotes a Spanish writer called Unamuno. This writer said that suffering is the life blood that runs through us all and binds us together. A problem which every student must have is that of "choice" among alternatives. Students are expected to make choice of subjects that could be related to their future occupations. In itself, adequate preparation for

21. Beck and Mansoor in Graber. Models for Guidance Services needed in Nigeria . The West African Journal of Educational and Vocational Measurement. Vol.2, Dec. 1974. Pp.43-44.

22. Patterson, C.H. The Counsellor in the School: Selected Readings. McGraw-Hill Book Co., N.Y. 1967; P.22.

an occupation in a post-secondary institution also needs the choice-making process. This explains why the student inevitably requires some sort of assistance.

Counselling takes many forms such as educational, vocational, social, recreational, emotional and/or moral but the three basic services considered essential in educational institutions include the first two and personal. Under the counselling service in a secondary school, the Counsellor can identify pupils for different types of education. Kaduna State has employed this method extensively since 1973²³. This programme gives options with bias in Arts, Science, Technical, Commercial, Home Economics for the WASC, Technical and Vocational Training for Intermediate City and Guilds. The teacher training for the Grade II Certificate is another option.

All pupils entering secondary schools are given the options during the first two years. This general education is designed to broaden each pupil's experience beyond the academic areas in Arts, Home Economics and technical

23. Bennett, John G. The Development of Secondary School Guidance Services in North Central State (now Kaduna). A paper presented at the Annual Conference of the Nigerian Psychological Society at UNN, 17th and 18th October, 1974, P.3.

subjects. It is at the beginning of the third year that pupils are placed in the most appropriate course and this course is pursued by the pupil till the fifth year.

Placement of a pupil in a course where he is most likely to do best may necessitate his transfer to another school. Essentially, the comprehensive scheme with all its good intentions has not made it possible for all institutions to be equipped to offer the full range of options.

In actual fact, the aims of academic counselling in Nigeria are in agreement with the definition of educational counselling by Moser and Moser²⁴ who hold it to be assistance afforded the student in promoting maximum scholarship and help in projecting his plans towards future training for vocation and life in addition to course planning. For instance the Bendel State Ministry of Education stipulated that educational counselling in the secondary schools be aimed at improving students' grades in examinations. The approach is by organizing regular preparation activities to develop good study skills in the students. Under this service also, the high-achievers are encouraged to seek further education in institutions which best satisfy their aspirations. Furthermore, every student is helped in

24. Moser and Moser. Counselling and Guidance: An Exploration. Prentice-Hall, N.Y. 1963, P.228.

choosing subjects which will be appropriate for occupational decisions.

Another aspect of counselling is vocational which is presently and popularly known as career guidance in Nigeria. The preference for the term 'career' in Nigeria tallies with the view of working group 8 on 'New goals and strategies for vocational (career) guidance' at the 9th International Round Table for the Advancement of Counselling (IRTAC) held in Greece from 8th to 12th April, 1980²⁵. The working group believed that 'career guidance' is more consistent with what is happening in education, work and family around the world. A proposal was therefore made by the group to IRTAC that a joint committee be formed with representatives from IRTAC and the International Association of Educational-Vocational Guidance (IAEVG) to develop an international definition of career. Katz²⁶ had much earlier conceded that the term 'career guidance' has the virtue of comprehensiveness in relating to a variety of work and non-work situations.

25. Working Group 8. New Goals and Strategies for Vocational (Career) Guidance, IRTAC. 8th - 12th April, 1980, P.1.

26. Katz, M.R. The name and nature of Vocational Guidance, Career Guidance for a new age (ed.) by Borow, H. Houghton Mifflin Co., Boston: 1973, P.110.

While stating the goals of career guidance at an annual workshop, the 1974 Honourable Commissioner for Education in Midwest State (now Bendel), Mr. Tayo Akpata²⁷ pointed out that it is an important aspect of a guidance programme. The Commissioner views career guidance in the State as an effective means of guiding against misdirection and misapplication of human talent. It is hoped that availability of occupational information to students will help them to choose occupations which will be in keeping with their abilities and interests.

Even if Moser and Moser²⁸ contend that students' choices of occupations are tentative in schools, yet a search of the literature reveals that the final and correct choice is made possible by career guidance. It is also generally assumed that career guidance helps students to develop the ability to think independently.

The third basic counselling service known as personal is also variously referred to as individual or personal-social counselling. Hughes²⁹ defines it as a process by

27. Akpata, Tayo. The Role of the Ministry of Education in Promoting Careers Guidance in Schools . CAREERS Vol.1, No.2, 1972, P.55.

28. Moser and Moser. op.cit., p.228.

29. Hughes, Patrick M. Guidance and Counselling in Schools: A Response to Change. Pergamon Press, Oxford: 1973, P.207.

which discussions are directed at problems which are personal to the student. A central idea is assistance to students in self-adjustment and in accepting their weaknesses so as to capitalize on their strengths.

Olayinka³⁰ has specified the problems of secondary and university students in Nigeria. According to him, these students who have left the security of their home environments to find themselves among a large number of people often present a great variety of problems other than academic problems. The list of problems includes those of adjustment both socially and inter-personally with room-mates, fellow students and teachers/lecturers. Students may lose confidence in themselves and their own abilities, have little or no sense of personal values, become tense, introverted and emotional. Other problems are those of worry especially about conditions at home, sex and loss of appetite.

We might conclude that the level of adjustment attained by each student is shown in his reactions towards the expectations of the school. Bennett³¹ supports this idea when she says that an important step

30. Olayinka, M.S. The Place of Counselling in Nigerian Educational Policy Nigerian Journal of Psychology Vol.1 No.1, 1976, Pp.89-93.

31. Bennett, Margaret E. Guidance and Counselling in Groups. McGraw-Hill, New York: 1963, P.342.

towards positive mental health is the recognition of how one reacts to life experiences. It is believed that counselled students have the advantage of faster adjustment to school environmental demands.

Counselling has been an object of formal study over the years and most of the investigations used certain criteria as the dependent variables. A comprehensive list of such variables was compiled by Downing³² and it includes such variables as improvement in grades, higher frequency of graduation, more involvement in social activities, better progress in post-high school endeavours, better involuntary motor responses to a word association test, scores on adjustment inventories, changes in self-perception and more accurate awareness of specific interests.

Although there is ample research evidence on counselling effectiveness yet there is need for a careful judgement. This opinion is confirmed by Truax and Carkhuff³³ after reviewing relevant literature. Their motivation for the review was the claim by Eysenck that

32. Downing, L.N. Guidance and Counselling Services: An Introduction. McGraw-Hill Book Company, N.Y. 1966, Pp.137-138.

33. Truax and Carkhuff. Toward Effective Counselling and Psychotherapy: Training and Practice. Aldine Atherton. 1967, P.21.

on the average, counselling and psychotherapy were not more effective than no counselling or psychotherapy.

They summarized the evidence reviewed as follows:

- (a) certain relatively unspecified kinds are indeed effective;
- (b) under certain unspecified conditions, therapy and control patients show equivalent average outcomes but those treated by psychotherapy show greater variability in outcome than those in control conditions; and
- (c) what is called "psychotherapy" or "counselling" is a heterogenous collection of ingredients or psychological conditions that produce varying degrees of both positive and deteriorative personality change in patients.

Eysenck is a respectable academic but he sounds rather sensational as the effects of counselling in European settings may not necessarily be same with those in Nigeria. The alternatives from which choices could be made are obviously more in European settings than Nigeria where the stage of development has made choice options comparatively fewer in number.

However a few researches have been reviewed to show both the positive and negative outcomes of counselling in changing behaviour. Campell³⁴ thinks that the changes are consistent since counselled students generally make better grades or are more comfortable with life or have

34. Campell in Downing. op.cit., Pp.137-138.

a more accurate perception of themselves and score higher on whatever relevant criterion the counselling researcher chooses.

Some of the research investigations reported below provide a proof for Campell's opinion. Jackson³⁵ used elementary school pupils to study the effects of a three-year counselling treatment on the academic development of 190 children who were under-achievers. One major criterion employed was improvement in grades and findings were in favour of the experimental group on 10 of the 12 criteria used. While the causes of under-achievement may not have been consistent on the two groups throughout the three years, a similar study also showed significant differences in favour of the experimental group for academic performance.

McGowan³⁶ examined the results of counselling of eighteen low-ability and low-achieving eight, ninth and tenth grade males at the secondary school level. These subjects were matched on the basis of IQ and grade level. Counselling consisted of ten-minute interviews held twice a week for one academic year. In addition to academic

35. Jackson in Whiteley, J.M. Changes through Counselling. Review of Educational Research, Vol.39, 1969, P.191.

36. ibid., P. 191.

performance results showed significant differences in favour of the experimental group for attendance in school and frequency of client initiated counsellor appointments.

Bates³⁷ also at the secondary school level compared what he called "traditional group counselling" consisting of 13 weekly class period meetings and "accelerated Interaction" for equal amount of time but concentrated into two-day continuous sessions during school hours. The criteria employed were gain in scores, attendance and effort grades. The traditionally counselled group demonstrated significant improvement only in increasing students' receptivity to the learning process through reducing tension and hostility.

Another proof of counselling effectiveness is shown by More³⁸ who administered a test of guidance information to freshmen and again to the same students as seniors. The object was to find out if there was an increase in the students' knowledge of vocational information which aid them in making decisions. The result was significant gain in knowledge. It is however obvious that the cause of the gain in knowledge is not specified by the above

37. *ibid.*, P.192.

38. Patterson, C.H. Program Evaluation . Review of Educational Research, Vol.33, 1963, pp. 214-222.

study. Various types of information are derived from the regular school subjects and this information gaining process has been described as a general information base by Brown³⁹ and his associates.

There is a local research⁴⁰ with findings to show counselling effects on behaviour change. The investigator of the present research evaluated the guidance programme in the Delta area of Bendel State. Although counselling was not the only variable, yet it shares in the attributions particularly as it is the most important service in the guidance programme. Downing⁴¹ in fact states unequivocally that counselling is the heart of the guidance programme. Many specialists have used the two interchangeably. Durojaiye⁴² accepts that one implies the other.

A total of 240 secondary school students participated in the evaluative study and the purpose was to examine the strengths and weaknesses of the programme by an identification of the status of each guidance service. Outcome data were gathered by utilizing the GPA, Grand Republic

39. Brown, Duane et.al. Career Education: The Counsellor Role. The School Counsellor, Vol.20, No.3, 1973, Pp.193-196.

40. Adugbo, A.J. op.cit., P.97.

41. Downing, L.N. op.cit., P.129.

42. Durojaiye, M.O.A.(ed.), op. cit., P. 77,

of Zambia Occupational Interest Inventory (GRZ) and a questionnaire. The results were affirmative for counselled students. Among other results, the counselled students were more satisfied with various school subjects, teachers and school work; were better adjusted, both socially and emotionally. Furthermore, under-achieving students gained in grades.

A study which shows only the negative effect of counselling was that by Winkler⁴³ and his associates. It was concerned with changes in grade point averages (GPAs) of 121 under-achieving fourth grade pupils (primary four). Individual client-centred counselling, group counselling and group reading approaches were employed during the treatment. The treatment did not promote significant difference.

The studies reviewed show that outcome research on counselling effects could be positive or negative. Results which are negative could be explained in terms of environment and "control effect". Counselling in Nigerian secondary schools might reveal definitive results on the choices that students make.

43. Winkler in Whiteley, John. M. Changes through Counselling. Review of Educational Research Vol. 39, 1969, pp. 189-190.

2:3 Academic Performance

Students' intelligence relates more to their level of achievement than to any other characteristic and a considerable portion of the differences among individuals is due to other factors. Strang⁴⁴ confirms the first part of this statement when she says that in general, intelligence as measured by available tests has been found to be the most potent of all the factors related to scholarship. The second part of the statement has also been confirmed by Boyce⁴⁵ who holds the opinion that intelligence (scholastic aptitude) must be related to other factors in predicting achievement.

The literature on academic performance shows a variety of definitions. Sawrey and Telford⁴⁶ for instance made a naive assumption that performance is an index of learning level. Also relating academic performance to

-
44. Strang, Ruth. Personal Development and Guidance in College and Secondary School. Harper and Brothers Publishers, New York: 1934, P.194.
 45. Boyce, R.W. "Predicting Success in College: An Integrated Review" Vocational Guidance Quarterly, Vol. 2, 1963, Pp.292-295.
 46. Sawrey, James M. and Telford, C.W. Educational Psychology: Psychological Foundations of Education Second Edition. Allyn and Bacon Inc., Boston: 1942, P. 198.

learning, McGeoch⁴⁷ points out that the distinction between the two is logically valid but practically and operationally of little importance in a treatment of learning which regards academic performance as a first order empirical construct. He therefore concludes that the only way we can know that learning has occurred is by an observation of successive performances, since learning is a relation between successive performance.

When restated simply, academic performance can be viewed as the actual accomplishment of a student in the secondary school subjects based on the average of scores that is the GPA. In other words, the scholastic standing of a student in any particular class during terminal examinations typifies his academic performance.

Certain categories of academic performance are often employed by research investigators. They are "achievers" which is sometimes prefixed by "high" or "super" and the other is "under" or "low". The first is a group made up of students whose discrepancy scores fall at one or more standard deviations in the positive direction from the average discrepancy score. On the other hand, the under-achievers are students with grade point discrepancy scores

47. McGeoch, John A. The Psychology of Human Learning: An Introduction. Longmans Green and Co., N.Y. 1962, Pp.597-599.

(GPA) falling one or more standard deviations in the negative direction from the average discrepancy score of the population.

What is common as regards the meanings of achiever and under-achiever is that researchers tie the terms to the particular investigation. There is therefore the definition by Frankel⁴⁸ who views an achiever as a student in the top or first quartile of his class with a scholastic average of at least 89 per cent for the tenth and eleventh years. Under-achiever is a student in lowest or fourth quartile of the same class with a scholastic average of 79 per cent or less. This scholastic average is rather too high for an under-achiever.

Bearing in mind the mostly used criterion of average of all grades or achievement test scores, Kirk⁴⁹ defines under-achievement simply as those students who are functioning less well than they could.

-
48. Frankel, Edward. A Comparative Study of Achieving and Under-achieving High School Boys of High Intellectual Ability. Journal of Educational Research, Vol.53, 1960, Pp.172-180.
49. Kirk, Barbara A. Test Versus Academic Performance in Malfunctioning Students. Journal of Consulting Psychology, Vol.16, 1952, Pp.213-216.

In all circumstances, the phenomenon of under-achievement is considered a societal problem and it has been more speculated on than over-achievement. Baymur and Patterson⁵⁰ feel that under-achievement is both a problem to the individual who may suffer from the sense of failure and to society which loses the full potential contributions of unestimated numbers of its members. Another educator who thinks that under-achievement is a serious problem is Frankel⁵¹. He believes that the young people whose scholastic performance lags far behind their intellectual ability represent serious loss to society in terms of their potential contributions.

Over the past several years, a search for factors related to academic performance other than potential ability has been carried out. Under-achievement has thus been attributed variously to parental disinterest, cultural impoverishment, home environment, personality maladjustment, teacher inadequacy, plain laziness on the part of the student, measures of interest, attitudes and values.

Kirk⁵² thinks that although emotional maladjustment and illness may affect the patient's performance or use of

50. Baymur, F.B. et.al. A Comparison of three Methods of Assisting Underachieving High School Students. UNDER-ACHIEVEMENT (ed.) by Kornrich, Milton. Charles C. Thomas Publishers, Spring Field: 1965, Pp.501-513.

51. Frankel, Edward op.cit., P.87.

52. Kirk, Barbara A. op. cit., Pp.213-216.

his mental capacity but they do not reduce his endowment. Under-achievement itself can be blamed on the student who is not working hard enough to achieve the limits allowed by his abilities. This is the view expressed by Kowitz and Armstrong⁵³ who also point out the case of parents who believe that their children would achieve more if the school is run properly. A counter view is held by Shaw and Grubb⁵⁴ as if trying to defend teachers and their organization of the school. They say that under-achievement as a problem does not have its genesis within the educational framework but rather one which the under-achiever brings with him at least in embryo from when he enters high school.

There are a great deal of other studies and findings which point to the causes of under-achievement but according to Creange⁵⁵, while they are most helpful, make one definite point: as individuals are different so are the causes for lack of achievement.

-
- 53. Kowitz, G.T. & Armstrong, C.M. Under-achievement: Concept or Artifact. School and Society, Vol.89, 1961, Pp.347-349.
 - 54. Shaw, M.C. & Grubb J. Hostility and able High School Under-achievers. Journal of Counselling Psychology, Vol.5, 1958, Pp.263-266.
 - 55. Creange, Norman C. Group Counselling for Under-Achieving Ninth Graders. School Counsellor, Vol.18, 1971, Pp.279-285.

Some specific differences exist between the high-achievers and under-achievers categories of academic performance. A comprehensive list of such differences was made by Farguhar⁵⁶ who says that high-achievers have a need for long-term involvement, unique accomplishment, competition with a maximal standard of excellence. The characteristics of under-achievers as contained in the list are antitheses of their more fortunate colleagues. They tend to have a need for short-term involvement, common place accomplishment and competition with a minimal standard of excellence. In addition, high-achievers have high goals, relate school work to future goals, tend to regard education far more than its job value, clear and indefinite academic occupational choices together with impossible or no goals at all.

While paying attention to only under-achievers, Taylor⁵⁷ says that this group of students dislike their instructors and resistant to externally imposed tasks. It is this dislike and hostility, he adds, that makes

-
56. Farguhar, W.W. Motivation Factors Related to Academic Achievement. Office of Research and Publications. College of Education, Michigan State University, East Lansing, Michigan: 1963, Pp.10 and 235.
57. Taylor, R.G. Personality Traits and Discrepant Achievement: A Review. Journal of Counselling Psychology, Vol.11, 1964, Pp.76-81.

instructors to have a less favourable impression about under-achieving students and invariably such students become less acceptable as well.

Available research does not support all the differentiating characteristics of the two groups of students, that is under-achievers and high-achievers. There is however a confirmation of the differences between them. Impellizzeri and her colleagues⁵⁸ for instance, investigated the scholastic functioning of 4,875 high-ability secondary school students in New York City. Methods used were a widespread demand for tutoring in specific subjects, organized class in study skills and reading workshops were conducted after school hours during the academic year 1958/59. Students were also invited to participate in a summer programme designed to improve reading ability.

Most of the findings were in favour of both high and under-achievers. Among the results were that more than ninety per cent of the whole group were enrolled in the academic course with under-achievers more heavily represented in the non-academic courses. Almost all students

58. Impellizzeri, Irene H. et.al. An Investigation of the Scholastic Functioning of 4,875 High-Achieving Secondary School Students in N. Y. City in UNDER-ACHIEVEMENT (ed.) Kornrich Milton Charles. C. Thomas Publishers, Springfield, 1965., Pp.138-173.

even the extremely low-achievers planned to graduate and very few indicated that they were being forced by parents to finish school. Under-achievers tended to choose lower level occupations than achievers and girls in both achieving and under-achieving groups tended to choose lower levels than boys in the corresponding groups.

The situation in Nigeria regarding the subjects offered in secondary schools is similar to that described in the above study. All the participants of the present investigation also enrolled for the academic subjects taught in the schools. Nevertheless, this does not show that results would be similar.

Another study which was concerned with differences between achieving and under-achieving students was by Frankel⁵⁹. Its main purpose was the determination of possible causes for differences between the two groups. The sample was composed of fifty pairs of achieving and under-achieving boys. The Kuder Vocational Preference Record was used for comparing interests of the groups. Results show that interests of the under-achievers were significantly greater in the mechanical area whereas those of achievers were in scientific. In addition, the

59. Frankel, Edward. op.cit., Pp.172-180

achievers were more interested in computational and the under-achievers in the artistic. As regards vocational and college planning, significantly more achievers than under-achievers planned to follow liberal college programme majoring in science whereas more under-achievers than achievers expected to enter non-science fields such as Business Administration, Accountancy and the like.

A contradictory report is given by Diener⁶⁰ who also used the Kuder Vocational Preference Record. He investigated the similarities and differences between 138 over-achieving and under-achieving students of Arkansas University. Basically, there was no significant difference between the two groups for all the areas of vocational preference except artistic interest which was in favour of under-achieving males.

It is improper to compare the above two research investigations because they were not matched on the basis of academic attainment. The under-graduates were obviously more mature and could consider all relevant factors before choice of an occupation is made. Differences in findings could also be due to analysis of data. When related to the present study, the use of two interest

60. Diener, C.L. Similarities and differences between over-achieving and under-achieving students: Guidance and Personnel Journal, Vol.38, 1960, Pp.396-400.

inventories developed in Africa could highlight similarities and differences among academic categories of students comparable to those of the above two investigations.

There is still enough evidence in support of the differences between achievers and under-achievers. The findings of Hummel⁶¹ and his colleagues together with that by Teigland et. al.⁶² are further proofs.

Some other investigations related intelligence to occupational choice. Holden⁶³ conducted a research in this area and hypothesized that students at the lower range of the IQ continuum are more likely to change the level of occupational choice between grades 8 and 11 than students in the upper range of the IQ continuum. The study group consisted of 109 members selected from a junior high-school of a suburban community. The hypothesis was supported.

61. Hummel, Raymond et. al. op.cit., Pp.388-395

62. Teigland, John J. et. al. Some Concomitants of Under-Achievement at the Elementary School Level. Guidance and Personnel Journal, Vol.44, 1966; Pp.950-955.

63. Holden, George S. Scholastic aptitude and the Relative Persistence of Vocational Choice. Vocational Guidance Quarterly, Vol.14, 1966; Pp.211-214.

Gribbons and Lohnes⁶⁴ related verbalized preferences and scores on an intelligence test. The sample consisted of 111 boys and girls during the five years of grades 8 through 12. Three personal interviews were conducted with each student. The results revealed that 61 per cent of students in eighth grade preferred occupations at the professional level and at the tenth and twelfth grades slightly over half still expressed preference for professionally oriented occupations.

As could be seen, these research findings indicate that bright students appear to make choices of occupations which are consistent with their measured intelligence or academic performance. It should be noted that the factors which influence students' choices vary from place to place and if so, counselling is bound to introduce variability in the Nigerian secondary schools despite the impact of academic performance.

Some studies indicate that students who have the benefit of counselling are in most cases at an advantage. The study by Calhoun⁶⁵ assessed effects of individual

64. Gribbons, Warren D. & Lohnes, Paul P. Occupational Preferences and Measured Intelligence, Vocational Guidance Quarterly, Vol.14, 1966, Pp.211-214

65. Calhoun, Reed S. The effect of Counselling on a Group of Under-achievers, School Review, Vol.64, 1956, Pp.312-316.

counselling on academic accomplishment of under-achieving students. Three interviews were planned and additional interviews with pupils or their parents were arranged. A total of 267 pupils participated in the investigation and the experimental group excelled by three comparisons and closely approached a fourth in the comparison of school marks.

Again, Creange⁶⁶ determined whether or not a planned programme of group counselling can have a positive effect on grade achievement. A class of 212 students who has been administered the School and College Ability Test and Sequential Test of Educational Progress (SCAT - STEP) together with the EM Form of the Otis Quick Scoring Mental Ability Test were the participants. The findings indicate a significant grade point average (GPA) gain.

2:4 Choice of WASC Subjects

Academic work during the first few years in Nigerian secondary schools is devoted to what may be called broadening subjects whereby the individual student discovers those in which he is likely to do best depending upon his level of interest. In spite of this good intention, there is little or no choice open to students.

66. Creange, Norman. Op.cit., Pp.279-285.

The range of subjects offered is very small, so much so that prescription by school authorities is almost the rule. It is more of a pitiable situation in schools where facilities are very limited. In such schools, once an individual child becomes a student in his field of interest like the grammar school, technical, commercial or the teacher training college, the process of choice-making regarding subjects ends.

The problem is even compounded by the idea of compulsory subjects at the school certificate level. Students are required to master subjects like Mathematics and English Language before they can be awarded the certificate. These subjects are also necessary for admission into most Faculties in the Universities and most post-secondary institutions throughout the country. With this "core curriculum", students are in fact given free choice of six subjects from the limited number of available subjects.

Even if only one curriculum is offered for all students in the grammar schools and whether facilities are adequate or not, each student has an important decision to make relating to selection of the six other subjects for the West African School Certificate (WASC). Form III seems to be the year of decision for students who plan to take the WASC in their Form Five.

A review of literature has shown that the choice of subjects is a difficult process for students. Rubinfield⁶⁷ says that it is not the simplest matter to make the decision concerning the choice of courses. According to him, this is so since most of the students (he was referring to eighth graders in the United States) have not selected careers, do not have a real awareness of the type of school they prefer at a later date and are not ready to determine what best fits their particular situation.

Expressed a little differently, Goldman⁶⁸ points out that often there is at least some anxiety about the decision itself or the decision-making process. And that quite frequently especially with adolescents who come voluntarily for counselling, lack of confidence in their ability to make decisions lead to an attempt to become dependent on the Counsellor.

Many of the specific problems which characterize the choice-making process are compiled into a list by Holt⁶⁹.

-
- 67. Rubinfield, W.A. Planning Your College of Education. Vocational Guidance Manuals. A Division of Data Courier Inc., Louisville, Kentucky: 1976, P.26.
 - 68. Goldman, Leo. Using Tests in Counselling. 2nd Edition Good Year Publishing Co. Inc., Pacific Palisades, California: 1971, P.29.
 - 69. Holt, John. The Problem of Choice . The Limits of Schooling by Marin Peter et.al., Prentice-Hall Inc., Eaglewood Cliffs, N.J., 1975, Pp.89-103.

First, when students are offered freedom and choice, they see the offer as not being real so they are slow to utilize it. Second is that students may not trust themselves enough to be willing to choose. A third problem concerns the belief of students that it is a risk to choose since they do not know how to decide what is good. Lastly, it is frightening, confusing and paralyzing to have too much to choose from, she says. This last point is not representative of the Nigerian secondary grammar schools as the subjects offered are limited.

The problem of subject choice was much earlier pointed out by Strang⁷⁰ who says that many students are at sea as to the best course to take and in many schools they are offered no assistance. Wilson and his associates⁷¹ look at the problem of choice in relation to intelligence which is a determinant factor for choice. In their belief since the secondary grammar school programme calls for only one kind of intelligence i.e. intellectual intelligence, many students are not endowed generally with this capacity. Their contention is that a student may possess other kinds of intelligence like social intelligence which

70. Strang, Ruth. Educational Guidance: Its Principles and Practice. The Macmillan Co., N.Y., 1947, P.3

71. Wilson, Eugene S. et.al. College Ahead? A Guide for High-School Students and their Parents. Harcourt and World Inc., New York: 1961, Pp.32-41.

enables him to work successfully with people yet schools do not give marks for this kind of intelligence. Since this view is true of the Nigerian grammar schools, it means that students without the required abilities for academic work will have greater problems of choice.

Writing about the role of education in shaping individual pupil's idea of prestige attached to different occupations, Durojaiye⁷² notes some of the factors connected with choice of subjects: First, in a modern economy, the path an individual takes through the occupational structure is influenced by the paths he takes through the educational system. Furthermore, he says that through the principle of anticipatory socialization, pupils in academic courses look upon jobs in which their academic learning can be most used as having prestige.

Certain occupations actually require knowledge of particular subjects for secondary school students in Nigeria. These are few as has been noted by Wilson⁷³ but professions like medicine, mathematics, chemistry and physics are compulsory and it is difficult to admit the

72. Durojaiye, M.O.A. Education and Occupational Prestige in Nigerian Secondary School Pupils. West African Journal of Education, Vol.17, 1973, Pp.409-421.

73. Wilson, Eugene S. et.al. Op.cit., Pp.35-41.

would-be Engineers without a pass at credit level in mathematics.

As regards the role of aptitude in determining students' choice of subjects, Cote⁷⁴ theorizes that if a student has an aptitude in a certain area such as the technical field, it is more likely he will be successful in courses in the area and will be more likely to choose to work in this area when a choice is necessary. This view will be most probable if students are assisted to know their capabilities, how to select subjects and occupations.

Courses in post-secondary institutions are more specialized than at lower levels of the educational system. If it is so, then a close correspondence between WASC subjects and the courses pursued at a post-secondary institution is of vital importance. Students are therefore entreated by the Science Research Associates⁷⁵ to make certain that they are taking courses which equip them to get into post-secondary institutions. The students are further advised to eschew haphazard selection of subjects but should consider those which have a purpose geared to their needs and future plans. Abilities and interests are

74. Cote, M.P. Guidance in Education: The application of the Behavioural Sciences in Secondary schools in Durojaiye (ed.) op.cit., Pp.89-99.

75. Science Research Associates. How to get into College and stay there. 57 Grant Avenue, Chicago: 10 Illinois, 1974, Pp.13-21.

not to be left out of the decision-making process because it is sheer absurdity for a student who is poor in mathematics to enrol for a course in advanced algebra and geometry.

Sulkin⁷⁶ strengthens the above advice by prescribing guidelines for students' preparation for further studies. These include choice of subjects that suit students' abilities, subjects that demand fullest exercise of their intellectual capacities, finding out specific subjects required for specialized programmes and need for flexibility of programme of choice as there might be cause to switch courses to suit new interests.

There are students who choose subjects because of preference for teachers and it is obvious that these students' favourable regard or dislike for teachers is due to their experience. However in response to students' excuse for inadequate work because of dislike for teachers Wilson⁷⁷ dismisses the idea. He has a firm conviction as to the goodness of students working successfully for people they find incompatible.

Judging the dilemma of the secondary school student in making choices of subjects, it is apt that someone be

76. Sulkin, Sidney. Complete Planning for College. McGraw-Hill Book Company, N.Y., 1962, Pp.17-20.

77. Wilson, Eugene S. et.al. Op.cit., P.32.

capable to assist him. Strang⁷⁸ supports this idea when she declared that very seldom do pupils know enough about themselves, the courses offered or the relations of school subjects to vocational fields to plan the programme that fits them best.

Occasionally, school teachers, counsellors, parents, friends are consulted by students before choosing subjects for the WASC. The most popular opinion as it seems, is that both the teacher and counsellor have the capability for the assistance required by students. For instance, Wilson⁷⁹ says that the decision in high school whether to take a college preparatory (equivalent of the grammar school programme in Nigeria) course, a commercial course or a vocational course will be determined subsequently to a talk with a teacher, a counsellor or the school principal, after a careful analysis of the student's aptitudes, interests and achievements, his financial assets and his parents' attitudes towards college.

While it is accepted that the teacher and parents can be consulted by students before making academic decisions yet the counsellor's expertise must be recognised.

78. Strang, Ruth. Op.cit., Pp.3-12.

79. Wilson, Eugene. Op.cit., P.32.

Nigerian parents tend to direct their children into family occupations hence some students whose fathers were medical doctors are advised to choose medicine in spite of the capabilities of such students. This lack of recognition for the counsellor's experience as against the teacher is disapproved by Jacobson⁸⁰. He considers the teacher's assistance to young people as unofficial. While conceding that every school cannot have a full-time personnel officer Jacobson argues that it is the counsellor who has time for individual interviews can help the student plan his educational programme and choose his vocation wisely.

Counsellors appear to defend their professional status and this is clearly borne out in literature on choice of school subjects. Cote⁸¹ who was in the guidance team at the Aiyetoro Comprehensive School in the sixties, states positively that through individual counselling, the school comes much closer to optimum pattern of courses for each student than in the past. Williamson⁸² who is a counsellor makes the same assertion by summarizing the counsellor's problem as help to individual student to develop skill in

80. Jacobson, Paul B. The American Secondary School (ed.) Prentice-Hall Inc., 1952, P.122.

81. Cote, M.P. Op.cit., P.97.

82. Williamson, E.G. How to Counsel Students: A Manual of Techniques for clinical Counsellors. McGraw-Hill Book Company, N.Y., 1939, P.248.

techniques of his educational career. This, he adds, is accomplished by judicious choice of courses as a result of diagnosis and analysis of the student's problems in the educational, vocational, social-personal, health and financial areas.

Another counsellor who carefully avoided the teacher and specifically entrusts counsellors with the responsibility of counselling students is Hutson⁸³. He requests counsellors to perform the function of counselling students for choice of subjects before the latter's entry upon diversified educational opportunity.

Research evidence is ample on various attributes of subject choice. Most of the studies were carried out in the U.S. but it is hoped that the present study will contribute facts relating to subject choice in Nigeria.

Concerning reasons given for choosing courses, Berdie⁸⁴ carried out an investigation in 1950 using all high-school seniors totalling 24,898 and graduating that year in Minnesota. The findings show that the most frequently given reason was influence of vocational plans. Second in importance was that the course was interesting and third, that the parents advised it. Only 5% of the

83. Hutson, Percival W. The Guidance Function in Education, 2nd ed. Appleton-century Crofts, N.Y., 1968, P.61.

84. Berdie, Ralph F. After High School - What? The University of Minnesota Press, Minneapolis: 1954, Pp.119-120.

metropolitan boys planning college indicated they took their course because it was the only one offered; but 17% of the farm boys and girls planning on college reported this reason. The most striking result was that fewer than ten per cent of the college planning students attributed their choice of a high school course to counselling and only 5% attributed their choice to teachers' advice or counselling.

The percentage of students who attribute their choice of subjects to counselling might be higher in Nigeria. At least most parents are not knowledgeable to assist their children in selecting subjects for the WASC examination. In such a situation, students might resort to counsellors in schools where they are available.

Another research directed towards reasons students give for taking courses was by Mallory et.al.⁸⁵. The number of participants was not mentioned but results show that students who have been in college longer are more likely to take courses because of preference for a particular professor. Second is that students choose about two-thirds of their subjects because of interests and finally, parents' influence determines the choice of

85. Mallory, Edith B. et.al. Relationship Between Reasons Students Give for Taking Certain Courses and Student Estimates of these Courses. Journal of Educational Psychology, Vol.32, 1941, Pp.13-22.

relatively fewer courses more so towards senior years. These findings may not be true of secondary school students in Nigeria. In addition, such variables as academic performance and counselling might introduce variance into findings.

The research by Rowlands⁸⁶ equally deserves to be cited. It was concerned with differences between prospective scientists, non-scientists and early leavers in a representative sample of English Grammar School boys. Among other results was that science which topped the popularity poll, occupied the second lowest place on the list of subjects found easy. The popularity of science stemmed largely from the nature of the subject itself rather than the pupil's feelings towards the teacher or their estimate of the influence of examination success.

The following three studies treat a possible relationship between educational and occupational interests. One was by Miller and his colleagues⁸⁷. Participants numbered up to 100 and findings were that highest correlations between educational and occupational interest were in physical sciences, engineering and industrial arts; lowest in fine arts and social science.

86. Rowlands, R.G. Some Differences Between Prospective Scientists, non-scientists and Early Leavers in a Representative Sample of English Grammar School Boys. British Journal of Educational Research, Vol.31, 1960, pp.23-24.

87. Miller, C. Dean et.al. Op.cit., pp.113-118.

The two other research investigations were carried out in West Africa and devoted to the utility of subjects for future career. The first was by Okeke⁸⁸ at Abbot Institute, Sapele in Bendel State, Nigeria. The findings indicate that all students who combined general subjects with commercial subjects achieved employment quickly as account clerks, office clerks, teachers and managers in that order. Sixty per cent of the participants picked on subjects as the most influential in their obtaining employment and in planning further studies.

Napier⁸⁹ conducted the other study at Okuapemman secondary school in Ghana with 84.2 per cent of the 462 population of students responding to the mailed questionnaire. When asked why they selected the subjects they did as their favourites, most of the students indicated that their interest stemmed from the utility the subjects had for their future careers. The response second in frequency was that the course was easy. An inference implicit from the literature on choice of subjects for study is that the most frequently given reason is occupational plans. Despite this Dole⁹⁰ urges counsellors to treat decisions involving educational and

88. Okeke, Ambrose. Op.cit., Pp.5-16.

89. Napier, Rodney W. Education and Vocational Attitudes of Students at Okuapemman Secondary School. School Guidance Services: Focus on Developing Nations. Evans Brothers Ltd., 1972, Pp.66-68.

90. Dole, Arthur A. Op.cit., Pp.30-34.

occupational preference is likely by itself to be a poor basis for educational decision-making.

2:5 Choice of Post-Secondary Institutions

The change in the Nigerian Government from Military to Civilian has affected educational policies. As it were, political parties have their educational programmes which are different from those by the military regime. While some States in the country are still under the severe economic measures of the military government against education (increase in school fees and boarding at all levels), those under the Unity Party of Nigeria (U.P.N.) enjoy free education at all levels.

The economic measures of the military regime against education may like to complicate the problem of choice of post-secondary institutions for the secondary school students. Instead of merely deciding on choice of a specific institution which is best suited to his needs, aspirations and conditions, the student has to decide first whether he has the financial resources essential for continuing his education beyond the secondary school level. The only alternative is entry into the labour market at least for a while. A fortunate percentage of secondary school students concerns those whose interest is in the teaching programme where the crash-programme system is still operative.

On the condition that secondary school students know the various types of post-secondary institution that they could go into, Nigeria would make an appreciable stride in economic advancement. At least, knowledge of available institutions reasonably leads to choices made after a consideration of such factors as personal interests and aptitudes.

The woeful circumstances described by Strang⁹¹ applies very adequately to our present day secondary school students in Nigeria. She says that students' choice of further education in college, vocational school, trade school or apprenticeship training is haphazard and unguided. In addition, the high-school student rarely shows a good judgement and little indication of need for guidance.

There is the implication also that schools with guidance counsellors are profited. While it is voluntary job for a teacher to help students select post-secondary institutions, it is compulsory for the counsellor whose duty encompasses this realm. Byrne⁹² makes this clear when he says that one of the counsellor's duties is to assist youth in post-secondary school selection and entry.

91. Strang, Ruth. Op.cit., Pp.12-13.

92. Byrne, Richard Hill. The School Counsellor. Houghton Mifflin Company, Boston; 1963, P.208.

Bearing in mind that the student ought to know, Endicott⁹³ makes the point that the counsellor who assists students to make their college (post-secondary institutions) plans can usually be especially helpful. It is he who has information about many colleges including their admission requirements, can evaluate students' scholastic record, discuss their educational and occupational plans and help them to select schools most likely to meet their needs.

Rubinfield⁹⁴ makes a list of useful materials with which guidance offices are equipped and concludes that a student who has failed to use such guidance facilities has deprived himself of the principal aid in selecting a college. The materials include books on careers, college catalogues, scholarship information, college guide books, technical and specialized school bulletins.

If any secondary school enjoys the services of a counsellor, it therefore becomes the duty of such a school to help students select appropriate post-secondary institutions. Schuerger⁹⁵ in fact indicates that the

93. Endicott, Frank S. How to Plan for College: What High School Students Need to Know About College. Rand McNally and Co., 1967, Pp.61-62.

94. Rubinfield, William A. What you must know about getting into College: An essential guide for students and parents. Vocational Guidance Manuals. Educational Books, Division of Universal Publishing Corporation, N.Y., 1964, Pp.31-32.

95. Schuerger, James. Counselling for College Choice. Peacock Publishers, Inc., Itasca, Illinois: 1970, Pp.3-5.

counsellor applies his greater knowledge of the field and of possible alternatives to help the student lay out a plan of action complete with alternative paths. A list of specific items of information at the various levels of schooling is prepared by him.

1. Students to be told about college in general and about the opportunities which may accrue from attending college.
2. They need to be encouraged to plan their programmes so as to allow themselves the broadest possible choice for the future.
3. They need specific information about course requirements for college and other post-secondary programmes so as to give themselves this broad choice later on.
4. Students need information about test (in Nigeria, refers to entrance examinations).
5. Students need encouragement to visit colleges -----
6. Students need to return to counsellor their self-ratings and list of colleges to which they may apply.

Expectations of students and parents in Nigeria concerning counselling services particularly educational counselling are similar to those enumerated above. Such assistance to students when making choices of post-secondary institutions can be described to be adequate.

It does not mean that the student who is considering the possibility of going to a post-secondary institution should seek help from only the counsellor. A few other

people like the teacher and parents as pointed out by Endicott⁹⁶ can be of tremendous assistance. The only conceivable difference between these sources and the counsellor is a matter of effectiveness. The teacher can help since he has evaluated the student's achievement in the classroom. He knows each student's academic strengths and weaknesses and can compare him with other students. On the other hand, it is parents who can work out the amount of financial help that is available from home. This is an important factor for a student who decides to further his education.

Even in schools where guidance services are available, one cannot be sure that students avail themselves of the opportunity. While commenting on preparation for college in high school (United States), Rubinfeld⁹⁷ deplored the attitudes of students. As stated by him, even in those systems with equivalent of full-time counsellor for every two hundred and fifty youngsters, only a few students visit the guidance office to take advantage of the opportunity and seek out this type of professional help. Siegel⁹⁸ on the contrary, offers an explanation for students' failure

96. Endicott, Frank S. Op.cit., P.23.

97. Rubinfeld, William A. Op.cit., Pp.31-32.

98. Siegel, Max (ed.) The Counselling of College Students: Function, Practice and Technique. The Free Press, N.Y., 1967, Pp.21-22.

to seek assistance. According to him, students might realize the professional assistance of the counsellor too late when choices should have been based on their attitudes and expectations of their institutions. This inevitably calls for early introduction of counselling services to secondary schools.

There is no research evidence to show the appropriate time to consider continuation of education beyond the secondary school. Bowles⁹⁹ who came close to the point holds the opinion that this consideration should be as early as the student can begin to be fairly definite about his plans and prospects. Bowles however did not consider the difficulty involved in knowing the particular age during which secondary school students become fairly definite about their plans and prospects.

It seems sensible for a student to choose an occupation before a post-secondary institution where adequate preparation could be made. This then necessitates the consideration of continuation of education beyond the secondary school to be made after age thirteen which Hamblin¹⁰⁰ recommends for group guidance in the vocational

99. Bowles, Frank H. How to get into College. Dutton and Company, Inc., 1960, P.95.

100. Hamblin, D.H. The Teacher and Counselling. Basil Blackwell, Oxford: 1974, P.240.

sense. Since most Nigerian children find themselves in form one of the secondary school at age thirteen, this is not an appropriate time to consider continuation of education beyond the secondary school. This study therefore excluded the form one students.

Several factors are considered before a choice of a post-secondary institution is made. The most commonly cited factors are occupational plans, the various offerings of the post-secondary institution and who gives them, whether the institution is approved or not, geographical factor (location), co-educational or not and costs. Others are large versus small institutions, public (government), private or denominational, social levels of the institution, library facilities, ratio of students to faculty, intellectual climates i.e. the character of the institution whether an easy-going, non-academic sort of place where students go to enjoy years of social living or not, admissions and strength in possible major fields.

Costs (finances) seems to be given priority consideration in selecting an institution. Hodnett¹⁰¹ views the role of finance as having the greatest effect on the

101. Hodnett, Edward. Which College for You? Harper and Brothers Publishers, N.Y., 1960, Pp.84-89.

decision-making which comes up at the final stage.

Finances are analyzed under costs, personal resources, family contribution, scholarship grant and loan.

Rubinfield¹⁰² on the other hand feels that costs should not be the major factor in selecting an institution but that it is wise to take them into consideration before using other criteria.

Dunsmoor's¹⁰³ guideline concerning costs is also important and it states that the student might limit his choice by eliminating some of the more expensive institutions. The alternative is for the student to start by preparing a list of those institutions in which the expenses are moderate or comparatively low.

There are other educators who want occupational plans to be given priority consideration. Detjen and Detjen¹⁰⁴ say that after the student has determined the field of work for which he is best suited mentally, physically and emotionally together with consideration of opportunities for employment, then he investigates the institutions which

102. Rubinfield, William A. 1964, Op.cit., P.37.

103. Dunsmoor, Clarence C. et.al. How to Choose that College: A Guide for Students and Parents. Bellman Publishing Company Inc., Boston: 1951, P.33.

104. Detjen, Mary Ford and Detjen, Ervin Winfred. Your Plans for the Future. McGraw-Hill Book Co. Inc. N.Y., 1947, P.32.

can give him the necessary preparation. The choice of an institution is therefore based on the criterion that most nearly meets the student's needs educationally, occupationally and geographically. Dunsmoor¹⁰⁵ supports the above contention by the statement that the curriculum a student plans to take in college is one of the important points for consideration particularly if the student has in mind an occupational goal for which he wishes to prepare.

Parents very often want their children to consider the concept of good or bad as an important factor in choice of post-secondary institutions. Endicott¹⁰⁶ wants those parents to know that no school is good or bad except in terms of the needs, interests and facilities of a particular student. In addition, although reputable institutions are considered as prestigious, successful men and women have come from all types of institutions.

A few research reports are available on the choice of post-secondary institutions. Berdie¹⁰⁷ sought to determine after high-school plans for 24,892 students in Minnesota, United States. Of the entire group 11,379 (46%) were boys. Thirty three per cent of the participants came from metropolitan schools, 30% came from farm families and 36% came from smaller cities and towns. The findings

105. Dunsmoor, Clarence et.al. Op.cit., P.29.

106. Endicott, Frank S. Op.cit., P.35.

107. Berdie, Ralph F. Op.cit., Pp.93-95.

show that 51% of the total group were planning to continue their education or training. College planning was more typical of boys than girls among youth from metropolitan and non-farm areas whereas college planning was more typical of girls than boys among those from farm areas. Only 4% of the total group were planning to attend trade school. Planning to attend business school was characteristically the plan of girls. The influence of counselling was not considered and it could introduce further variability.

Sulkin's¹⁰⁸ report is about a survey which was aimed at determining high school student's knowledge of course offerings. The participants were 500 and the results revealed that 87% were not familiar with the course offerings of the colleges they had chosen. Many were actually heading for schools that offered little training in occupations they wanted to follow.

Probably, the most interesting findings were by Dole¹⁰⁹ who investigated the major factors in educational decisions with three samples. Each of the first two groups consisted

108. Sulkin, Sidney. Op.cit., P.64.

109. Dole, Arthur A. Factors in Educational Decisions among the Public School Pupils; Psychology in the Schools, Vol.6, 1969, Pp.73-79.

of 300 males and females. The spectacular finding was that the eight major factors in educational decisions are generally comparable to factors obtained on the determinants of occupational decisions.

2:6 The Choice of Occupations

Three aspects of occupational development have hitherto been used in research investigations. However, greater attention has been directed to occupational aspiration and preference in developing countries. Occupational choice on the other hand is less commonly employed as a variable although the three terms are invariably used interchangeably.

A difference in the three terms has been pointed out by Crites¹¹⁰. He says that aspiration concerns what an individual considers to be an ideal occupation for him after thinking about his wants and wishes without the least thought about limitations. Preference involves a selection of one in a continuum of two or more occupations and the deciding factor is desirability or liking. Finally, occupational choice which is related to this study refers to what an individual will probably do after considering his chances of actually entering into the occupation.

110. Crites, O. Vocational Psychology. N.Y. McGraw-Hill Book Company Inc., 1969, pp.127-130.

Occupational choice is regarded as a process which takes place in the context of a changing set of social environments. O'Hara¹¹¹ views these environments as largely academic in the early years. This is true of modern Nigeria as course offerings in the secondary schools are academic although comprehensiveness has gained a little ground in recent years.

Career development, as pointed out in the literature, starts at an early age of about four years and various theories have been formulated for proper understanding of the process. Some criticisms were directed against a few of the theories but notwithstanding, an important contribution to the process of occupational choice is made by them. These theories are many and categorized into the Developmental theory, Need theory, Psycho-analytic theory, Sociological theory and the Composite theory of Hoppock. A few good contributors to the development of the theories were Ginzberg and his associates¹¹², Super¹¹³,

111. O'Hara, Robert P. Guide for Career Development. Guidance for Education in Revolution, edited by David R. Cook. Allyn & Bacon Inc., Boston: 1971, pp.194-213.

112. Ginzberg, Eli et.al. Occupational Choice: An Approach to a General Theory. Columbia University Press, N.Y., 1951, pp.3-17.

113. Super, D.E. A Theory of Vocational Development. The American Psychologist, Vol.8, No.4, 1953, pp.185-190

Roe¹¹⁴, Bordin and his associates¹¹⁵, Hollingshead¹¹⁶ and Hoppock¹¹⁷.

Among the central ideas conveyed by the theories is that the process of occupational choice extends over a period of time and it is irreversible. The major factors for occupational choice are interests, capacities and values. Quite unlike popular belief, these theories propound that since people are different in abilities, interests and personalities, each person is qualified for more than one occupation. A choice of an occupation has to be made after a consideration of available opportunities and limitations of reality. It is expected logically therefore that any particular choice involves a compromise between the subjective elements of interests, capacities together with values on the one hand and opportunities and limitations of reality on the other hand.

Psychological needs are also made central in some of the theories. The main idea being that needs are the determinants of occupational choice. According to the

114. Roe, Anne. The Psychology of Occupation. John Wiley and Sons Inc., N.Y. 1956, pp.23-253.

115. Tolbert, E.L. Counselling for Career Development. Houghton Mifflin Co., Boston: 1974, pp.46-55.

116. *ibid.*, p.62.

117. Hoppock, Robert. Occupational Information. 3rd ed. McGraw-Hill Book Co., 1967, pp.94-95.

proponents, occupations are chosen to meet our needs and only those which satisfy our needs that are considered. These needs, they argue, influence choices whether they are distinctly perceived or vaguely felt as attractions.

If viewed from the perspective of sociology, social class becomes an important factor in the process of occupational choice. The argument is that social class has a marked effect on job plans, job availability and feelings of certainty about plans.

2:7 Factors for Choice of Occupations

Several factors supposed to influence occupational choices have been employed as variables in research investigations in parts of the world including Nigeria. In some cases, the results of studies were contradictory. Nevertheless, the commonly cited factors include the following list made by Lockwood¹¹⁸: age, intelligence, course of study pursued (school subjects), school marks, favourable subjects, interests, aptitudes, abilities, work experiences, environment, physical status, economic status, amount of occupational information, nature and degree of occupational counselling, motives or drives, sex, self-knowledge, values and vocational test data.

118. Lockwood, W. Realism of Vocational Preference. Personnel and Guidance Journal, Vol.37, No.2, 1958, pp.98-106.

In an investigation done in Nigeria, Agusiobo¹¹⁹ categorized the factors into four groups -

1. Socio-economic or external situational factors i.e. socio-economic aspects of environment.
2. Personal or family factors i.e. parents, value orientations, personality, attitudes, intelligence, special aptitudes.
3. Role factors i.e. concepts of self and identification of self in an occupational position.
4. Cultural factors i.e. school, peer, age group and work experience.

Although the list of factors which influence vocational behaviour seems long, yet Super and Overstreet¹²⁰ feel that some determinants are more important. Such determinants are intelligence and socio-economic status.

There is little research evidence on the impact of counselling on "occupational choice" as a variable. It is still recognized that counselling helps to bring about realistic choices. Ginzberg and his associates¹²¹ suggest

-
119. Agusiobo, O.N. Personal Factors Influencing the Occupational choice of Selected Under-Graduates at the University of Nigeria, Nsukka. Unpublished Doctoral Dissertation, 1966, p.44.
120. Super, D. E. et.al. The Vocational Maturity of Ninth-Grade Boys. Bureau of Publications, Teachers College, N.Y., 1960, pp.6-10.
121. Ginzberg, Eli. et.al., p.6.

that experts (counsellors) bring the complex reality into focus and help the individual to evaluate both his opportunities and his limitations.

A few others hold a similar view that counselling plays an important role in the choice process of occupation. Carter¹²² puts forward the argument that subsequent job changing arises out of inadequate help and guidance. The argument is carried further by Tolbert¹²³ who thinks that if counselling is augmented by other services, it helps pupils understand themselves, become aware of available options, and the relevance of these options, make and evaluate decisions, implement the decisions and assess their suitability. This can be summarized to mean that students who have the benefit of counselling make more realistic occupational choices.

As regards the impact of academic performance on occupational choices, Hollender's¹²⁴ mental estimate is relevant. He opines that more occupations are open to those persons of greater intellectual ability -----.

122. William W.M. (ed.) Occupational Choice. George Allyn and Unwin Ltd., London: 1974, p.198.

123. Tolbert, E. L. op. cit., pp.46-55.

124. Hollender, John W. Development of a Realistic Vocational Choice. Journal of Counselling Psychology, Vol.14, No.4, 1967, pp.314-318.

This is confirmed by the findings of a study which Davis¹²⁵ and his associates did. It was found that more mature choices seem to correlate positively with intelligence. This result might have been different if the participants were also counselled. In another study, Gribbons and Lohnes¹²⁶ found that bright students made choices which were consistent with their measured intelligence.

Counselling should help both high and under-achieving students to understand themselves and the available opportunities in order to make wise choices. However wherever counselling services are inadequate, it is logical to expect that greater intellectual ability (represented by academic performance) aids students in making appropriate decisions concerning choices of WASC subjects, post-secondary institutions and occupations.

An appropriate choice of subjects keeps open the possibility of subsequent choices of related professions. The secondary school student who chooses subjects such as chemistry, physics and mathematics can eventually choose a career in medicine, engineering, etc., all things being equal.

125. Davis, Donald A. et.al. Occupational Choice of Twelve-year-olds. Personnel Guidance Journal, Vol.40, 1962, pp.628-629.

126. Gribbons, W.D. et.al. op. cit., pp.211-219.

The review of literature in the following chapter has revealed two main ideas which form a summary of several general theories. One of these two ideas is that students who receive counselling are in most cases at an advantage in academic accomplishment. The second is that some students in the secondary schools make choices which are consistent with their measured intelligence or academic performance. Based on these ideas, assumptions and hypotheses were formulated to guide the present outcome research investigation.

2:8 Assumptions

This study was based on the assumptions given below:

- (1) Counselling improves the choice-making processes of students.
- (2) Intelligence as represented by academic performance influences the choice-making processes of students.

2:9 Hypotheses

The following hypotheses were explored in order to achieve the purpose of the study:-

- (1) The factors which influence choice of WASC subjects are not different for counselled and noncounselled secondary school students.
- (2) Counselled students make more appropriate choices of WASC subjects than do noncounselled students.
- (3) Influential factors in the choice of post-secondary institutions are not significantly different for counselled and noncounselled students.

- (4) Students who receive the benefit of counselling are more likely to make appropriate choices of post-secondary institutions than those who did not receive counselling.
- (5) The particular occupations chosen by students in the counselled group do not differ significantly from those of students in the noncounselled group.
- (6) There is no difference in the factors which influence occupational choices of counselled and noncounselled students.
- (7) Students who are counselled probably make more appropriate occupational choices than noncounselled students.
- (8) Students who belong to a higher category of academic performance will make appropriate choices of WASC subjects than those who belong to a lower category.
- (9) There will be increase in appropriate choices of post-secondary institutions with higher levels of academic performance.
- (10) There will be a significant difference in realistic occupational choices for the different academic performance categories of secondary school students.

CHAPTER 3

DESIGN AND PROCEDURE

3:1 Population of Secondary Schools in Bendel State

The 1975/76 Bendel State Education statistics showed that there were 166 secondary schools in the State. The statistics indicated an enrolment of 81,165 students for one hundred and forty-nine schools excluding H.S.C. classes. The enrolment figures for the two Federal Government secondary schools were not provided.

3:2 Subjects in the Sample

A sample of 5 out of the 11 secondary schools with organized guidance services was selected to form the counselled group. Out of the 26 secondary schools without adequate guidance services, 5 were also selected to provide comparison with the counselled group. Thus a total of 10 secondary schools were involved. In either group, two boys', two girls' and one mixed schools were selected. Table I shows the distribution of schools between the sexes.

TABLE I
School Sampling Design

Type of School	Schools with Guidance Services	Number Selected	Schools without Guidance Services	Number Selected
Boys	5	2	8	2
Girls	4	2	10	2
Mixed	2	1	8	1
Total	11	5	26	5

Thirty students were selected randomly from each of the three classes of the ten secondary schools giving a total of 900 participants. An equivalent number of participants was selected from each school without regard to variability of student distribution in the schools. Table 2 shows the distribution of students in classes throughout the schools.

TABLE 2
Student Distribution in Schools

Groups	Schools	Form II Total Subjects	Form III Total Subjects	Form IV Total Subjects
COUNSELLED	1	122 30	124 30	132 30
	2	131 30	152 30	150 30
	3	184 30	167 30	110 30
	4	121 30	169 30	136 30
	5	134 30	128 30	114 30
NON- COUNSELLED	6	113 30	117 30	119 30
	7	278 30	254 30	251 30
	8	189 30	199 30	193 30
	9	176 30	156 30	100 30
	10	156 30	154 30	136 30
	Total	1,604 300	1,620 300	1,441 300

The overall average age of subjects during the first year of this study was 15.4 years. Only 25 (2.92%) subjects were aged 12 years. 94.5% representing 805 subjects were aged between 13 and 18 years. The remaining 26(3.04%) subjects were aged 19 and 20 years. Age ranged from 12

through 20 years.

Selection of Students into Academic Performance Categories

A student was considered to belong to any particular category if his academic performance was consistent during two terminal results. Ten students were selected randomly to represent each category.

All the low-achievers of each class in schools with adequate guidance services were combined to form the low-achievers category. A similar approach was adopted to obtain the average and high-achievers categories. The students from schools with adequate guidance services made up the counselled group and those from schools without organized guidance services formed the noncounselled group. All three categories were also determined for the non-counselled group. Table 3 shows the 1978 distribution of students in academic categories.

TABLE 3
Student distribution in Academic Categories

Groups	Academic Performance Category	Boys	Girls	Total
Counselled	L	73	67	140
	A	77	66	143
	H	79	65	144
Non-Counselled	L	77	68	145
	A	75	69	144
	H	75	65	140
Total		456	400	856

3:3 Research Instruments

(1) Questionnaires

Three questionnaires were used and each was concerned with only one dependent variable. Their description follows-

(a) WASC subjects Questionnaire

This questionnaire was designed to identify how subjects are chosen by secondary school students for the WASC examination. It contains 11 items and they are based on the particular decisions that secondary school students make in choosing whatever subjects interest them. Items therefore seek information about the particular subjects; class where subjects are chosen for the WASC in the student's school; reasons why students want to choose subjects in a particular class; whether a student thinks that his WASC subjects were forced upon him or her; student's future course at a post-secondary institution; reasons for subject choice and whether a student's three subjects of highest interest would be studied even if the teachers were disliked.

(b) Post-Secondary Institution Questionnaire

The purpose of this questionnaire was to establish assistance received in the recognition of the

various considerations in the process of choosing a post-secondary institution. The 11 items contained in the questionnaire require information on students' future education plans; the post-secondary institution of a student's choice; reasons for choice of institutions; influential persons in the choice of an institution; whether the choice is influenced by geographical location of an institution and whether a student is decided about his or her choice of a post-secondary institution.

(c) Occupation Questionnaire

This questionnaire was directed towards the choice of a life career and hence attention was focussed on the types of work in Nigeria and in which students could be interested to go into. Thirteen items are contained in the questionnaire and they seek information about occupations students have selected; class where decision was made; requirements considered for occupational choice; influential people in the decision; how information about the occupation was obtained; and a student's ideal occupation.

Validation of the Questionnaires

In order to ensure validity, specialists in educational psychology were invited to check

through the questionnaires. Two of the specialists were in the Faculty of Education, University of Benin and the other was my supervisor for this study. These psychologists determined whether the questionnaires had content validity, and whether ambiguities and inadequate wordings would be eliminated.

After the first data collection with these questionnaires, validation continued. The occupational choices of 30 students were compared with results of the Grand Republic of Zambia Occupational Interest Inventory. There was correspondence in 24 (80%) out of the 30 choices.

The finding by Dole¹²⁷ that major factors in educational decisions are generally comparable to factors obtained on the determinants of occupational decisions was taken into consideration. The questionnaires of the 30 subjects mentioned above were checked and 14 (66.67%) out of 21 gave "consideration for an occupation" as a factor for choosing their subjects and post-secondary institutions.

127. Dole, Arthur. op.cit., pp.73-79.

(2) Occupational Interest Inventories

Two occupational interest inventories were used and each inventory was employed once during the two occasions of data collection.

(a) Grand Republic of Zambia (GRZ) Occupational Interest Inventory

This occupational interest inventory was originally developed in Zambia and used for secondary school students. Attempts have been made to adapt it to the experiences of Nigerian students. One of such examples was the revision exercise by the participants of the Guidance and Counselling Seminar which was conducted by the Institute of Education, Ahmadu Bello University in 1973. In addition, Kaduna State Ministry of Education has adapted it for use with her secondary school students. The Ministry had tried it out on 2,300 students by 1975. The expression has been given by the Ministry that the inventory is an essential instrument to help careers-master prod the students into thinking rationally about the future.

Adugbo¹²⁸ utilized it in evaluating the guidance services in selected secondary schools in Bendel State. The findings showed that the instrument is

128. Adugbo, A.J. op. cit., pp.63-65.

relevant in the measurement of occupational decision-making process. For instance, oral interviews following administration of the instrument in two schools revealed that the GRZ results of 16 and 18 out of 20 students in each school corresponded with their expressed occupational interests.

At the moment, the inventory has no norms. Its users have always developed local norms. The present study used as a norm the congruence between expressed interest and inventoried interest with WASC subjects.

(b) The Vocational Interest Inventory (VII)

This is an inventory developed by Bakare¹²⁹. The basic motivation for the construction was that despite the considerable improvement in inventories developed in European countries, they are still unsuitable in many respects for use in Africa. Occupations and activities which are available in Africa formed the content. Seven principles of interest measurement proposed by Kuder (1970) were adopted to guide the construction of this inventory.

129. Bakare, C.M.G. The Construction and Validation of a Vocational Interest Inventory for use in Africa, pp.1-9.

Interest areas are similar to those found in the GRZ Occupational Interest Inventory. Since this inventory does not use the forced-choice format characterized by GRZ inventory, the use of the Vocational Interest Inventory helps to increase freedom of choice and reduce threat.

Reliability and Validity

In determining reliability, two groups of secondary school pupils were used and each group consisted of 20 boys and 20 girls. The administration of the inventory was with an interval of 8 weeks. Test-retest reliabilities ranged from .57 to .92 for both groups.

Concerning the content and face validities the author included activities which lie within the experience of African subjects. Inter-correlations among the ten interest areas were derived to testify to the construct validity and the figures ranged from .00 to .53.

3:4 Procedure

Administration of Questionnaires

The three questionnaires were administered personally by the investigator in all the forms. There was only one testing session in each school per occasion during the

two occasions of data collection (1978 and 1979 occasions of data collection). Participants were arranged according to forms in an assembly hall and in some schools, a large classroom depending upon whichever was provided by the school authorities.

The order of administration of the questionnaires during each occasion of data collection was "choice of WASC subjects" first, followed by "choice of a post-secondary school" and the "choice of an occupation" was last.

Instructions on how to fill each questionnaire followed its distribution. Subjects filled the questionnaires without any discussion with classmates. Assistance was given to only those who needed it.

Administration of Inventories

The GRZ Occupational Interest Inventory was administered during the first occasion of data collection, and the Vocational Interest Inventory was administered during the second occasion. Students were told that the GRZ Occupational Interest Inventory was to help them determine their occupational choices and therefore a deeper understanding of themselves. On the other hand, the Vocational Interest Inventory was used to establish the choices already determined by use of the GRZ.

Instructions were read carefully to specify that there were no right or wrong answers. Instead, it was their own preferences which were important. There was also no need to be influenced by friends as no two students have the same interests. The results would serve as a starting point from which they could explore possible lines of development in the future.

The practice number in the GRZ inventory was then illustrated on the blackboard and at the end of the testing session, subjects helped to check through the inventory to ensure that they had indicated their choices for all the pairs. The students also took part in scoring it. There was no practice number in the Vocational Interest Inventory and students did not take part in scoring it.

3:5 Procedure for Analyzing Data

Discrete variables were involved in this investigation. Therefore, percentages, the standard error (SE) formula¹³⁰ and chi-square values were used in testing the hypotheses. Other more powerful statistics could be employed as this study was concerned with the responses of subjects which fell in various categories.

¹³⁰. Garrett, H.E. Statistics in Psychology and Education. Longmans, London: 1967, pp.235-236.

The chi-square values were calculated based on a 2 x 2 contingency table with class categories on one dimension and frequencies of factors on the other dimension. All three procedures were aimed at testing the hypothesis that these responses would differ in frequency. The standard error (SE) formula was applied to determine the significance of the difference between two per cents representing observed frequencies of counselled and noncounselled students. Groups were mainly compared on the total rating but in some cases a series of rating of specific variables were used.

CHAPTER 4

RESULTS AND INTERPRETATION OF DATA

4:1 Actual Participants

Even though the design shows a sample of 900 participants yet, some of the students did not take part as they were absent during the occasions of data collection. The actual participants were 856 in 1978 and 724 in 1979. Some specific contributory factors towards students' failure to participate were the dropout phenomenon as a result of grades received in examinations and transfers of parents or guardians particularly during the second year of the study. Tables 4 and 5 show the actual number of students who took part on the two occasions of data collection.

TABLE 4
1978 Participants by Class and Group

Schools	II		III		IV		Total	
	Boys	Girls	Boys	Girls	Boys	Girls		
COUNSELLED	1	30	-	29	-	28	-	87
	2	28	-	30	-	28	-	86
	3	21	6	17	10	18	8	80
	4	-	26	-	30	-	30	86
	5	-	30	-	28	-	30	88
Total		79	62	76	68	74	68	427
NON-COUNSELLED	6	28	-	30	-	30	-	88
	7	30	-	30	-	28	-	88
	8	14	14	19	9	18	9	83
	9	-	30	-	30	-	30	90
	10	-	26	-	28	-	26	80
Total		72	70	79	67	76	65	429
								856

Table 5:1979 Participants by class and group

SCHOOLS		III Boys Girls		IV Boys Girls		V Boys Girls		Total
COUNSELLED	1	26	-	23	-	22	-	71
	2	25	-	27	-	24	-	76
	3	17	6	14	10	16	8	74
	4	-	26	-	30	-	23	79
	5	-	26	-	21	-	24	68
Total		68	58	64	61	62	55	368
NON-COUNSELLED	6	23	-	25	-	24	-	72
	7	26	-	22	-	20	-	68
	8	13	9	15	6	14	5	62
	9	-	29	-	27	-	28	84
	10	-	23	-	27	-	20	70
Total		62	61	62	60	58	53	356
								724

4.2 CHOICE OF WASC SUBJECTS

The suggestion of hypothesis 1 is that the factors which influence choices of WASC subjects would be similar for both counselled and noncounselled students from the lowest to the highest form of the secondary grammar schools participating in this investigation. To test this hypothesis, students were provided with a list of influential factors for choice of subjects in a questionnaire and they were asked to tick the one which was most appropriate. The factors included

'other subjects needed were not offered; student's personal interest; liking for a teacher; parents' advice; examination success; friend's influence; the career-master/counsellor's assistance and reason not quite known.

In analyzing the responses, percentages of students who chose WASC subjects on the basis of each factor were used to test the differences between influence of factors on counselled and noncounselled students. The 1978 results are presented in Table 6.

Table 6:

1978 Counsellled and noncounselled students choosing WASC subjects on the basis of each factor

No.	Factors	COUNSELLED			NONCOUNSELLED			SE of Diff. +
		Boys	Girls	Total	Boys	Girls	Total	
1.	Other subjects needed not offered	16 (6.99)	7 (3.54)	23 (5.39)	11 (4.85)	19 (9.41)	30 (6.99)	0.94
2.	Students' personal interest	88 (38.43)	103 (52.02)	191 (44.73)	106 (46.70)	76 (37.62)	183 (42.66)	0.61
3.	Liking for teachers	12 (5.24)	16 (8.08)	28 (6.56)	16 (7.05)	24 (11.88)	40 (9.32)	1.49
4.	Parents' Advice	16 (6.99)	16 (8.08)	32 (7.49)	20 (8.81)	38 (18.81)	57 (13.29)	2.78 *
5.	Good grades received in exams	46 (20.09)	23 (11.62)	69 (16.16)	30 (13.22)	27 (13.37)	57 (13.29)	1.19
6.	Friend's influence	12 (5.24)	14 (7.07)	26 (6.09)	21 (9.25)	12 (5.94)	33 (7.69)	0.92
7.	Career-master/counsellor's assistance	17 (7.42)	10 (5.05)	27 (6.32)	-	-	-	
8.	Reason not quite known	22 (9.61)	9 (4.55)	31 (7.26)	23 (10.13)	6 (2.97)	29 (6.76)	0.29
Total		229	198	427	227	202	429	
		100.00	100.00	100.00	100.00	100.00	100.00	

Note: The figures with decimal points represent percentages while the others represent frequencies. + represents (difference)

*represents statistical significance at .05 level.

Table 6 gives the percentages of Counsellled and noncounsellled students selecting WASC subjects on the basis of each factor. The difference between the two groups was significant in only one out of the eight factors. A statisfically significant difference exists between the two groups as regards parents advice as a factor for choosing WASC subjects. It is further observed that more noncounsellled (13.29%) than counsellled (7.49%) students chose their WASC subjects with regard to advice by their parents.

Results in table 6 also show that a student's personal interest was the most popular reason for choosing subjects in both counsellled and noncounsellled groups.

"Good grades received in examinations" was placed in the second position in both groups. Only 27 (6.32%) out of the 427 counsellled students mentioned the careers master's or counsellor's assistance as an influential factor.

In explaining this situation, at least one factor could be considered. Perhaps, the careers-masters were ineffective in their assistance to the students while selecting subjects for the WASC examinations. Failure on the part of the Ministry of Education to implement certain incentives for careers masters may have led to their lack of enthusiasm.¹³¹

131. Aduabo, A. J. *Op. cit.*, p. 110.

A comparison of the sexes showed that "a student's personal interest" ranked first as a factor in the choice of WASC subjects for both boys and girls in the counselled and noncounselled groups. More counselled girls than noncounselled girls and boys depended upon their personal interests for choosing WASC subjects. Counselled boys were less than their counterparts in the noncounselled group who considered their personal interests as the most relevant factor. "Good grades received in examination" ranked second in the case of both sexes in the counselled group while it was placed second by only boys in the noncounselled group. It occupied the third place in the case of noncounselled girls.

The least preferred factors were "liking for teachers" and "friend's influence" in the case of counselled boys while they were "other subjects needed not offered" and "liking for teachers" in the case of noncounselled boys. "Other subjects needed not offered" and "Career-master/counsellor's assistance" were the least preferred factors by noncounselled girls. The 1979 choices of WASC subjects on the basis of each factor are presented on table 7.

Table 7

1979 Counsellled and Noncounsellled students choosing WASC subjects on the basis of each factor.

No.	Factors	COUNSELLED			NONCOUNSELLED			SE of diff.
		Boys	Girls	Total	Boys	Girls	Total	
1.	Other subjects needed NOT offered	44 (22.68)	25 (14.37)	69 (18.75)	19 (10.44)	9 (5.17)	28 (7.87)	4.3*
2.	Students' personal interest	41 (21.13)	37 (21.26)	78 (21.20)	69 (37.91)	47 (27.01)	116 (32.58)	3.46*
3.	Liking for teachers	20 (10.31)	14 (8.05)	34 (9.24)	8 (4.40)	43 (24.71)	51 (14.33)	2.13*
4.	Parents' advice	16 (8.25)	11 (6.32)	27 (7.34)	12 (6.59)	16 (9.20)	28 (7.87)	0.27
5.	Good grades received in examinations	16 (8.25)	17 (9.77)	33 (8.97)	20 (10.99)	12 (6.90)	32 (8.99)	T
6.	Career-master/Counsellor's assistance	16 (8.25)	11 (6.32)	27 (7.34)	-	-	-	-
7.	Reason not quite known	-	-	-	11 (6.04)	15 (8.62)	26 (7.30)	-
8.	Consideration for employment	41 (21.13)	59 (33.91)	100 (27.17)	43 (23.63)	32 (18.39)	75 (21.07)	1.92*
Total		194 (100.00%)	174 (100.00%)	368 (100.00%)	182 (100.00%)	174 (100.00%)	356 (100.00%)	

* : represents statistical significance at .05 level.

T: Fraction too small.

Table 7 indicates the responses of both counsellled and noncounsellled students in the choice of WASC subjects on the basis

of influential factors. The number of students who considered each factor as being influential is written together with its corresponding percentage. A comparison of the two groups by use of the total columns shows that four instances are statistically significant.

Judging the results over the two years of study, the hypothesis that the factors which influence choice of WASC subjects are not different for counselled and noncounselled secondary school students has been partially supported. Since the 1979 comparisons of the two groups show significant differences, it means that counselling has become more effective. Probably, it was the increase in guidance information that helped counselled students in making decisions.

To determine the relative importance of each influential factor in choosing WASC subjects, the data were further analyzed. As shown in Table 7, "consideration for after school employment" was included in the list of factors influencing choice of WASC subjects during the 1979 data collection session. On the other hand, "friend's influence" was inadvertently omitted. However, the comparison of counselled and noncounselled students was considered valid as the hypothesis sought to determine the difference between the two groups instead of the relative influence of each factor over the two years.

"A student's personal interest" maintained its first position of the previous year as the most frequent reason for choosing subjects in the noncounselled group while "consideration for after school employment" replaced it in the case of the counselled group. The second most frequent reason was "a student's personal interest" in the counselled group while it was "consideration for after school employment" in the noncounselled group.

"Parents' advice" lost its influence in either group over the two years of study. The loss was 0.15 percent from 7.49 percent in 1978 to 7.34 percent in 1979 for counselled students while the loss was 5.42 percent from 13.29 percent in 1978 to 7.87 percent in 1979 in the noncounselled group.

There was an improvement in the number of counselled students who felt that they did not know the reason for choosing their subjects. Although only 31 (7.26%) out of 427 counselled students did not know why they chose subjects in 1978 yet, all of them knew in 1979.

The least preferred factors were "career-master/counsellor's assistance" and "parents' advice" in the case of counselled students while they were "other subjects needed not offered" and "parents' advice" among the non-counselled students.

"A student's personal interest maintained its position of supremacy only in the case of noncounselled boys and girls throughout the two years of study. The most frequent reason for counselled students of both sexes changed to "consideration for employment". Quite interesting however is that more noncounselled boys than counselled boys considered employment an important factor in their choices.

More boys and girls in the counselled group than the noncounselled group chose their subjects because other

subjects needed were not offered. While 19 (10.44%) out of 182 noncounselled boys chose their subjects after a consideration of the above factor, 44 (22.68%) out of 194 counselled boys did so. Similarly, only 9 (5.17%) out of 174 noncounselled girls as compared with 25 (14.37%) out of 174 counselled girls chose their subjects because other subjects needed were not offered.

4.3 Appropriateness of WASC subjects choice

Hypothesis 2 implies that since counselled students know the important considerations for subject choice, they are most likely to choose post-secondary courses related to their subjects. It was also borne in mind that counselled students would not allow their post-secondary courses to be controlled by their likes and dislikes for teachers.

Students were asked in the questionnaire to indicate the three subjects in which each of them was most interested. In analyzing the responses, a relationship was expected to exist between the three subjects and the post-secondary course. Furthermore the respondent has to show his commitment to the three subjects by stating that he would study them even though the teachers were disliked. It was only then that the concept of congruence between WASC subjects and the post-secondary course was accepted. The rigid requirements for post-secondary courses were strictly adhered to. For instance, mathematics, physics and chemistry

are compulsory for medicine and engineering. English is compulsory for all arts students as mathematics is compulsory for all social science and science students.

The number of students making appropriate choices of subjects was tabulated and percentages were then calculated to test differences between frequencies of groups. Results appear on tables 8 and 9.

Table 8: 1978 students making appropriate choices of WASC subjects in both counselled and noncounselled groups.

SEX	Total	COUNSELLED Students making appropriate choices of WASC subjects	Total	NONCOUNSELLED Students making appropriate choices of WASC subjects	SE of diff.
Boys	229	203 (88.65%)	227	196 (86.34%)	0.75
Girls	198	172 (86.87%)	202	173 (85.64%)	0.36
ALL Boys and Girls	427	375 (87.82%)	429	369 (86.01%)	0.78

Table 8 shows the numbers and percentages of students making appropriate choices of WASC subjects in 1978. The difference between the two groups does not show any significant difference. Nonetheless, the information shows some difference in favour of counselled students particularly in respect of congruence between WASC subjects and post-

secondary courses. A higher percentage of counselled (87.82%) than noncounselled (86.01%) students fulfilled the requirements for congruence.

In an attempt to know the favourite subjects and the effects they have on the most frequently mentioned post-secondary courses, data were further analyzed and the results follow. Of the 427 counselled students, 106 (24.82%) opted for a course in medicine. Another 90 (21.08%) students chose courses in science. Engineering was the third preferred course with only 41 (9.6%) students mentioning it. A course leading to qualification in teaching was least preferred as only 21 (4.96%) students would pursue it at the post-secondary level. Nursing was preferred by 35 (8.2%) students.

The subjects frequently mentioned by counselled students among the three subjects of highest interest were biology by 180 (14.05%) and mathematics by 177 (13.82%) students. English language which is the single most compulsory subject for post-secondary courses was placed third with 148 (11.55%) students mentioning it. Chemistry and Physics were fourth and fifth with 132 (10.3%) and 122 (9.52%) students respectively.

In the case of the noncounselled students, the trend of preference for post-secondary courses was similar to that of the counselled students. Out of 429 students in the group,

88 (20.51%) chose medicine and another 73 (17.02%) would like other science courses. Nursing was mentioned by 68 (15.85%) students.

The subjects mostly liked were biology by 168 (13.05%), English language by 151 (11.73%), Mathematics by 127 (9.87%), Chemistry by 118 (9.17%) and Physics by 84 (6.53%) students.

Generally, the difference between the number of boys and girls whose subjects were congruent with their post-secondary courses was slight in either group. For instance, while 196 (86.34%) out of the 227 noncounselled boys met the requirements, 173 (86.64%) out of the 202 girls did so in the same group.

Table 9: 1979 Students making appropriate choices of WASC subjects in both Counsellled and Noncounselled groups.

SEX	Total	COUNSELLED Those making appropriate choices of WASC subjects	Total	NONCOUNSELLED Those making appropriate choice of WASC subjects	SE of Diff.
Boys	194	176 (90.72%)	182	146 (80.22%)	2.9*
Girls	174	133 (76.44%)	174	144 (82.76%)	2.07*
ALL Boys and Girls	368	309 (83.97%)	356	290 (81.46%)	0.89

* represents statistical significance at .05 level.

A comparison of obtained overall frequencies for the two groups (table 9) were not significantly different.

When the counselled boys on the one hand and the counselled girls on the other hand were compared with their counterparts in the noncounselled group, results were significantly different. It is also noticed that of the 203 (88.65%) out of the 229 counselled boys who satisfied the criterion for congruence in 1978, 164 (80.79%) were consistent. Noncounselled boys with consistent responses were less. 196 (86.34%) out of 227 noncounselled boys fulfilled congruence but only 133 (67.86%) were consistent. Only 129 (75%) of 172 (86.87%) out of the 198 counselled girls were consistent while 169 (97.69%) of the 173 (85.64%) out of the 202 noncounselled girls were consistent.

Medicine, other science courses and engineering were mentioned in the same order of the previous year as the most frequent post-secondary courses by counselled students. The percentages of students who chose ~~medicine~~ and ~~engineering~~ courses increased between 1978 and 1979. Other science courses decreased. Medicine rose from 24.82 percent to 25.54 percent while engineering increased by 2.08 percent from 9.6 percent to 11.68 percent. Other science courses had a decrease of 0.7 percent from 21.08 percent to 20.38 percent. Only a few students gave indication to pursue a course leading to qualification in teaching. While 21 (4.92%) out of 427 counselled students preferred it in 1978, it was 20 (5.43%) out of 368 students who did so in 1979.

In the case of noncounselled students, the trend of preference for post secondary courses was different. Courses were not consistently mentioned in the same order. The most frequently mentioned courses were nursing with an increase of one percent; other science courses with a decrease of 0.45 percent and medicine with a decrease of 7.87 percent.

Subjects most frequently mentioned by counselled students as their favourites were mathematics by 149 (40.49%), chemistry by 147 (39.95%), biology by 143 (38.86%), physics by 124 (33.7%) and English language by 100 (27.17%). The order of most frequent post-secondary courses in the noncounselled group was nursing mentioned by 60 (16.85%), other science courses by 59 (16.57%) and medicine by 45 (12.64%) out of the 356 students in the group. Teaching and engineering which were mentioned by 28 (7.87%) and 21 (5.9%) students respectively were placed fourth and fifth.

English language was a favourite subject for 147 (41.29%), biology for 144 (40.45%), mathematics for 112 (31.46%) chemistry for 87 (24.44%) and physics for 73 (20.51%) noncounselled students.

The significance of the information about appropriate choices of post secondary courses is that irrespective of counselling benefit most secondary school students know the post secondary courses related to their WASC Subjects.

The hypothesis that students who are counselled make more appropriate choices of WASC subjects than noncounselled students was however not borne out. Thus counselling does not have a noticeable effect on appropriateness of WASC subjects.

Factors for choice of Post-Secondary Institutions

The third hypothesis suggests that influential factors in the choice of post-secondary institutions are not different for counselled and noncounselled students. In the second questionnaire of this investigation, the participants were provided with some of the points which should be considered in choosing post-secondary institutions. They were asked to place a check in the box against the response that best applies to the type of institution each of them had chosen as already indicated in an earlier number of the same questionnaire.

Analysis of responses was in two stages. The first concerns calculation of percentages of students choosing institutions on the basis of each factor. The second stage was computation of standard error of the difference between the two groups as represented by percents.

Tables 10 and 11 show the 1978 and 1979 observed results respectively.

Table 10: 1978 Counsellled and Noncounsellled students
choosing institutions on the basis of each factor.

FACTORS	COUNSELLED			NONCOUNSELLED			SE of Diff.
	Boys	Girls	Total	Boys	Girls	Total	
1. Consideration of occupation	54 (23.58)	82 (41.41)	136 (31.85)	58 (25.55)	77 (38.12)	135 (31.47)	0.12
2. Comments by friends	14 (6.11)	7 (3.54)	21 (4.92)	10 (4.41)	14 (6.93)	24 (5.59)	0.44
3. Availability of Scholarship or Finance	18 (7.86)	9 (4.55)	27 (6.32)	12 (5.29)	15 (7.43)	27 (6.29)	0.44
4. Students knowledge of his ability	99 (43.23)	57 (28.79)	156 (36.53)	70 (30.84)	41 (20.30)	111 (25.87)	3.36*
5. I have never made such a decision	23 (10.04)	15 (7.58)	38 (8.9)	46 (20.26)	30 (14.85)	76 (17.72)	3.8*
6. My parents often spoke about the institution	7 (3.06)	20 (10.10)	27 (6.32)	19 (8.37)	12 (5.94)	31 (7.23)	0.53
7. Its high status	14 (6.11)	8 (4.04)	22 (5.15)	12 (5.29)	13 (6.44)	25 (5.83)	0.44
Total	229 (100.00)	198 (100.00)	427 (100.00)	227 (100.00)	202 (100.00)	429 (100.00)	-

Note: The figures with decimal points represent percentages while the others represent frequencies.

* represents statistical significance at .05 level.

Only two in seven comparisons of counsellled and noncounsellled students (table 10) on the influential factors for choice of post-secondary institutions were statistically significant.

Information on table 10 reveals in addition that the most frequently mentioned reason for choice of post-secondary institutions was different

for counselled and noncounselled students. While "a student's knowledge of his ability" was most popular in the counselled group, it was consideration of "after school employment" in the noncounselled group. The reason placed second in each group was the most frequently mentioned reason in the other group. Students of both groups gave a low rating to "comments by friends" and the "high status of an institution" as influential factors for choosing post secondary institutions. Noncounselled students were by far greater in number who had never made a decision concerning choice of post-secondary institutions. It was only 8.9 percent of counselled students who had not chosen their high institutions while 17.72 percent of noncounselled students failed to do so.

A student's knowledge of his ability was the most frequent reason for the choice of a post-secondary institution by both counselled and noncounselled boys. Consideration of an occupation was also the most frequently mentioned reason by girls in the two groups. More counselled girls than noncounselled girls yielded to parents' suggestions about particular post-secondary institutions. On the other hand, more noncounselled boys than counselled boys depended upon this factor.

Table 11. 1979 Counsellled and Noncounsellled students choosing institutions on the basis of each factor.

Factors	COUNSELLED			NONCOUNSELLED			SE of Diff.
	Boys	Girls	Total	Boys	Girls	Total	
1. Consideration of occupation	70 (36.08)	75 (43.10)	145 (39.40)	77 (42.31)	36 (20.69)	113 (31.74)	2.15*
2. Comments by friends	14 (7.22)	7 (4.02)	21 (5.71)	13 (7.14)	32 (18.39)	45 (12.64)	3.24*
3. Availability of scholarship or finance	20 (13.31)	4 (2.30)	24 (6.52)	15 (8.24)	41 (23.56)	56 (15.73)	3.95*
4. Students knowledge of his ability	34 (17.53)	41 (23.56)	75 (20.38)	43 (23.63)	45 (25.86)	88 (24.72)	1.4
5. I have never made such a decision	13 (6.70)	7 (4.02)	20 (5.43)	6 (3.30)	5 (2.87)	11 (3.09)	0.77
6. My parents often spoke about the institution	14 (7.22)	21 (12.07)	35 (9.51)	7 (3.85)	-	7 (1.97)	4.33*
7. Its high status	29 (14.95)	19 (10.92)	48 (13.04)	21 (11.54)	15 (8.62)	36 (10.11)	1.23
Total	194 (100.00)	174 (100.00)	368 (100.00)	182 (100.00)	174 (100.00)	356 (100.00)	

* represents statistical significance at .05 level.

Table 11 shows that four of the seven comparisons of counsellled and noncounsellled students on influential factors

for choice of institutions were statistically significant. The summary of the information about the choice of post-secondary institutions over the two years is that hypothesis 3 has been partially supported. Thus, it cannot be confidently declared that factors in the choice of post-secondary institutions are different for counselled and noncounselled students. Counselling, therefore, does not have an appreciable effect on the influential factors for choices of post-secondary institutions by secondary school students.

4.5: Appropriate choices of post-secondary institutions

The 4th hypothesis states that the students who receive the benefit of counselling are more likely to make appropriate choices of post-secondary institutions than those who are not counselled. Two criteria were employed to test the hypothesis. The first was a decision to continue education beyond the secondary school and the other was congruence between WASC subjects and post-secondary institutions.

(i) Further education plans

This criterion implies that students who receive counselling are more aware of the different fields of specialisation in post-secondary institutions, scholarship opportunities, entry requirements and the amount of fees which are charged. It was also assumed that they possess the skill in judging whether or not they have the abilities to justify their aspirations to enter particular post-secondary institutions.

This criterion was tested by use of a questionnaire in which students were required to specify their further education plans.

In analyzing the responses, the number of students who planned to continue their education beyond the secondary school was calculated by sex and group. Standard error of the difference was also computed to test differences between subgroups. The results are presented in tables 12 and 13 and they support the hypothesis.

Table 12: 1978 Students who planned to continue their education.

SEX	COUNSELLED		NONCOUNSELLED		SE of Diff.
	Total	Those who planned further education	Total	Those who planned further education	
Boys	229	226 (98.69%)	227	216 (95.15%)	2.19*
Girls	198	197 (99.49%)	202	195 (96.53%)	2.11*
All Boys and Girls	427	423 (99.06%)	429	411 (95.8%)	3.02*

* represents statistical significance at .05 level.

A significant difference exists between counselled and noncounselled students in their choices of post-secondary institutions. However, regardless of counselling benefit, most secondary school students plan to continue their education. More counselled students than their counterparts in the non-counselled group were intending to continue their education

and those who planned to further their education were generally more than ninety-five percent in either group. Girls in the two groups who would further their education were more than the boys. For instance, the percentage of girls who planned further education in either group was not less than ninety-six percent compared with ninety-five percent in the case of boys.

Table 13: 1979 students who planned to continue their education.

EDUCATION PLANS	COUNSELLED			NONCOUNSELLED		
	Boys	Girls	Total	Boys	Girls	Total
1. Definitely intending to continue	178 (91.75)	161 (92.53)	339 (92.12)	155 (85.16)	147 (84.48)	302 (84.83)
2. Not very sure to continue	6 (3.09)	2 (1.15)	8 (2.17)	14 (7.69)	17 (9.77)	31 (8.71)
3. Definitely not intending to continue	4 (2.06)	8 (4.6)	12 (3.26)	3 (1.65)	4 (2.3)	7 (1.97)
4. Don't know	6 (3.09)	3 (1.72)	9 (2.45)	10 (5.49)	6 (3.45)	16 (4.49)

Chi-square values were calculated to test the difference between the two groups and the comparison is statistically significant. The chi-square value was 18.782 for 3 df compared with the table value of 7.815 for 3 df at .05 level. The series of frequencies in the total columns were used for computing the chi-square value.

Of the 423 counselled students who planned to continue their education in 1978, 339 (80.14%) were definite about their plans in 1979. Eight (1.89%) students were not sure and 12 (2.84%) were definitely not intending again. Six (1.42%) others did not know if they would continue and 58 (13.71%) did not participate in the investigation.

Four hundred and eleven students planned to continue their education in the noncounselled group in 1978. While 302 (73.48%) of them were definite about their plans, 29 (7.06%) were not sure. Fourteen (3.41%) others felt that they would continue and 66 (16.06%) did not participate in the investigation during the 1979 session of data collection.

A University preliminary course was the most frequently preferred type of a post-secondary institution. There was a decrease in the number of counselled students and an increase in the number of noncounselled students who chose it. The counselled group had a decrease of 12.99 percent from 262 (61.36%) to 178 (48.37%) students over the two years. The noncounselled students on the other hand increased by 8.36 percent from 170 (41.36%) in 1978 to 177 (49.72%) students in 1979.

A college of Medicine was placed in the second and third positions by counselled and noncounselled students respectively in 1978. The same post-secondary institution was relegated to the third and fifth positions in the second year by counselled and non-counselled students respectively.

It was 36 (9.78%) counselled students who preferred a College of Medicine compared with 35 (9.83%) noncounselled students.

Continuation of one's education at an Advanced Teachers College was of less importance throughout the period of study. Only 7 (1.65%) counselled students and 24 (5.84%) noncounselled students planned to attend Advanced Teachers College during the first year. The situation was not much better during the second year as only 8 (2.17%) counselled students and 18 (5.06%) noncounselled students planned further education at such an institution of higher learning.

Only 21 (4.92%) counselled students want to pursue H.S.C. courses compared with 56 (13.63%) noncounselled students in the first year of this investigation. Students preferring H.S.C. courses in the second year were 36 (9.78%) counselled and 27 (7.3%) noncounselled.

The position of a Polytechnic changed from fourth in the counselled and fifth in the noncounselled groups to second in each of the groups over the two years. While the number of students were 26 (6.15%) in the counselled group, it was 33 (8.03%) in the noncounselled group during the first year of study. An increase in the number of students characterized both groups. Counselled students were 58 (15.76%) compared with 47 (13.2%) noncounselled students.

The number of students who chose nursing dropped in both groups over the two years. While the counselled group had a decrease of 4.89 percent from 46 (10.87%) in 1978 to 22 (5.98%) in 1979, the drop was 1.27% from 41(9.98%) to 31 (8.71%) in the case of noncounselled students.

(ii) Congruence between WASC subjects and Post-Secondary institutions.

This is the second criterion employed for testing hypothesis 4 which states that students who receive the benefit of counselling are more likely to make appropriate choices of post-secondary institutions than those who do not receive counselling. The appropriate choice of post-secondary institutions refer to the student's consideration of his needs, interests and abilities in the process of decision-making. The criterion of congruence between WASC subjects and post-secondary institutions ensures that a student chooses an institution which has the necessary qualities to meet his needs.

In testing the criterion, the characteristics of institutions chosen by students were considered for adequacy in meeting these needs. The number of students who made appropriate choices of post-secondary institutions in the counselled group was compared with that of the noncounselled group by use of chi-square values. Results are shown in the tables that follow.

Table 14: 1978 students whose WASC subjects were congruent with their post secondary institutions

SEX	COUNSELLED		NONCOUNSELLED	
	Total	No. fulfilling congruence requirements	Total	No. fulfilling congruence requirements
Boys	229	157 (68.56%)	227	121 (53.3%)
Girls	198	114 (57.58%)	202	116 (57.43%)
All Boys and Girls	427	271 (63.47%)	429	237 (55.24%)

Counselled and noncounselled students (table 14) were compared on all the total rating with the application of the chi-square value of 1.53 for 1df at .05 level of significance. It was not significant as the table value for 1df at .05 level of significance is 3.841.

However, the proportions of the students who fulfilled congruent requirements show some interesting results. For example, while a large percentage of counselled boys fulfilled congruence requirements, the corresponding percentage of noncounselled boys was comparatively less. The same was not the case with counselled girls and non-counselled girls. There was virtually no difference between the two groups as the difference was slight (0.15%). Within group comparison of counselled students reveals that more boys than girls had their subjects corresponding with their post-secondary institutions. On the other hand,

more girls than their male counterparts did so in the noncounselled group.

Table 15: 1979 students whose WASC subjects were congruent with their post-secondary institutions.

SEX	COUNSELLED Total Those fulfilling congruence requirements			NONCOUNSELLED Total Those fulfilling congruence requirements		
Boys	194	142	(73.20%)	182	113	(62.09%)
Girls	174	100	(57.47%)	174	110	(63.22%)
All Boys and Girls	368	242	(65.76%)	356	223	(62.64%)

Results were similar to those of 1978. The comparison (table 15) of the two groups failed to show statistical significance. The chi-square value is 0.637 for 1df as against 3.841 for 1df which is the table value. The number of students who met the congruence requirements in the counselled group were consistently more than those of the noncounselled group over the two year period. However, the noncounselled girls whose subjects corresponded with their

post-secondary institutions were more than counselled girls by 5.75 per cent during the second year of the study.

Generally, counselled boys were more than counselled girls who fulfilled congruence requirements throughout the study. The reverse was the case in the noncounselled group.

The inference from hypothesis 4 is that of partial support. While the two comparisons of the 1978 were significant, the two comparisons of 1979 were not significant.

4.6 OCCUPATIONAL CHOICES

Hypothesis 5 states that the particular occupations chosen by students in the counselled group do not differ significantly from those of students in the noncounselled group. It is assumed that counselling helps students understand themselves (i.e. in terms of interest, capacities and values) and make them become aware of available options (i.e. in terms of opportunities and limitations of reality). The occupations were classified according to the International standard Classification of Occupations.¹³² To test this hypothesis, students were provided with a list of occupations and were asked to indicate their choices. The analysis involved tabulation of percentages of students who chose each occupation. Wherever possible chi-square values were used to test difference between subgroups as regards occupational choice frequencies. In some cases of comparison, chi-square tests could not be applied as some cells contained expected frequencies less than 5. Results are shown on tables that follow.

¹³².

¹³². International Labour Office. International Standard Classification of Occupations. Geneva. 1962, P. 3.

Table 16: 1978 students choosing each Occupation.

Occupations	COUNSELLED			NONCOUNSELLED		
	Boys	Girls	Total	Boys	Girls	Total
Soldier	2 (0.87)	1 (0.51)	3 (0.70)	1 (0.44)	-	1 (0.23)
Farmer	4 (1.75)	-	4 (0.94)	2 (0.88)	-	2 (0.47)
Agricultural Officer	14 (6.11)	2 (1.01)	16 (3.75)	17 (7.49)	3 (0.49)	20 (4.66)
Clergyman	1 (0.44)	1 (0.51)	2 (0.47)	1 (0.44)	-	1 (0.23)
Artist	-	-	-	7 (3.08)	2 (0.99)	9 (2.10)
Medical Doctor	80 (34.93)	44 (22.22)	124 (29.04)	46 (20.26)	39 (19.31)	85 (19.81)
Nurse	1 (0.44)	41 (20.71)	42 (9.84)	3 (1.32)	38 (43.56)	91 (21.21)
Pharmacist	6 (2.62)	24 (12.12)	30 (7.03)	5 (2.20)	3 (1.49)	8 (1.86)
Teacher	1 (0.44)	17 (8.59)	18 (4.22)	13 (5.73)	18 (8.91)	31 (7.23)
Education Officer	-	-	-	2 (0.88)	1 (0.50)	3 (0.70)
Ship Pilot	1 (0.44)	-	1 (0.23)	3 (1.32)	-	3 (0.70)
Aeroplane Pilot	10 (4.37)	3 (1.52)	13 (3.04)	3 (1.32)	-	3 (0.70)
News Broadcaster	1 (0.44)	7 (3.54)	8 (1.87)	-	6 (2.97)	6 (1.4)
Journalist	1 (0.44)	6 (3.03)	7 (1.64)	6 (2.64)	1 (0.50)	7 (0.70)
Air Hostess	4 (1.75)	2 (1.01)	6 (1.41)	-	3 (1.49)	3 (0.70)
Lawyer	8 (3.49)	18 (9.09)	26 (6.09)	18 (7.93)	11 (5.45)	29 (6.76)
Accountant	7 (3.06)	8 (4.04)	15 (3.51)	13 (5.73)	7 (3.47)	20 (4.66)
Business Manager	22 (9.61)	7 (3.54)	29 (6.79)	31 (13.66)	5 (2.48)	36 (8.39)
Sales Agent	-	1 (0.51)	1 (0.23)	3 (1.32)	1 (0.50)	4 (0.93)
Engineer	55 (24.02)	8 (4.04)	63 (14.75)	29 (12.78)	6 (2.97)	35 (8.16)
Surveyor	3 (1.31)	-	3 (0.70)	1 (0.44)	-	1 (0.23)
Architect	5 (2.18)	2 (1.01)	7 (1.64)	12 (5.29)	2 (0.99)	14 (3.26)
Scientist	3 (1.31)	-	3 (0.70)	8 (3.52)	1 (0.50)	9 (2.10)
Catering Officer	-	6 (3.03)	6 (1.41)	-	1 (0.50)	1 (0.23)
Health Inspector	-	-	-	3 (1.32)	4 (1.98)	7 (1.63)

Comparison was based on the total rating of an occupation by boys and girls in each group. Chi-square test was therefore applied to the series of rating of occupations. The difference between the groups were significant and the chi-square value is 68.349 at 17df.

Being a medical doctor was the most popular occupation among the counselled students but it was the occupation of nurse in the case of noncounselled students. Both occupations belong to the social service category. Medical doctor was placed second by the noncounselled students compared with an engineer in the counselled group.

Both counselled boys and noncounselled boys chose medical doctor as the most popular occupation. Their girl counterparts made a nurse as most popular occupation. Only 1 (.044%) out of the 229 counselled boys would like to go into the occupation of a nurse compared with 41 (20.71%) out of the 198 counselled girls. The pattern in the noncounselled group is similar to that of the counselled group. Of the 227 counselled boys, only 3 (1.32%) chose a nurse compared with 38 (43.56%) out of the 202 noncounselled girls.

Only a few girls in both groups chose the occupations of soldier, a farmer, a clergyman, a ship pilot and aeroplane pilot. The newsbroadcaster was shown to be an occupation for girls as less boys chose it in either group. The most frequent choices of boys were medical doctor, business manager, engineer, lawyer and agricultural officer. On the other hand, the girls chose nursing, medical doctor, teacher, lawyer and newsbroadcaster as their most frequent occupational choices. The 1979 results are presented on table 47.

Table 17: 1979 Students choosing each Occupation

OCCUPATIONS	COUNSELLED			NONCOUNSELLED		
	Boys	Girls	Total	Boys	Girls	Total
Police Officer	-	-	-	-	1 (0.57)	1 (0.28)
Farmer	1 (0.52)	-	1 (0.27)	9 (4.95)	-	9 (2.53)
Agricultural Officer	6 (3.09)	3 (1.72)	9 (2.45)	15 (8.24)	-	15 (4.21)
Clergyman	-	-	-	-	2 (1.15)	2 (0.56)
Artist	1 (0.52)	3 (1.72)	4 (1.87)	4 (2.20)	4 (2.30)	8 (2.25)
Medical Doctor	60 (30.93)	37 (21.26)	97 (26.36)	28 (15.38)	33 (18.97)	61 (17.13)
Nurse	-	32 (18.39)	32 (8.7)	2 (1.10)	67 (38.51)	69 (19.38)
Pharmacist	4 (2.06)	28 (16.09)	32 (8.7)	6 (3.30)	10 (5.75)	16 (4.49)
Teacher	1 (0.52)	1 (0.57)	2 (0.54)	12 (6.60)	13 (7.47)	25 (7.02)
Education Officer	1 (0.52)	2 (1.15)	3 (0.82)	-	2 (1.15)	2 (0.56)
Ship Pilot	-	-	-	1 (0.55)	-	1 (0.28)
Aeroplane Pilot	4 (2.06)	-	4 (1.47)	4 (2.20)	-	4 (1.12)
News Broadcaster	1 (0.52)	5 (2.87)	6 (1.63)	1 (0.55)	8 (4.6)	9 (2.53)
Journalist	2 (1.03)	4 (2.30)	6 (1.63)	7 (3.85)	1 (0.57)	8 (2.25)
Air Hostess	-	1 (0.57)	1 (0.27)	-	1 (0.57)	1 (0.28)
Lawyer	20 (10.31)	27 (15.52)	47 (12.77)	23 (12.64)	8 (4.6)	31 (8.71)
Accountant	20 (10.31)	11 (6.32)	31 (8.42)	8 (4.40)	4 (2.3)	12 (3.37)
Business Manager	15 (7.73)	9 (5.17)	24 (6.52)	37 (20.33)	4 (2.3)	41 (11.52)
Sales Agent	-	-	-	7 (3.85)	1 (0.57)	8 (2.25)
Engineer	45 (23.20)	7 (4.02)	52 (14.13)	10 (5.49)	7 (4.02)	17 (4.78)
Surveyor	1 (0.52)	1 (0.57)	2 (0.54)	-	-	-
Architect	9 (4.64)	1 (0.57)	10 (2.72)	5 (2.75)	1 (0.57)	6 (1.69)
Scientist	3 (1.55)	-	3 (0.82)	3 (1.65)	1 (0.57)	4 (1.12)
Catering Officer	-	2 (1.15)	2 (0.54)	-	6 (3.45)	6 (1.69)
Totals	194 (100%)	174 (100%)	368 (100%)	182 (100%)	174 (100%)	356 (100%)

The chi-square value for the total columns of the two groups is 61.16 for 12df and this represents a significant difference. Chi-square table value is 21.026 for 12df at .05 level.

The data in table 17 also shows that a doctor was consistent as the most popular occupation among counselled students. In addition, it retained its second position in the noncounselled group. The choice of a doctor was nonetheless typified by a downward trend. Of the 124 counselled students who chose a medical doctor in 1978, only 84 (67.74%) were consistent over the two years of the study. While 12 out of the remaining 40 students did not participate in the investigation in 1979, 9 of them changed to the occupation of a pharmacist instead. It was only one who changed from medical doctor to education officer. The other 18 students (14.52%) chose occupations outside the category of social service.

In the noncounselled group 49 (57.65%) out of the 85 students who chose medical doctor in 1978 were consistent with their choices. Thirteen others failed to participate in 1979. Eight (9.52%) of the students who changed their occupational choices, selected nursing and 3 (3.53%) chose pharmacist. The remaining 12 students selected occupations outside the social service.

In conclusion, the hypothesis that the particular occupations chosen by students in the counselled group do not differ significantly from those of students in the noncounselled group is not supported. The chi-square value significantly distinguishes between the groups of students on the two comparisons.

4.7 Factors for Occupational Choices

Hypothesis 6 suggests that there is no difference in the influential factors for occupational choices of counselled and noncounselled students. To test this hypothesis, students were provided with a list of sixteen job requirements and were asked to choose one.

In analyzing the responses, the sixteen items were grouped according to Miller's Categories.¹³³ These categories are thought to be indicators of values named security, career satisfaction, prestige and social rewards. Bakare's¹³⁴ Motivation for Occupational Preference Scale (MOPS) for determining why an individual likes any particular occupation is based on the same principle.

1. Security

- (a) Earning high enough for a reasonable standard of living

133. Miller, C.H. Occupational Choices and Values. Personnel and Guidance Journal, Vol. 35, No. 4, 1956, pp. 244-246.

134. Bakare, C.G.M. Motivation for Occupational Preference Scale. Department and Institute of Education, University of Ibadan, 1970, pp. 1 - 2.

(b) No unusual hazards to health or great danger

(c) Assured steady income

(d) Certainty of continuous employment.

2. Career Satisfaction:

(a) Opportunity to use your own ideas

(b) Freedom in working out your own methods of doing things

(c) The work permits a feeling of personal achievement

(d) Opportunity to make full use of your knowledge and experience.

3. Prestige:

(a) Salary or income above the average of the community

(b) The occupation is usually followed by persons of high education

(c) The work requires intelligence rather than physical strength

(d) Good work will become known and recognized outside of your own business or professional circle.

4. Social Rewards:

(a) Satisfaction to be gained from helping people.

(b) Contact with varied and stimulating people

(c) The job will take you to a locality where there are good schools and churches

(d) Congenial working associates.

The frequencies and percentages of students choosing occupations on the basis of each value were calculated. Chi-square values were then computed to test differences between groups. Tables 18 and 19 summarize the findings.

Table 18: 1978 students choosing occupations on the basis of any value

Value	COUNSELLED		Total	NONCOUNSELLED		
	Boys	Girls		Boys	Girls	Total
1. Security	48 (20.96)	29 (14.65)	77 (18.03)	54 (23.79)	53 (26.24)	107 (24.94)
2. Career Satisfaction	106 (46.29)	102 (51.52)	208 (48.71)	87 (38.33)	73 (36.14)	160 (37.30)
3. Prestige	30 (13.10)	22 (11.11)	52 (12.18)	33 (14.54)	32 (15.84)	65 (15.15)
4. Social	45 (19.65)	45 (22.73)	90 (21.08)	53 (23.35)	44 (21.78)	97 (22.61)
Total	229 (100.00)	198 (100.00)	427 (100.00)	227 (100.00)	202 (100.00)	429 (100.00)

A comparison of the total columns by use of chi-square value is statistically significant at .05 level. The computed chi-square value is 12.854 for 3df while chi-square table value is 7.815 for 3df.

Career satisfaction was the highest value for

occupational choices in both groups and social rewards was placed second in the counselled group while it was security in the case of noncounselled students. Prestige was considered of least importance in either group.

Table 19: 1979 students choosing occupations on the basis of any value.

VALUE	COUNSELLED			NONCOUNSELLED		
	Boys	Girls	Total	Boys	Girls	Total
1. Security	43 (22.16)	38 (21.84)	81 (22.01)	46 (25.27)	51 (29.31)	97 (27.25)
2. Career Satisfaction	85 (43.81)	84 (48.28)	169 (45.92)	79 (43.41)	66 (37.93)	145 (40.73)
3. Prestige	36 (18.56)	23 (13.22)	59 (16.03)	29 (15.93)	21 (12.07)	50 (14.04)
4. Social rewards	30 (15.46)	29 (16.67)	59 (16.03)	28 (15.38)	36 (20.69)	64 (17.98)
Total	194 (100.00)	174 (100.00)	368 (100.00)	182 (100.00)	174 (100.00)	356 (100.00)

Chi-square value for the total columns is 4.021 for 3df and it does not show any significance. Chi-square table value is 7.819 for 3 df at .05 level.

Career satisfaction retained its position of supremacy as the highest value for occupational choices in both groups. The counselled group had a drop of 2.79 percent in the number of students who made occupational choices on the basis of career satisfaction. On the other hand, the noncounselled

group had an increase of 3.43 per cent. Security replaced social rewards as the second most important value in the counselled group. Career satisfaction was the most important value among counselled and noncounselled boys throughout the two years.

Although both counselled and noncounselled girls had career satisfaction as their highest value yet more counselled girls depended upon it. Noncounselled girls consistently placed security in the second position throughout the two years. Quite unlike their male counterparts, counselled and noncounselled girls consistently placed prestige as the value of least importance.

The hypothesis that there is no difference in the influential factors for occupational choices of counselled and noncounselled students has not been completely fulfilled. The conclusion is that counselling is very likely to improve the ability to make occupational choices on the basis of any value.

4.8 Appropriateness of Occupational Choices

Hypothesis 7 implies that if students are counselled, they will make more appropriate occupational choices. The criterion employed to test this hypothesis called for a relationship between WASC subjects, occupational choice and the results of the occupational interest inventories. As it has been pointed out, such a relationship was fulfilled

if a student's WASC subjects included those which are required for a preferred occupation. In addition, the results of the occupational interest inventory should correspond with the preferred occupation.

The two occupational interest inventories used were the G.R.Z. and the Vocational Interest Inventories. The frequencies of occupational choices were used to decide the particular occupation which a student had chosen.

In analyzing the results, WASC subjects were considered for their relationship with the particular occupation a student had chosen and the results of the inventory. Both the G.R.Z. Occupational Interest Inventory and the Vocational Interest Inventory contain major occupational areas. And due to the variety of occupations which can be classified under each group and the subject requirements, an explanation of the occupational areas is presented below.

- 1: Mechanical embraces all occupations which require constructing, repairing and operating things by use of the hands. Such occupations include all aspects of engineering and the subject requirements are mathematics, physics and chemistry.
2. Computational. Occupations in this area involve accounting, arithmetical and statistical procedures

and they include account, banking, customs and excise. Among the subject requirements are accounts, economics, commerce and mathematics.

3. Scientific. This includes activities associated with laboratories or the study of natural phenomena. Occupations are in the field of geology, biochemistry, pharmacy, neurology, political science, urban and regional planning. The subject requirements are mathematics, physics, chemistry and biology.
4. Persuasive. Involves selling ideas or things and generally influencing other people. Common occupations in this area are salesmanship, business (trading and contracting) and law. A variety of subjects are relevant but English, history, economics and government rank high.
5. Literary. A great deal of reading or writing of articles, reports, stories etc. is essential. Journalism and broadcasting are among the variety of occupations available in this area. Subjects such as English, history and linguistics are very necessary.
6. Artistic. Occupations in this area include painting, illustrating, designing, photographic activities and drawing. A salient subject is art.

7. Social Service. These are occupations in which the primary concern is to attend to the needs and welfare of other persons. Included in the list of occupations are guidance, teaching, human medicine and nursing. Subjects such as biology, chemistry, health science, mathematics and a variety of other subjects are relevant.
8. Clerical. Involves writing routine letters, keeping records, sorting papers and typing. The most relevant subjects are shorthand and typing.
9. Outdoor. This group includes agricultural, fishing, forestry, mining and similar occupations associated with the open air. Biology, economics, geography and agricultural sciences are subjects which provide necessary intellectual requirements.
10. Music. This includes performing, teaching and music therapy. The performing aspect involves working on television commercials, film background music and other light music recording sessions etc. Teachers of music do the work either full-time in one school possibly with a second subject or part-time in many schools. Music therapy involves development and treatment of handicapped and of maladjusted people. While broadcasting, dancing, film production and teaching are the related occupations,

the subject requirements include music and English Language.

Table 20: 1978 students making appropriate occupational choices.

SEX	COUNSELLED Those making appropriate occupational choices			NONCOUNSELLED Those making appropriate occupational choices		
	Total			Total		
Boys	229	87	(37.99%)	227	64	(28.19%)
Girls	198	78	(39.39%)	202	67	(33.17%)
All boys and girls	427	165	(38.64%)	429	131	(30.54%)

The computed chi-square value of 2.00 for 1 df failed to show a significant difference as the chi-square table value is 3.841 for 1df at .05 level. Results still show some differences in favour of counselled students. Appropriate occupational choices were more typical of counselled boys and counselled girls than their counterparts from the noncounselled group. Quite interesting is that appropriate occupational choices were more typical of girls than boys in each of the two groups. The 1979 results are presented in table 21 and the chi-square value of 2.84 for 1df did not also show any significant difference at the .05 level.

Table 21: 1979 students making appropriate occupational choices.

SEX	COUNSELLED Those making appropriate occupational choices.			NONCOUNSELLED Those making appro- priate occupational choices.		
	Total			Total		
Boys	194	98	(50.52%)	182	66	(36.26%)
Girls	174	68	(39.08%)	174	61	(35.06%)
All boys and girls	368	166	(45.11%)	356	127	(35.67%)

Students who made appropriate occupational choices increased in either group between 1978 and 1979. While the counselled group had an increase of 6.47 per cent the noncounselled group had an increase of 5.15 per cent.

Of the 166 (45.11%) out of the 368 counselled students who made appropriate occupational choices, only 147 (39.95%) were consistent. On the other hand, only 111 (30.41%) out of the 365 noncounselled students were consistent in their choices.

Fifty-three (26.24%) out of the 202 counselled students who did not fulfil the requirements for congruence satisfied the academic requirements of their occupational choices. It was 49 (21.4%) out of the 229 noncounselled students who did not fulfil the criterion for congruence that satisfied

the academic requirements of the occupational choices.

Although there was an increase in the number of both counselled and noncounselled boys who made appropriate occupational choices during the two years, the increase was higher in the counselled group. Seventy-nine (90.8%) out of the 87 counselled boys who made appropriate occupational choices during the second year were consistent. On the other hand, 53 (80.3%) out of the 66 noncounselled boys who made appropriate choices were consistent. The counselled boys who were consistent in their choices increased by 12.53 per cent as against the 8.07 per cent of noncounselled boys. There was a drop of 0.31 per cent in the number of counselled girls who were consistent in their choices compared with an increase of 1.89 per cent for noncounselled girls.

On the whole, the hypothesis that if students are counselled they will make more appropriate occupational choices has not been supported.

4.9 Academic Performance

This hypothesis suggests that a student's level of academic performance will affect his choices of subjects, post-secondary institutions or occupations. Participants were categorized into low, average and highachievers by use of the discrepancy between their academic performance in class as represented by grades in various subjects, when compared to the other students. Being members of the same population with other students in this sample, the same

criteria have therefore been used.

4.10 Appropriateness of WASC subject choices

Hypothesis 8 says that if a student belongs to a higher category of academic performance then he will make more appropriate choices of WASC subjects. Students were asked in the questionnaire to show their three favourite subjects. A relationship was expected to exist between these subjects and the post-secondary courses.

To analyze the responses, the number of students making appropriate choices of subjects was tabulated and standard error of the difference was calculated. Results are shown in tables 22 and 23.

Table 22: 1978 students per academic category making appropriate choices of subjects

Groups	Academic Performance category	Boys		Girls		All boys and all girls		SE of Diff
		Total	Those making appropriate choice of WASC subjects	Total	Those making appropriate choice of WASC subjects	Total	Those making appropriate choice of WASC Sub- jects	
COUN- SELLED	L	73	63 (86.3%)	67	54 (80.6%)	140	117 (83.57%)	1.1 1.00
	A	77	69 (89.61%)	66	57 (86.36%)	143	126 (88.11%)	
	H	79	71 (89.87%)	65	61 (93.85%)	144	132 (91.67%)	
NON- COUN- SELLED	L	77	63 (81.82%)	68	56 (82.35%)	145	119 (82.07%)	0.77 1.37
	A	75	66 (88%)	69	57 (82.61%)	144	123 (85.42%)	
	H	75	66 (88%)	65	61 (93.85%)	140	127 (90.71%)	

Table 22 indicates that comparisons of academic performance categories within each group in making appropriate choices of subjects were not statistically significant. It is however observed that the percentages of boys who made appropriate choices of WASC subjects in counselled subgroups were higher than those of the noncounselled subgroups. In the case of girls the percentages were higher in only one out of the three comparisons. The 1979 results are presented in table 23 that follows.

Table 23: 1979 students per academic category making appropriate choices of subjects.

Groups	Academic performance Categories	Boys		Girls		All Students	SE of Diff.
		Total	No making appropriate choices	Total	No. making appropriate choices	Total No. making appropriate choices	
COUN-SELLED	L	64	61 (95.31%)	57	39 (68.42%)	121 100 (82.64)	0.96 3.03
	A	66	54 (81.82%)	60	44 (73.33%)	126 98 (77.78)	
	H	64	61 (95.31%)	57	50 (87.72%)	121 111 (91.74)	
NON-COUN-SELLED	L	60	44 (73.33%)	55	46 (83.64%)	115 90 (78.26)	0.26 1.35
	A	58	43 (74.14%)	60	51 (85%)	118 94 (79.66)	
	H	64	55 (85.94%)	59	51 (86.44%)	123 106 (86.18)	

Within group comparisons (table 23) of academic categories by the application of the standard error of the difference show statistical significance only once in four cases. Further evaluation of the difference between percents of sexes within and between groups by the

chi-square value showed a significant difference only once in 14 comparisons. The chi-square values ranged from 0.06 at 1df for counselled girls low achievers versus counselled girls average-achievers to 3.88 at 1df for noncounselled girls average-achievers versus noncounselled girls high-achievers which is significant at .05 level.

It is also seen that irrespective of counselling benefit, quite more than 70 per cent of the students in each academic category made appropriate choices of WASC subjects. More boys in the counselled categories made appropriate choices of WASC subjects than boys in the noncounselled categories.

The summary of the information concerning appropriate choices of WASC subjects is that there was no support for the hypothesis. Thus, a student who belongs to a higher category of academic performance does not necessarily make more appropriate choices of WASC subjects.

4.11 Appropriate choices of Post-Secondary

Institutions

Hypothesis 9 states that there would be increase in appropriate choices of post secondary institutions with higher levels of academic performance. The criterion employed for testing this hypothesis was congruence between WASC subjects and post-secondary institutions. The characteristics of post-secondary institutions were considered for adequacy in meeting the needs of students.

It was only then that the concept of congruence was accepted. Results are shown on tables 24 and 25.

Table 24: 1978 students, making appropriate choices of post-secondary institutions in each academic performance category.

GROUPS	Academic Performance category	BOYS		GIRLS		All Students		SD of Diff.
		Total	Those making appropriate choice of post-Secondary institution	Total	Those making appropriate choices of post Sec. institution	Total	Those making appropriate choices of Post-Secondary Institution	
COUNSELLED	L	73	46 (63.01%)	67	33 (49.25%)	140	79 (56.43%)	0.53
	A	77	51 (66.23%)	66	35 (53.03%)	143	86 (60.14%)	2.56*
	H	79	61 (77.22%)	65	46 (70.77%)	144	107 (74.31%)	
NON-COUNSELLED	L	77	37 (48.05%)	68	27 (39.71%)	145	67 (46.21%)	1.91
	A	75	47 (62.67%)	69	36 (52.17%)	144	83 (57.64%)	1.65
	H	75	52 (69.33%)	65	42 (64.62%)	140	94 (67.14%)	

* represents statistical significance at .05 level.

The table of results shows that only one in four comparisons of academic categories would a difference as large as 2.56 be expected. Further examination of table 24 reveals that except noncounselled low-achievers, students who made appropriate choices of post-secondary institutions in each category were more than 56 per cent. Even though the comparisons were not statistically significant yet there was an increase in percentages of students making appropriate choices of

post-secondary institutions with higher levels of academic performance. Both boys and girls in the two groups were equally affected by the increase. The 1979 results are presented in table 25.

Table 25: 1979 students making appropriate choices of post-secondary institutions in each academic performance category.

Groups	Academic Performance Category	BOYS		GIRLS		All Students		SE of Diff.
		Total	Those making appropriate choices of post-Sec. institution	Total	Those making appropriate choices of post-Sec. institution	Total	Those making appropriate choices of post-Sec. institution	
COUN-SELLED	L	64	40 (62.5%)	57	25 (43.86%)	121	65 (53.72%)	0.67 4.56*
	A	66	42 (63.64%)	60	31 (51.67%)	126	73 (57.94%)	
	H	64	63 (98.44%)	57	39 (68.42%)	121	102 (84.3%)	
NON-COUN-SELLED	L	60	32 (53.33%)	55	30 (54.55%)	115	62 (53.91%)	1.63 1.63 1.33
	A	58	39 (67.24%)	60	37 (61.67%)	118	76 (64.41%)	
	H	64	47 (73.44%)	59	42 (71.19%)	123	89 (72.36%)	

* represents statistical significance at .05 level

Table 25 shows the standard error (SE) of the difference between uncorrelated percentages of students making appropriate choices of post secondary institutions in academic performance categories. None of the four critical ratios exceeds 1.96, the .05 level. The hypothesis that there would be increase in appropriate choices of post-secondary institutions with higher levels of academic performance is abandoned. It is therefore concluded that higher levels of academic performance have no

appreciable effect on appropriate choices of post-secondary institutions.

Results also show that the 1978 pattern of increase in percentages of students making appropriate choices of post-secondary institutions characterizes the 1979 results. More counselled and noncounselled boys made appropriate choices of post-secondary institutions than their girl counterparts.

4.12 Realistic Occupational Choices

Hypothesis 10 implies that there is no difference between counselled and noncounselled groups as regards the percentages of realistic occupational choices with higher levels of academic performance. Realism refers to appropriateness of occupational choices especially those made after a consideration of school subjects. The criterion was a relationship between WASC subjects, expressed occupational choices and the results of the occupational interest inventories. The results are presented in tables 26 and 27.

Table 26: 1978 Students per academic category making realistic occupational choices.

GROUPS	Academic Performance Category	BOYS		GIRLS		All Students		SE of Diff.
		Total	Those making realistic occupational choices	Total	Those making realistic occupational choices	Total	Those making realistic occupational choices	
COUNSELLED	L	73	30 (41.10%)	67	22 (32.84%)	140	52 (37.14%)	0.59
	A	77	24 (31.17%)	66	24 (36.36%)	143	48 (33.8%)	1.97*
	H	79	34 (43.04%)	65	31 (47.69%)	144	65 (45.14%)	
NON-COUNSELLED	L	77	20 (25.97%)	68	22 (32.35%)	145	42 (28.97%)	0.17
	A	75	24 (32%)	69	19 (27.54%)	144	43 (29.86%)	
	H	75	23 (30.67%)	65	23 (35.38%)	140	46 (32.86%)	0.54

* represents statistical significance at .05 level.

Table 26 shows the comparison of academic categories by use of the standard error of the difference for realistic occupational choices. Only one of the four comparisons shows a difference as large as 1.97 on this criterion.

There seems to be no consistent pattern regarding the realistic occupational choices of students in both groups. The noncounselled girl average achievers and the counselled boy average achievers were less than students of other academic categories who made realistic occupational choices.

The 1979 results follow in table 27.

Table 27: 1979 students per academic performance category making realistic occupational choices.

Groups	Academic Performance category	BOYS		GIRLS		All Student		SE of Diff.
		Total	Those making realistic occupational choice	Total	Those making realistic occupational choice	Total	Those making realistic occupational choice	
COUNSELLED	L	64	30 (46.88%)	57	22 (38.60%)	121	52 (42.98)	0.65 2.11*
	A	66	30 (45.45%)	60	19 (31.67%)	126	49 (38.89)	
	H	64	33 (51.56%)	57	29 (50.88%)	121	62 (52.24)	
NON-COUNSELLED	L	60	17 (28.33%)	55	13 (23.64%)	115	30 (26.09)	2.49* 0.14
	A	58	24 (41.38%)	60	25 (41.67%)	118	49 (41.53)	
	H	64	26 (40.63%)	59	24 (40.68%)	123	50 (40.65)	

* represents statistical significance at .05 level.

Table 27 gives the frequencies, percentages and the standard error of difference of students per academic performance category making realistic occupational choices. Three in 8 within group comparisons of academic categories were significant at the .05 level.

The difference between counselled average-achievers and counselled high-achievers was consistently significant throughout the two years of this study.

It is also observed that the boys who made realistic occupational choices in either of the two groups increased over the period of study. Counselled boys increased in both low-achievers and average-achievers categories. For instance, counselled boys low-achievers had an increase of 5.78 per cent while their noncounselled counterparts had an increase of only 2.36 per cent. However, noncounselled boys high achievers had an increase of 9.96 per cent as against the 8.52 per cent of counselled boys highachievers.

On the other hand, only the girls in the highachievers categories of the two groups had a consistent increase in realistic occupational choices. Counselled girls average-achievers had a decrease of 4.69 per cent over the two years while the noncounselled girls had an increase of 5.76 per cent as against a decrease of 8.71 per cent in the noncounselled group.

The result reveals that the difference between academic performance categories in realistic occupational choices has not been upheld since only 3 out of 8 comparisons were significant. It can therefore be concluded that levels of academic performance in the secondary school do not affect realism of occupational choices.

CHAPTER V

DISCUSSION OF RESULTS AND SUMMARY OF CONCLUSION

5.1 Introduction

This chapter is concerned with the discussion of the findings of this study. Since the two independent variables are "academic performance" and "counselling", the discussion is about their effects on choices of WASC subjects, post-secondary institutions and occupations by secondary school students.

5.2 Effects of Counselling

One of the findings is that increased guidance information helps students in making decisions relating to choice of WASC subjects. Actually, this was the initial expectation of the Bendel State government for establishing a guidance programme in the secondary schools in 1972. It was envisaged that the provision of information to students would be helpful towards the development of their abilities, aptitudes and capacities to the fullest.

Four in 7 comparisons of counselled and noncounselled students regarding choice of WASC subjects were significant in 1979 as against only one in 1978. Although guidance services had existed for six years in the state's secondary schools before this study was started yet the Form II students had received the benefit of counselling for a

little less than two years. Perhaps, increase in the duration of counselling benefit of students tentatively explains the increase in the number of significant comparisons.

It is clear that if the careers - masters were effective in their supportive role to students, the number of significant comparisons would have been higher. The lack of enthusiasm on the part of career-masters may have led to their inefficiency as represented by non-significant results.

When guidance services were introduced in the state, the careers-masters were given the hope that certain incentives would be met. Their teaching load was to be reduced but this could not materialize due to shortage of qualified teachers. These guidance workers were also to be given in-service training and preferential treatment as regards car loans. If all these ideas were implemented a majority of the careers-masters did not benefit at least by 1979 when this investigation was concluded. For instance, many participants at the Seminar on Guidance and Counselling organized by the Ministry of Education, Benin-City on 28th August, 1979 gave a verbalized expression of displeasure.

A second finding concerns students' awareness of post-secondary institutions which offer fields of specialisation related to their WASC subjects. Students of both counselled and noncounselled groups who knew the post-secondary courses related to their WASC subjects were more than 80 per cent

throughout the two year period of this study. On the condition that secondary school students do not need to be counselled before they become acquainted with the post-secondary courses related to their WASC subjects, it therefore means that the students collect relevant pieces of information without the assistance of careers-masters. Parents and teachers as pointed out by Endicott¹³⁵ can be of tremendous assistance. This finding contradicts the personal opinion of Strang¹³⁶ that the high school student rarely shows a good judgment and little indication of need for guidance when choosing further education in college, vocational school, trade school or apprenticeship.

The results did not show the need for counselling before secondary school students can choose post-secondary institutions. There seems to be a general feeling in secondary school students to continue their education beyond that level. Quite more than 70 per cent of all the students in either the counselled or noncounselled group were consistent with their further education plans. Perhaps the most important reason for this strong feeling of interest about further education is the promise to make fees low enough. The Federal Government spells this out clearly in the National Policy on Education.¹³⁷ The Universities also revised fees

135. Endicott, Frank S. Op. cit., p. 23.

136. Strang, Ruth. op. cit., pp. 12 - 13.

137. Federal Republic of Nigeria. National Policy on Education. Federal Ministry of Information, Printing Division, Lagos 1977, p. 35

to be effective from 1977/78 academic session¹³⁸ and shortly afterwards the political parties especially the Unity Party of Nigeria (U.P.N.) re-echoed the determination. This is already effective in the U.P.N. States. The proposition to lower school fees was so widely publicized that students and their parents may have sought more information which resulted in the strong feeling towards further education plans.

Results seem to have support for the proposition that career objectives are often determinants of educational plans. Educational plans can also determine career objectives. Whether these plans are not always wise or consistent as pointed out by Dole¹³⁹ yet this study has proved that irrespective of counselling experience, secondary school students in Nigeria consider an occupation as the most important factor for choices of post-secondary institutions. The results of related studies by Berdie,¹⁴⁰ Okeke¹⁴¹ and Napier¹⁴² may be helpful in understanding the effect of education plans on career objectives. Although none of the three studies employed "counselling" as a variable yet they show that most

138. Aminu Jibrin. Why we revised Varsity fees. Daily Times, Tuesday, April 11, 1978, p. 7.

139. Dole, Arthur. op. cit., pp. 73 - 79

140. Berdie, Ralph F. op. cit., pp. 119 - 120

141. Okeke, Ambrose. op. cit., pp. 5 - 16

142. Napier, Rodney W. op. cit., pp. 66 - 68.

secondary school students choose occupations and school subjects after a consideration of ~~the relationship~~ between the two.

There was virtually no difference between counselled and noncounselled students in the choice of appropriate occupations. This may be explained in terms of the importance laid on vocational guidance as an essential service under the guidance programme in secondary schools. Noncounselled students may also have received assistance in considering their occupational choices.

However the study proved the need for vocational guidance. There was not only a disparity between occupations chosen by students of both groups but counselled students showed better judgment regarding occupational choices which are consonant with the values they hold.

The Status of medicine and engineering among occupations most frequently chosen by Nigerian youth is probably becoming a tradition. This finding in the present study is similar to that by Olayinka¹⁴³ who studied the aspirations of the youth and educational provisions in Lagos.

5.3 Effects of academic performance

In his study of occupational choice of twelve year olds, Davis¹⁴⁴ found that more mature choices

143. Olayinka, M. S. Job aspirations of the Youth and the Educational Provisions in Lagos. W.A.J.E., Vol. 17, No. 1, 1973, pp. 41 - 49.

144. Davis Donald A. et. al. Occupational choice of twelve year-olds. Personnel and Guidance Journal, Vol. 40, 1962, pp. 628 - 629.

seem to correlate positively with intelligence. The finding of this investigation and that of the above study are in contradiction. Academic performance representing intelligence did not significantly distinguish appropriate choices of WASC subjects, post secondary institutions and realism of occupational choices across the three achievement categories.

It may be that 'age' as a variable was more influential than academic performance in determining the choice patterns of the students. As it has been pointed out, the average age of the participants during the first year of this study was 15.4 years. Probably therefore it is their experience rather than academic performance that helped them in making choices. The students maturity of mind may have led them to engage in discussions with informed persons such as teachers, parents, friends and obtained information about subjects, post-secondary institutions and occupations from other sources like the mass media.

5.4 Summary of Conclusion

The analyses of the data from this study indicate the following findings.

1. While secondary school students know the factors to consider in the choice of WASC subjects, increased guidance information helps them to make decisions.
2. Irrespective of counselling benefit, most secondary school students know the post-secondary courses

related to their WASC subjects.

3. Counselling does not have an appreciable effect on the influential factors for choice of post-secondary institutions.
4. While most secondary school students generally plan to continue their education, counselling improves their ability to judge whether or not they have the capabilities.
5. Counselling does not result in differential patterns of responses to appropriate choice of post-secondary institutions for counselled and noncounselled students.
6. Counselling introduces a disparity into the particular occupations chosen by secondary school students.
7. Counselling is likely to improve secondary school students' decision-making process regarding occupational choices which are consonant with the values they hold.
8. Counselling has no significant influence on appropriateness of occupational choices by secondary school students.
9. Academic performance does not significantly distinguish appropriate choice of WASC subjects across academic performance categories.

10. Academic performance has no noticeable effect on appropriate choice of post-secondary institutions and
11. Finally, the level of academic performance in the secondary school does not affect realism of occupational choices.

5.5 Unhypothesized findings

1. Most secondary school students plan to continue their education beyond that level.
2. Occupational objectives and educational interests for secondary school students are determinants of one another.
3. Medicine and engineering are the first and second most frequently chosen occupations by secondary school students.

Based on the findings of this study, it can be concluded that although guidance services are very useful in the Nigerian educational system yet their effects on some student problems are at present minimal. As previously pointed out, many reasons including the shortage of qualified personnel explain the situation. There is therefore the need for qualified guidance counsellors to organize and administer guidance services in all institutions of learning throughout the country. The student will not only be aware of his capabilities and available opportunities

in his environment but will also know how best to utilize resources.

Guidance services seem to be needed by students at all levels of academic performance. Since the already adequate motivation and determination of high ability students to succeed did not place them at a good stand over their counterparts in this study, guidance and counselling can help to reinforce these qualities.

BIBLIOGRAPHY

A. BOOKS

- Baymur, Feriha B. and Patterson, C.H. A Comparison of three methods of assisting underachieving high school students. UNDERACHIEVEMENT (ed) by Kornrich, Milton. Charles C. Thomas Publishers. Springfield: 1975, pp. 501 - 513.
- Bennett, Margaret E. Guidance & Counselling in groups. McGraw-Hill. New York: 1963, p. 342.
- Berdie, Ralph F. After high School - What? The University of Minnesota Press, Mineapolis: 1954, pp. 119 - 120.
- Bowles, Frank H. How to get into College. E. P. Dutton and Co. Inc., 1960, p. 93.
- Byrne, Richard Hill. The School Counsellor. Houghton Mifflin Company. Boston: 1963, p. 208.
- Cote, M.P. "Guidance in Education: The application of the behavioural Sciences in Secondary schools", in Durojaiye (ed) Psychological Guidance of the Sch. Child Evansbrothers Ltd. Ibadan: 1972, pp. 89-99.
- Cramer, Stanley H. et. al. Research and the Counsellor Houghton Mifflin. Boston: 1970. pp. 90 - 91.
- Crites, O. Vocational Psychology. McGraw-Hill Book Company, Inc., N.Y. 1969, pp. 127-130.
- Detjen, Mary Ford et. al. Your plans for the future. McGraw-Hill Book Co. Inc., N.Y 1947, p. 32.
- Downing, L.N. Guidance & Counselling Services: An Introduction. McGraw-Hill Book Company. N.Y. 1968, pp. 137 - 138.
- Dunsmoor, Clarence C. et. al. How to choose that College: A guide for students and parents, Bellman Publishing Company, Inc., Boston: 1951, P. 33.
- Durojaiye, M.O.A. (ed.) Psychological Guidance of the school child. Evans Brothers Ltd., Ibadan: 1972, P. 79.
- Endicott, Frank S. How to plan for College: What high school students need to know about College. Rand McNally and Co. N.Y. 1967, pp. 61 - 62.

- Farguhar, W.W. Motivation Factors related to academic achievement. Office of research and Publications. College of Education. Michigan State University, East Lansing, Michigan: 1963, p. 10 and 235.
- Federal Republic of Nigeria. National Policy on Education. Federal Ministry of Information, Printing Division, Lagos: 1977, p. 35.
- Garret, H. E. Statistics in Psychology and Education. Longmans, London: 1967, pp. 235 - 236.
- Ginzberg, Eli et. al. Occupational Choice. An approach to a general theory, Columbia University Press, New York: 1951, p. 66.
- Goldman, Leo. Using tests in Counselling. 2nd edition. Good Year Publishing Company, Inc., Pacific Palisades, California: 1971, p. 29.
- Hamblin, D. H. The teacher and Counselling. Basil Blackwell. Oxford: 1974, p. 240.
- Hodnett, Edward. Which College for you? Harper and Brothers Publishers, N.Y. 1960, pp. 84-89.
- Holt, John. The Problem of Choice. The limits of Schooling by Marin, Peter et. al., Prentice Hall, Inc., Eaglewood Cliffs, N.J., 1975, pp. 89-103.
- Hoppock, Robert. Occupational Information. 3rd edition, McGraw-Hill Book C., 1967, 593 p.
- Hughes, Patrick M. Guidance and Counselling in Schools. A response to Change. Pergamon Press. Oxford: 1973, 421 p.
- Hutson, Percival W. The Guidance function in Education. 2nd ed. Appleton-Century Crofts, N.Y. 1968, p. 641.
- Impellizzeri, Irene H. et. al. An investigation of the Scholastic functioning of 4875 highachieving Secondary school students in N.Y. City. UNDERACHIEVEMENT (ed) Kornrich, Milton. Charles C, Thomas Publishers. Springfield: 1965, pp. 138 - 173.
- Jacobson, Paul B. The American Secondary School (ed), Prentice-Hall, Inc., 1952, p. 122.

- Katz, M.R. The name and nature of vocational guidance. Career Guidance for a new age (ed) by Borow, H. Houghton Mifflin Co. Boston: 1973, p. 97.
- McGeoch, John A. The Psychology of human learning: An Introduction. Longmans Green and Co. N. Y., 1962, pp. 597-599.
- Moser and Moser. Counselling and Guidance. An Exploration. Prentice-Hall, Inc., Eaglewood Cliffs, N.Y. 1963, 432, p.
- Napier, Rodney W. Education and Vocational attitudes of students at Okuapemman Secondary School School Guidance Services: Focus on Developing Nations. Evans Brothers Limited, 1972, 200 p.
- O'Hara, Robert P. Guidance for Career Development. Guidance for Education in Revolution (ed.) by David R. Cook. Allyn and Bacon, Inc., Boston: 1971, pp. 194 - 213.
- Patterson, C.H. The Counsellor in the School: Selected Readings. McGraw-Hill Book Company. N.Y. 1967, 495 p.
- Pierson in Shertzer and Stone. Fundamentals of Guidance. 2nd ed. Houghton Mifflin, Boston: 1971, 575 p.
- Reober, Edward C. et. al. Organisation and Administration of Guidance Services. 2nd ed. McGraw-Hill, N.Y. 1955, 436 p.
- Rubinfield, William A. What you must know about getting into College: An essential guide for students and parents. Vocational Guidance Manuals, Educational Books, Division of Universal Publishing Corporation. N.Y. 1964, pp. 31-32.
- Rubinfield, William A. Planning your College Education. Vocational Guidance Manuals. A Division of Data Courier: Inc., Louisville, Kentucky: 1976, p. 26.
- Sawrey, James M and Telford, Charles W. Educational Psychology: Psychological Foundations of Education. 2nd edition. Allyn and Bacon. Inc. Boston: 1942, p. 198.

- Schuerger, James. Counselling for College Choice. Peacock Publishers, Inc., Itasca, Illinois: 1970, pp. 3-5
- Science Research Associates. How to get into College and stay there. 57 West Grant Avenue, Chicago 10, Illinois: 1974, pp. 13 - 21.
- Shaw, M.C. "Some basic requirements of an evaluation programme", School Guidance Systems. Houghton Mifflin, Boston: 1962, p. 273.
- Shertzer and Stone. Fundamentals of Guidance. 2nd ed. Houghton Mifflin. Boston: 1971, 575, p.
- Siegel, Max (ed) The Counselling of College Students: Function, practice and technique. The Free Press. N.Y. 1967, pp. 21-22.
- Strang, Ruth. Personal Development and Guidance in College and Secondary School. Harper and Brothers Publishers, New York: 1934, p. 194.
- Strang, Ruth. Educational Guidance: It's principles and practice. The Macmillan Co., N.Y., 1947, p. 3.
- Sulkin, Sidney. Complete planning for College. McGraw-Hill Book Company, N.Y., 1962, pp. 17-20.
- Super, D.E. et. al., The Vocational Maturity of Ninth-grade boys. Bureau of Publications, Teachers College, N.Y. 1960, pp. 6 - 10.
- Tolbert, E.L. Counselling for Career development. Houghton Mifflin Company, Boston: 1974, pp. 46-55.
- Traux, C.B. et. al. Toward effective counselling and Psychotherapy. Training and Practice. Aldine Atherton: 1967, p. 21.
- William, W.M. (ed) Occupational Choice. George Allyn and Unwin Ltd. London: 1974, p. 192. 198
- Williamson, E.G. How to Counsel students: A manual of Techniques for Clinical Counsellors. McGraw-Hill Book Company, N.Y. 1939, p. 248.

Wilson, Eugene S. et. al. College Ahead? A guide for high-school students and their parents. Harcourt, Brace and World, Inc. New York: 1961, pp. 32-41.

Wrenn, G.C. Student personnel work in College, N.Y. The Ronald Press Company. 1951, p. 57.

B. JOURNALS

Adugbo, A.J. The development of Guidance Services in Bendel State. EDUCATION, Vol. 14 April, 1980.

Akpata, Tayo. The Role of the Ministry of Education in Promoting Careers Guidance in Schools. CAREERS, Vol. 1 No. 2, 1972, p. 55.

Barbara, A. Kirk. Test versus academic performance in malfunctioning students. Journal of Counselling Psychology, Vol. 16. 1952, pp. 213-216.

Beck and Mansoor in Graber. Models for Guidance Services needed in Nigeria. The West African Journal of Educational and Vocational Measurement, Vol. 2, Dec. 1974, pp. 43-44.

Bennett, John G. The development of Secondary school Guidance services in North Central State (now Kaduna). A paper presented at the Annual Conference of the Nigerian Psychological Society at University of Nigeria, Nsukka: 17th and 18th October, 1974, p. 3.

Brown, Duane et. al. Career Education: The Counsellor Role. The School Counsellor, Vol. 20, No. 3, 1973, pp. 193-196.

Calhoun, Reed S. The Effect of Counselling on a Group of underachievers. SCHOOL REVIEW, Vol. 64, 1956, pp. 312-316.

Creange, Norman C. Group Counselling for under-achieving Ninth graders. SCHOOL COUNSELLOR, Vol. 18, 1971, pp. 279-285.

Davis, Donald. A et. al. Occupational Choice of twelve year olds. Personnel and Guidance Journal, Vol. 40, 1962, pp. 628-629.

Diener, C.L. Similarities and differences between overachieving and underachieving students. Guidance and Personnel Journal, Vol. 38, 1960, pp. 396-400

- 45 Dole, Arthur A. Educational Choice is not Vocational choice. Vocational Guidance Quarterly, Vol. 12, 1963, pp. 30-34.
- Dole, Arthur, A. Factors in educational decisions among the public school pupils. Psychology in the Schools, Vol. 6, 1969, pp. 73 - 79.
- Durojaiye, M.O.A. Education and Occupational prestige in Nigerian Secondary School pupils West African Journal of Educational Psychology, Vol. 19 1973, pp. 409 - 421.
- 48 Federal Republic of Nigeria. Federal Ministry of Economic Development. Third National Development Plan, 1975 - 1980 Vol. 1, Lagos: 1975, p. 250.
- Frankel, Edward. A Comparative Study of achieving high school boys of high intellectual ability. Journal of Educational Research, Vol. 53, 1960, pp. 172 - 180.
- Gribbons, Warren et. al. Occupational preferences and measured intelligence. Vocational Guidance Quarterly, Vol. 14, 1966, pp. 211 - 214.
- Holden, George S. Scholastic aptitude and the relative persistence of vocational choice. Personnel and Guidance Journal, Vol. 40, 1961, pp. 36 - 41.
- 7 Hollender, John W. Development of a Realistic Vocational Choice. Journal of Counselling Psychology, Vol. 14, No. 4, 1967, pp. 314-318.
- Kowitz, G. T. Armstrong, C.M. Underachievement; Concept or artifact? School and Society. Vol. 89, 1961, pp. 347-349.
- Lockwood, W. Realism of Vocational Preference. Personnel and Guidance Journal, Vol. 37, No. 2, 1958, p. 98 - 106.
- Mallory, Edith B. et. al. Relationship between reasons students give for taking certain courses and student estimates of these courses. Journal of Educational Psychology, Vol. 32, 1941, pp. 13-22.

- Miller C.H. Occupational Choices and Values. Personnel and Guidance Journal, Vol. 35, No. 4, 1956, pp. 244-246.
- Miller, C. Dean et. al., Relationships between educational and Vocational Interests. Vocational Quarterly, Vol. 16, 1966, pp. 113 - 118.
- Okeke, Ambrose, The impact of school subjects on the Choice of occupations and professions. West African Journal of Education, Vol. 17, 1973, pp. 5-16.
- Olayinka, M.S. Job Aspirations of the Youth and the Educational Provisions in Lagos. West African Journal of Education, Vol. 17, No. 1, 1973, pp. 41-49.
- Olayinka, M.S. The Place of Counselling in Nigerian Educational Policy. Nigerian Journal of Psychology, Vol. 1, No. 1, 1976, pp. 89-93.
- Patterson, C.H. Programme Evaluation. Review of Educational Research, Vol. 33, 1963, p. 214-222.
- Rowlands, R.G. Some differences between prospective Scientists, non-scientists and early leavers in a representative sample of English grammar school boys. British Journal of Educational Research, Vol. 31, 1960, pp. 21-32.
- Shaw, M.C. and Grubb, J. Hostility and able high School underachievers. Journal of Counselling Psychology, Vol. 5, 1958, pp. 263-266.
- Super, D.E. A theory of Vocational Development. The American Psychologist, Vol. 8, No. 4, 1953, pp. 185-190.
- Super, D.E. Career Development: Occupational Choice and Vocational adjustment. Bulletin of the International Association for Education and Vocational Guidance, (Luxembourg). Vol. 22, 1970, pp. 15-19.
- Taylor, R.G. Personality traits and discrepant achievement: a review. Journal of Counselling Psychology, Vol. 11, 1964, pp. 78-81.

- Teigland, John J. et. al. 'Some concomitants of underachievement at the elementary school level. Guidance and Personnel Journal, Vol. 44, 1966, pp. 950-955.
- Whiteley, John. M. 'Changes through Counselling. Review of Educational Research, Vol. 39, 1969, pp. 189-190.

C: UNPUBLISHED WORKS

- Aduqbo, A.J. An evaluation of the guidance services in selected secondary schools in the Delta Province of Bendel State, Unpublished Masters Thesis. A.B.U. Zaria, 1975, 128 p.
- Agusiobo, O.N. Personal Factors influencing the occupational choice of Selected under-graduates at the University of Nigeria. Nsukka, Unpublished doctoral dissertation, 1966, p. 44.
- Aminu, Jibrin. Why we revised varsity fees.. Daily Times, Tuesday April 11, 1978, p. 7.
- Bakare, C.M.G. The construction and Validation of vocational Interest Inventory for use in Africa. University of Ibadan, Nigeria, pp. 1-9.
- Denga, Daniel I. The Relationship between students potential and their career aspirations. Unpublished Masters Thesis, A.B.U. Zaria, 1975, p. 57.
- Gesinde, S.A. Choice points in the Nigerian educational system - implications for careers guidance. A paper presented at the 7th Residential Workshop and Seminar on Educational and Vocational Guidance, 8th - 14th August, 1976, pp. 2-16.
- International Labour Office. International Standard Classification of Occupations. Geneva 1962. p. 3.
- Nigerian Observer. November 28, 1978, p. 3.
- Working group 8. New goals and strategies for Vocational (Careers) Guidance, IRTAC, 8th - 12th April, 1980, p. 1.

APPENDIX I
UNIVERSITY OF LAGOS
FACULTY OF EDUCATION

WASC SUBJECTS QUESTIONNAIRE

Class _____ Date _____
 Age _____ (Years) Sex M M ()
 School _____ F ()

This questionnaire is designed to identify how subjects are chosen for the West African School Certificate (WASC) examination. It includes the particular decisions that secondary school students make in choosing whatever subjects interest them. You should think about each statement and respond in the way that best represents your feelings.

1. What were the highest educational attainments of your parents? Please indicate by a tick in the corresponding space.

	<u>Mother</u>	<u>Father</u>
a. Did not go to school	_____	_____
b. Attended primary school	_____	_____
c. Attended Secondary School	_____	_____
d. Attended teacher training College	_____	_____
e. Attended technical school	_____	_____
f. Attended Advanced Teachers college	_____	_____
g. Attended University	_____	_____
h. Any other . . .	_____	_____

2. Check at least six subjects you have chosen or intended to choose for the WASC.

- | | |
|-----------------------|--------------------|
| a. English Language | e. Bible Knowledge |
| b. English Literature | f. History |
| c. French | g. Geography |
| d. Economics | h. Mathematics. |

- i. Biology k. Health Science
j. Physics l. Agricultural Science

Please add any other subject as applicable.

- m. _____ n. _____

3. Why did you choose these subjects?
- a. Other subjects I needed were not offered in my school ()
 - b. My personal interests ()
 - c. Liking for a teacher (preference) ()
 - d. Parents advice ()
 - e. Examination success (good grades received) ()
 - f. The career-master/counsellor's assistance ()
 - g. Consideration for after school employment ()
4. When do students in your school choose subjects for WASC examination?
- a. Beginning of Form III
 - b. Middle of Form III
 - c. Beginning of Form IV
 - d. Middle of Form IV
 - e. Beginning of Form V
5. In what other class would you prefer that subject choice be made? Tick one of the following classes.
- a. Form One ()
 - b. Form Two ()
 - c. Form Three ()
 - d. Form Four ()
 - e. Form Five ()
6. Those about to be mentioned are reasons why students want to choose subjects for the WASC in particular class. Tick the one that is most suitable for the class you have chosen in No. 4 above.

- (a) Opportunity for students to know many subjects before choice of WASC subjects ()
- (b) Students do not have to study subjects they would not choose for WASC ()
- (c) The time is long enough for adequate knowledge about the WASC subjects before examination ()
- (d) Students should have been exposed to many subjects and time available is long enough for adequate coverage of the WASC subjects before the examination ()
7. If you think that some of your WASC subjects were forced upon you by your school, please tick one of the reasons that applies most to your situation.
- (a) Adequate facilities for teaching subjects of my interest were not available ()
- (b) Other subjects from which I could choose were not offered ()
- (c) A teacher advised me ()
8. If you had to attend a higher institution, write down your future course of study. _____
9. The following are some reasons why students choose subjects for the WASC. Tick the one that applies most to the subjects you have chosen in No. 2 above.
- (a) My personal interest ()
- (b) It is related to the occupation of my choice ()
- (c) The course is interesting ()
- (d) My parents want me to study this course ()
- (e) Unknown reason ()
10. Write below the names of three subjects in which you are most interested.
- (a)
- (b)
- (c)
11. Would you like these subjects even if you dislike the teachers? Tick one reason.
- (a) Definitely ()
- (b) Not quite sure ()
- (c) Definitely not ()
- (d) Don't know ()

APPENDIX II
UNIVERSITY OF LAGOS
FACULTY OF EDUCATION

POST-SECONDARY INSTITUTION QUESTIONNAIRE

Class _____ Date _____

School _____ Age _____ in years

Sex M () F ()

The purpose of this questionnaire is to help you recognize the various considerations in the process of choosing a post-secondary institution. You may not need to attend a post-secondary institution but you should respond to all statements and questions.

1. Do you hope to continue your education beyond the secondary school level? Tick the response which is most applicable to you.

(a) Definitely intending to continue	()
(b) Not very sure to continue	()
(c) Definitely not intending to continue	()
(d) Don't know	()

2. Suppose you are given the opportunity to attend a higher institution, which type would you choose? Tick the response below that best indicates your choice.

(a) An HSC Grammar School	()
(b) Technical School	()
(c) Polytechnic Institution	()
(d) School of Agriculture	()
(e) College of Medicine	()
(f) Advanced Teachers College	()
(g) Nursing School	()
(h) A University preliminary course	
in (a) Arts	()
(b) Social Science	()
(c) Science	()

3. The following are some reasons for choice of institutions of higher learning. Check the response that best applies to the institution you have chosen in No. 2 above.
- (a) The consideration of an occupation ()
 - (b) Comments by friends ()
 - (c) Availability of scholarship or Finance ()
 - (d) My subjects of interest are taught in that institution ()
 - (e) I have never made such a decision ()
 - (f) My parents have often spoken about the particular institution ()
 - (g) Its high status ()
4. Do you know anyone who has influenced you in choosing an institution of higher learning? Tick the one that is most influential.
- (a) Teacher (d) Relative
 - (b) Parents (e) Nobody
 - (c) Very close friend
5. Is the higher institution you have chosen in No. 2 above, situated in your state of origin?
Yes or No _____
6. Would you have chosen another type of higher institution if such an institution were to be available in your state of origin?
Yes or No _____
7. If your choice of higher institution was influenced by its geographical situation in your State, check your ideal institution of higher learning.
- (a) An HSC Grammar School ()
 - (b) Technical School ()
 - (c) Polytechnic ()
 - (d) School of Agriculture ()
 - (e) College of Medicine ()

- (f) Advanced Teachers College ()
- (g) Nursing School ()
- (h) A University preliminary course
 in (a) Arts ()
 (b) Social Science ()
 (c) Science ()
8. When did you make the decision to go to a post secondary school?
- (a) I have never made such a decision
- (b) Before I entered the secondary school.
- (c) In Form I
- (d) In Form II
- (e) In Form III
- (f) In Form IV
- (g) Any other
9. List at least three other post secondary institutions you can attend in order of preference. Also show the state where each is found.
- (a)
- (b)
- (c)
10. Which one of these two choices did you make first?
- (a) Subjects for WASC
- (b) Post-Secondary Institution
11. Tick one of the following:
- (a) I am definitely decided about my choice of a post secondary institution
- (b) I am tentatively decided.
- (c) I am still undecided.

APPENDIX III
UNIVERSITY OF LAGOS
FACULTY OF EDUCATION

AN OCCUPATIONAL QUESTIONNAIRE

Class: Date:
 School: Age: in years.
 Sex () M () F

Instructions

This questionnaire is concerned with the choice of a life career. It will help to focus your attention on the type of work in which you are interested and would go into.

Consider each statement or question and give the best answer that represents your feelings.

1. What is the occupation of each of these members of your family?

Father: Mother: Uncle:

2. Indicate in the space provided below, the member of your family whose occupation you like best.

.....

3. If you had to make a choice of an occupation now, which one occupation would you choose?

Farmer
 Agricultural Officer
 Clergyman (Pastor, Reverend Father, Bishop)
 Librarian
 Small Shopkeeper
 Postmaster
 Artist
 Carpenter
 Medical Doctor
 Nurse
 Pharmacist
 Teacher (in primary, secondary, University)
 Education Officer
 Ship Pilot
 Aeroplane Pilot

Musician	News Broadcaster
Journalist (Worker	Air Hostess
with the News-paper	Lawyer (Legal Practitioner)
publishers)	Accountant
Trader	Business Manager
Clerical Worker	Sales Agent
(Clerk)	Engineer (electrical
Surveyor	mechanical, marine, etc.)
Geologist	Architect
Mechanic (motor,	Warder (Prisons)
Radio, etc.)	

4. When did you make the decision to choose the occupation in No. 3 above?
 - a) Before I entered the secondary school
 - b) In Form One
 - c) In Form Two
 - d) In Form Three
 - e) In Form Four.
5. Write down in order of preference, two other occupations you would like to enter if you cannot get your first choice.

(a) (b)
6. If you had a choice of a job with one of these requirements, which one would you choose?
 - (a) High enough salary for a reasonable standard of living.
 - (b) Freedom from unusual hazards to health and great danger of accidents.
 - (c) Assured steady income
 - (d) Certainty of continuous employment
 - (e) Opportunity to use your own ideas
 - (f) Freedom in working out your own methods of doing things.
 - (g) The work permits a feeling of personal achievement
 - (h) Opportunity to make full use of your knowledge and experience.

- (i) Salary or income above average of the society
- (j) The occupation is usually followed by persons of high education
- (k) The work is known and recognized outside of your own professional circle
- (l) The work requires intelligence rather than physical strength
- (m) Satisfaction to be gained from helping people
- (n) Contact with many and stimulating people
- (o) The job will take you to a locality where there are good schools and churches
- (p) Friendly working colleagues

7. Tick one of the following

- (a) I am definitely decided about my choice of an occupation
- (b) I am tentatively decided
- (c) I am still undecided

8. Place in rank order how strongly you were influenced in your choice of an occupation by any of the following

- (a) Very close friend ()
- (b) Parents ()
- (c) Teacher ()
- (d) Nobody ()
- (e) Any other ()

9. Indicate the order in which you made these choices by writing 1st, 2nd and 3rd in the spaces provided.

- (a) Post secondary institution { }
- (b) Subjects for WASC { }
- (c) An occupation { }

10. How did you get information about the occupation of your choice? Check the one that is applicable.

- (a) The list in No. 3 above helped me
- (b) It is the occupation of my father/mother
- (c) The Radio, T.V., Newspapers (Mass Media)
- (d) From my Teacher

- (e) The Careers Master
- (f) From a relative
- (g) My parents told me
- (h) Any other.

11. If you pass your WASC examination, would you still
 choose the occupation in No. 3 above? Yes or
 No

12. What job do you believe that you would be doing
 ten years from now?

13. Which is your ideal occupation?

APPENDIX IV

UNIVERSITY OF LAGOS

FACULTY OF EDUCATION

GRZ OCCUPATIONAL INTEREST INVENTORY - MAY 1978

Student's Name _____

Class _____ Date _____ Age _____ Sex M F

School _____

Instructions:

The following 72 pairs of activities are the sorts of things people do in their jobs or spare time. Tick the box next to the activity you would prefer to do if you had to do one of the two.

There are no right or wrong answers.

- 1.442 () Try to influence people to change their eating habits.
 .759 () Give children who are behind extra help with their school work.
- 2.133 () Make doors out of metal
 .817 () Organize a new filing system in an office.
- 3.340 () Study ways of preventing soil erosion.
 .174 () Plan the water supply system for a new building.
- 4.705 () **Assist** in a self-help project
 .638 () Draw posters for a festival.

- 5.497 () Convince people that they should support an appeal fund.
 .206 () Add up the cost of purchases in a shop.
- 6.104 () Repair a broken table
 .715 () Visit and assist the sick
- 7.672 () Design a cover for a magazine
 .761 () Help people to settle into a new housing scheme.
- 8.272 () Calculate the cost of transporting goods.
 .572 () Translate stories from one language to another.
- 9.795 () Do voluntary work for the Red Cross
 .184 () Cut and sew leather to make handbags.
- 10.642 () Design the scenery for a play.
 .495 () Organise a campaign to stop people from smoking.
- 11.694 () Make fine Jewelry.
 .375 () Test and improve fuels for heating purposes.
- 12.271 () Work out percentages from a table of figures
 .461 () Try to persuade a group of people at a meeting to adopt your point of view.
- 13.641 () Take a course in map drawing
 962 () Hunt wild animals.
- 14.823 () Check forms to see that they are filled in correctly.
 .996 () Work with a team looking for mineral deposits.
- 15.259 () Work out the costs of a new building.
 .341 () Mix medicines in a chemist shop.
- 16.186 () Make keys and repair locks.
 .628 () Arrange displays for shop windows.
- 17.846 () Type business letters
 474 () Present your own point of view in a debate.
- 18.388 () Examine plants to see how they are made.
 .833 () Classify objects according to size.
- 19.283 () Work out how much paper to order for an office.
 974 () Supervise the irrigation system on a sugar plantation.
- 20.232 () Study graphs showing the profits of a company.
 .858 () Keep records of books in a library.

- 21.805 ☐ Send out the details of a meeting.
 .555 ☐ Study the books of a well-known author
- 22.778 ☐ Help a released prisoner to lead an honest life.
 .929 ☐ Explore by boat an unmapped river.
- 23.955 ☐ Help to survey the route for a new railway line.
 .465 ☐ Set up a trade agreement with another country.
- 24.688 ☐ Choose photographs for a magazine
 .820 ☐ File letters in an office.
- 25.398 ☐ Do experiments to improve the quality of paint.
 .403 ☐ Persuade firms and shops to advertise in your newspaper.
- 26.634 ☐ Design patterns for a clothing manufacture
 .255 ☐ Calculate interest payments in a bank.
- 27.393 ☐ Test water supplies to see if they contain impurities
 .533 ☐ Write a report of a film for a magazine.
- 28.804 ☐ Keep a diary of appointments for an employer.
 .669 ☐ Choose furniture and decorations for an office.
- 29.141 ☐ Test the mechanical efficiency of an aircraft
 .411 ☐ engine.
☐ Try to persuade workers on strike to return to work.
- 30.507 ☐ Judge stories in a competition
 .464 ☐ Represent the views of workers at industrial meetings.
- 31.791 ☐ Take a course in First Aid.
 .499 ☐ Take a course in Salesmanship.
- 32.538 ☐ Write about popular themes in African literature.
 824 ☐ Write down the proceedings in a court hearing.
- 33.960 ☐ Judge cows and goats at an agricultural show.
 .253 ☐ Analyse the figures from a population census.
- 34.415 ☐ Present a legal point in court.
 .679 ☐ Judge paintings in a competition.
- 35.179 ☐ Repair clocks and watches.
 .909 ☐ Observe wild animals.
- 36.470 ☐ Make a speech at a meeting.
 .577 ☐ Write articles for a newspaper.

- 37.422 () Recruit members for a new association.
 .990 () Be a guide in a game reserve.
- 38.938 () Raise chickens.
 .160 () Make a ladder out of wood.
- 39.135 () Assemble a radio set.
 .516 () Choose books for a library.
- 40.500 () Write about books you have read.
 .909 () Grow crops of groundnuts for sale.
- 41.390 () Study air conditions to forecast the weather.
 .244 () Do calculations to change foreign money into Naira.
- 42.205 () Work out the production cost in a factory.
 .769 () Help to run a camp for people who have no home.
- 43.814 () Be responsible for maintaining office records.
 .325 () Test the strength of different metals.
- 44.546 () Read about the lives of well known men and women.
 .191 () Make models of airplanes.
- 45.702 () Be a voluntary assistant at a clinic.
 .805 () Arrange a list of names in alphabetical order.
- 46.747 () Give exercises to injured people to help
 their recovery.
 .393 () Test foods to determine their vitamin content.
- 47.866 () Look for errors in a copy of a report.
 .786 () Read lessons to a blind student.
- 48.160 () Fit telephones in a building.
 .302 () Analyse chemical fertilizers in a laboratory.
- 49.447 () See clothes in a stall or shop.
 .817 () Take shorthand notes at a meeting.
- 50.579 () Read and correct articles for a newspaper.
 .251 () Collect figures on accident rates for insurance
 companies.
- 51.994 () Take part in a mountain climbing expedition.
 .526 () Write a short story about something you have done.
- 52.962 () Grow fruit and vegetables.
 .305 () Do experiment to develop a variety of maize that can
 resist plant diseases.

- 53.945 () Work on a forest plantation.
 .645 () Make pottery or models in clay.
- 54.969 () Stock a new dam with fish.
 .783 () Do volunteer work in a hospital.
- 55.645 () Design the costumes for a play.
 .178 () Take apart a small machine to see how it works.
- 56.390 () Test soil samples for their mineral content.
 623 () Design furniture.
- 57.996 () Run a cattle ranch.
 .818 () Sort incoming correspondence in an Office.
- 58.561 () Write a history book
 387 () Develop new detergents.
- 59.669 () Attend an exhibition of famous paintings.
 .546 () Belong to a book discussion group.
- 60.317 () Do experiments to improve foods for poultry.
 .732 () Teach people the rules of hygiene.
- 61.583 () Read about the different styles of various novelists.
 .644 () Attend a festival of plays and dances.
- 62.255 () Be a cashier in a shop.
 .173 () Repair faulty gears on a bicycle.
- 63.824 () Type copies of reports.
 .102 () Repair radios and record-players.
- 64.313 () Develop chemicals for destroying insect pests.
 985 () Spray crops to control pests.
- 65.889 () Keep up-to-date the work records of employees.
 .278 () Work out the timetable for a bus service.
- 66.233 () Work out mathematics problems.
 .624 () Select photographs for an exhibition.
- 67.773 () Help people solve their personal problems.
 .295 () Calculate wages in a small firm.
- 68.748 () Train physically handicapped people for new jobs.
 .528 () Choose stories for a magazine.
- 69.469 () Sell office equipment to businessmen.
 .115 () Operate a machine in a factory.

- 70.135 () Service motor car engines.
() Check the record of money received in a post office.
- 71.550 () Write a report of a recent event.
737 () Help alcoholics to overcome their drinking problem.
- 72.457 () Run a sales campaign for a new product.
.333 () Analyse blood samples to find evidence of disease.

1 2 3 4 5 6 7 8 9 TOTAL
() () () () () () () () () ()

VOCATIONAL INTEREST INVENTORY

NAME Date.....

Class Age Sex: M. F.
(in years) (circle one)

School

This Inventory is designed to help you indicate the type of work in which you are interested and which you will enjoy doing. It includes several activities which are performed in many different kinds of jobs. You may not be familiar with some of the activities and some of them may require a type of training which you do not have at present. But these are not important here. Consider each activity and then decide how much, after some training, you would like to perform the activity

- Circle
- 5 - if you would like very much to engage in the activity
 - 4 - if you would like to engage in it
 - 3 - if you would be indifferent to it (i.e. neither liking nor disliking it)
 - 2 - if you would dislike engaging in the activity, and
 - 1 - if you would very much dislike engaging in it.

							Like very much	like	Indifferent	Dislike	Dislike very much
1.	go on a field trip to study strange animals	..	..	..	..	..	5	4	3	2	1
2.	design and build a new machine	..					5	4	3	2	1
3.	collect statistics on wages and prices	..	..	..	..	..	5	4	3	2	1
4.	read about the theory of atomic energy						5	4	3	2	1
5.	persuade people to take a life insurance policy	..	..	..	..		5	4	3	2	1
6.	take a course on sketching or painting						5	4	3	2	1
7.	teach English in a school or college						5	4	3	2	1
8.	attend lectures on how to compose music						5	4	3	2	1
9.	tell stories to children who are sick in hospital	..	..	..	..	..	5	4	3	2	1
10.	type letters and documents in an office	..	..	..	..	..	5	4	3	2	1

B

		Like very much	Like	Indifferent	Dislike	Dislike very much
1.						
1.	Be an expert on rare trees	5	4	3	2	1
2.	design the bridge across					
	a large river	5	4	3	2	1
3.	add up long columns of figures	5	4	3	2	1
4.	try to find a new cure for					
	a terrible disease	5	4	3	2	1
5.	settle disputes between workers					
	and their employers	5	4	3	2	1
6.	read a book on the history of					
	art	5	4	3	2	1
7.	be the editor of an academic					
	magazine	5	4	3	2	1
8.	learn to play a complicated					
	music instrument	5	4	3	2	1
9.	do voluntary work in a camp for					
	people who have no homes of					
	their own	5	4	3	2	1
10.	learn to take notes in shorthand	5	4	3	2	1

C

		Like very much	Like	Indifferent	Dislike	Dislike very much
1.	raise cows, poultry, pigs or sheep scientifically	5	4	3	2	1
2.	learn to repair high-quality watches and clocks.. .. .	5	4	3	2	1
3.	take a job which require a lot of mental arithmetic	5	4	3	2	1
4.	take a course in advanced biology	5	4	3	2	1
5.	study the methods of convincing people	5	4	3	2	1
6.	design the cover of a book	5	4	3	2	1
7.	read many novels	5	4	3	2	1
8.	compose soul music	5	4	3	2	1
9.	distribute relief in a war affected area	5	4	3	2	1
10.	take a course in business letter-writing	5	4	3	2	1

D

		Like very much	Like	Indifferent	Dislike	Dislike very much
1.	work out of doors for long periods	5	4	3	2	1
2.	learn how an airplane works ..	5	4	3	2	1
3.	collect, analyse and record figures on a country's trade ..	5	4	3	2	1
4.	make a chemical analysis of a new drug	5	4	3	2	1
5.	take a course in public speaking	5	4	3	2	1
6.	design the costume for a play	5	4	3	2	1
7.	write short stories	5	4	3	2	1
8.	learn to play the piano	5	4	3	2	1
9.	look after sick people in a clinic or hospital	5	4	3	2	1
10.	keep records of sales in a store	5	4	3	2	1

E

		Like very much	Like	Indifferent	Dislike	Dislike very much
1.	be a guide on camping expeditions	5	4	3	2	1
2.	repair a car that has broken down	5	4	3	2	1
3.	use the computer to solve mathematical problems	5	4	3	2	1
4.	test blood or urine in a laboratory	5	4	3	2	1
5.	read a book on how to make people buy things easily	5	4	3	2	1
6.	learn to make carvings or sculptures	5	4	3	2	1
7.	read manuscripts of books to be published	5	4	3	2	1
8.	write a musical play	5	4	3	2	1
9.	run a Sunday School	5	4	3	2	1
10.	take a course in business English	5	4	3	2	1

F

					Like very much	Like	Indifferent	Dislike	Dislike very much
1.	go on a long sea trip	..	..		5	4	3	2	1
2.	design and construct new								
	mechanical toys	..	..	..	5	4	3	2	1
3.	be in charge of the accounts								
	department of a large company				5	4	3	2	1
4.	read about the causes of various								
	diseases	..	..	..	5	4	3	2	1
5.	help young people select their								
	vocations	..	..	..	5	4	3	2	1
6.	paint portraits of famous								
	people	..	..	..	5	4	3	2	1
7.	read a book on how to become								
	a writer	..	..	..	5	4	3	2	1
8.	be a vocalist in a pop band	..			5	4	3	2	1
9.	look after children in an								
	orphanage	..	..	..	5	4	3	2	1
10.	learn to use a duplicating machine				5	4	3	2	1

G

					Like very much	Like	Indifferent	Dislike	Dislike very much
1.	explore the countryside for minerals and oil deposits	5	4	3	2	1			
2.	repair electrical appliances (e.g., electric iron, kettle, T.V., radio, etc.)	5	4	3	2	1			
3.	draw graphs based on statistical tables	5	4	3	2	1			
4.	study the effects of various drugs on human beings	5	4	3	2	1			
5.	preach a sermon in a church	5	4	3	2	1			
6.	design posters for advertisements ..	5	4	3	2	1			
7.	review book for a magazine	5	4	3	2	1			
8.	conduct research on traditional music..	5	4	3	2	1			
9.	work in a home for very old people ..	5	4	3	2	1			
10.	read a book on office techniques ..	5	4	3	2	1			

H

									Like very much	Like	Indifferent	Dislike	Dislike very much
1.	travel over wide areas to collect soil samples								5	4	3	2	1
2.	learn to operate and repair complicated machine	..	..	..	..	..	..	..	5	4	3	2	1
3.	cash cheques for people in a bank	..	..	..					5	4	3	2	1
4.	work in a physics laboratory	..	..	..	..				5	4	3	2	1
5.	be a publicity director for a big company								5	4	3	2	1
6.	teach a course on modern art	..	..	..	..				5	4	3	2	1
7.	join in an essay contest	..	..	..	..				5	4	3	2	1
8.	take part in a musical play	..	..	..	..				5	4	3	2	1
9.	join a Society for helping the blind				..	..			5	4	3	2	1
10.	supervise the work of several typists	..	..						5	4	3	2	1

I

	Like very much	Like	Indifferent	Dislike	Dislike very much
1. work on project constructing a large dam	5	4	3	2	1
2. assemble small mechanical units of an engine	5	4	3	2	1
3. audit the accounts of a company ..	5	4	3	2	1
4. learn to use certain scientific instruments	5	4	3	2	1
5. settle marriage problems	5	4	3	2	1
6. draw cartoons for a newspaper	5	4	3	2	1
7. join a literary and debating society	5	4	3	2	1
8. teach music in a school or college ..	5	4	3	2	1
9. help in rehabilitating disabled persons	5	4	3	2	1
10. learn how to furnish an office with the right equipment	5	4	3	2	1

J

	Like very much	Like	Indifferent	Dislike	Dislike very much
1. take a long walk in a rural area	5	4	3	2	1
2. read a book about how computers work	5	4	3	2	1
3. take a job which requires working with a lot of numbers .. '	5	4	3	2	1
4. read the biography of famous scientists	5	4	3	2	1
5. study advertising techniques	5	4	3	2	1
6. write articles for an art magazine	5	4	3	2	1
7. report news for a local newspaper	5	4	3	2	1
8. take a course in modern music ..	5	4	3	2	1
9. work in a home for helping delinquent children	5	4	3	2	1
10. study office-efficiency methods ..	5	4	3	2	1

SCORES ON THE INTEREST AREAS OF THE V11

	INTEREST AREA	SCORE
1.	OUTDOOR	
2.	MECHANICAL	
3.	COMPUTATIONAL	
4.	SCIENTIFIC	
5.	PERSUASIVE	
6.	ARTISTIC	
7.	LITERARY	
8.	MUSICAL	
9.	SOCIAL SERVICE	
10.	CLERICAL	