THE RELATIONSHIP BETWEEN ENTRY QUALIFICATIONS, SCHOOL ACHIEVEMENT AND JOB PERFORMANCE QUALITY OF THE NORTHERN STATES' AGRICULTURAL ASSISTANTS

BY

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ABSTRACT

THE RELATIONSHIP BETWEEN ENTRY QUALIFICATIONS,
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This study investigated the relationship that might exist between entry qualifications and the school achievement of the students of the Northern States' Agricultural schools.

The study also investigated the relationship between school achievement, entry qualifications and job performance quality. This should be important to researchers because of the connections frequently made between entry qualifications, school achievement and success in a job.

Several variables, referred to as worker characteristics, were selected for this study. These were interest, ability or capability, practical skills, technical knowledge in agriculture, attitude, devotion and sense of commitment to duty, school achievement, style of interest stimulation, discipline, techniques in problem-solving, understanding of people's needs, problems and working out of programmes. Data for the study were collected from 25 Agricultural Superintendents and 44 Agricultural Assistants from former North-Central and Benue-Plateau States using structured questionnaire.

The data were analyzed using percentages, descriptive narrative, the non-parametric chi-square (X^2) statistic and the Rank-order Correlation.

The results of the study indicated the following:

1. Job performance quality can be explained statistically using the following variables:

(a) interest

(b) attitude to work

(c) ability or capability

(d) practical skills

(e) school achievement

Statistical tests of the data revealed a significant relationship ($p<.05$) between these variables and quality of job performance. The other variables were not statistically significant ($p>.05$), but the calculated percentages from the gathered data indicated a very close association.

2. The Agricultural Assistants without secondary school education were found to be better in general extension while on the other hand the secondary school Agricultural Assistants were found to be better in assignments other than general extension work.

3. The Agricultural Assistants without secondary school education were higher than the Agricultural Assistants with secondary school education in the quality of school achievement.

4. The General Agricultural Certificate Course final first and second year examinations correlation levels fluctuated and the fluctuation could be due to low reliabilities of these examinations,

and the fact that the subjects taken at the entry qualification examinations are usually different from the ones taken at the Agricultural Schools.

5. Correlation between school achievement and job performance quality may be negative for the following reasons:

(a) lack of prospects for progress to higher positions;

(b) the situation outside the Agricultural Schools might not be conducive to good quality job performance;

(c) delay in appointment might cause loss of interest;

(d) lack of incentive while the Agricultural Assistant is in the field;

(e) the Agricultural Assistant with poor academic standing may be scared by an idea to be redundant.

6. The quality of job performance in the field could be explained among other variables, by work behaviour, the level of school achievement, interest, ability, attitude to work, and practical skills.

It was felt that in investigating the relationship between entry qualifications, school achievement and job performance, a bivariate analysis using the chi-squared (X^2) statistic was good. However, a multivariate analysis could also be used.

This study did not seek to know the problems that could inhibit good quality performance because this was beyond the scope of the study. It would therefore be worthwhile to undertake further studies that might consider pertinent problems that inhibit good

quality performance and the appropriate solutions to these problems. Other aspects suggested for further research included the consideration of training institutions themselves as factors that could explain school achievement and job performance quality, the investigation of more specific things such as the study of situational factors determining school achievement and job performance, the measure of school and job success.

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TABLE OF CONTENTS

	Page
TITLE PAGE	i
APPROVAL SHEET	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	vii
TABLE OF CONTENTS	ix
CHAPTER 1 - INTRODUCTION	1
Purpose of the Study	5
Statement of the Problem	6
Hypotheses	7
Assumptions of the Study	7
Scope and Limitation of the Study	8
Significance of the Study	9
Definition of Terms	11
CHAPTER 2 - REVIEW OF RELATED LITERATURE	13
Factors of College Success	14
Research on Pre-requisites	15
Predictive Validity of Entry Qualifications	17
School Achievement and Job Performance	24
Educational Level and Job Performance	27

Page

CHAPTER 3 - HISTORICAL PERSPECTIVE OF AGRICULTURAL EDUCATION AND EXTENSION SERVICES IN THE NORTHERN STATES. . . . 30

Sub-Degree Level Agricultural Education 31

Agricultural Extension Service 36

CHAPTER 4 - METHODOLOGY. 40

Selection of Respondents and Sampling Procedure. 40

(i) Agricultural Assistants in School 40

(ii) Agricultural Assistants in the Field. 41

(iii) Agricultural Superintendents (Supervisors). 41

Development of Instrument. 42

Pretesting the Questionnaire 43

Collection of Data 43

Statistical Analysis 45

Significance Level Chosen. 46

Summary. 46

CHAPTER 5 - PRESENTATION AND ANALYSIS OF DATA. 47

The Sample 47

General Information About the Agricultural Assistants. . . 48

Opinions of the Agricultural Assistants. 52

Personal Characteristics of the Agricultural Assistants. . 55

Hypotheses Tested 63

Rationale for Using Chi-square 65

Summary. 86

Page

CHAPTER 6 - DISCUSSION OF THE FINDINGS 90

General Information About Agricultural Assistants. 89

Agricultural Assistants' Opinions. 92

Agricultural Assistants' Background Characteristics. . . . 93

Correlation Coefficients of Examination Results. 95

Relation of Level of School Achievement to Entry Qualifications 95

Relation of Worker Characteristics to Job Performance Quality. 97

Relation of Worker Characteristics to Entry Qualifications 98

Summary. 98

CHAPTER 7 - SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 100

Summary. 100

Conclusions. 102

Recommendations. 103

Implications and Suggestions for Further Study 105

BIBLIOGRAPHY 107

APPENDIX A - *Job Performance Questionnaire* 110

APPENDIX B - Questionnaire on Agricultural Assistants. 117

LIST OF TABLES

Table		Page
1.	Number of Agricultural Assistants Respondents.	47
2.	Number of Agricultural Superintendents Respondents	48
3.	Length of Service of the Agricultural Assistants	49
4.	Entry Qualifications of Agricultural Assistants.	50
5.	Grade of Pass in the Agricultural Assistant Course	51
6.	Duties of Agricultural Assistants.	52
7a.	*Agricultural Assistants' Opinions About the* Agricultural Assistant Course.	53
7b.	Value Ratings of the Agricultural Assistants Course. . . .	54
8.	Age Distribution of Agricultural Assistants.	55
9.	Marital Status of the Agricultural Assistants.	56
10.	Place of Birth of the Agricultural Assistants.	57
11.	Father's Occupation.	57
12a.	Factors Responsible for Choosing a Career in Agriculture .	58
12b.	Parents' Professional Preferences for Their Children . . .	59
13a.	Degree of Satisfaction with Agricultural Job	60
13b.	Degree of Satisfaction with Salary	61
14.	Duty Preferences of Agricultural Assistants.	62
15.	Rank-order Correlation of the Agricultural Assistant Course Examinations (1971-1973) With Entry Qualifications	63
16.	Data Relating Level of School Achievement to Entry Qualifications	65

Page

17. Data Relating Job Performance Quality to Entry Qualifications 66

18. Data Relating Job Performance Quality to Level of Academic Achievement 67

19a. Data Relating Level of Interest to Job Performance Quality of Agricultural Assistants Without Secondary School Education. 68

19b. Data Relating Level of Interest to Job Performance Quality of the Agricultural Assistants with Secondary School Education 68

20a. Data Relating Ability to the Job Performance Quality of the Agricultural Assistants Without Secondary School Education. 69

20b. Data Relating Ability to the Job Performance Quality of the Agricultural Assistants With Secondary School Education. 70

21a. Data Relating Practical Skills to Job Performance Quality of the Agricultural Assistants Without Secondary School Education. 71

21b. Practical Skills and Job Performance Quality of the Agricultural Assistants With Secondary School Education. . 71

22a. Technical Knowledge and Job Performance Quality of the Agricultural Assistants Without Secondary School Education. 72

22b. Technical Knowledge and Job Performance Quality of the Agricultural Assistants with Secondary School Education. . 73

23a. Attitude and Job Performance Quality of Agricultural Assistants Without Secondary School Education. 74

23b. Attitude and Job Performance Quality of Agricultural Assistants With Secondary School Education 74

24a. Devotion to Duty and Job Performance Quality of Agricultural Assistants Without Secondary School Education. 75

24b. Devotion to Duty and Job Performance Quality of the Agricultural Assistants With Secondary School Education. . 76

Page

25. Level of Interest and Entry Qualifications of Agricultural Assistants 77

26. Relation of Ability to Entry Qualifications of Agricultural Assistants. 78

27. Relation of Practical Skills Ratings to Entry Qualifications of the Agricultural Assistants. 79

28. Relation to Technical Knowledge to the Entry Qualifications of the Agricultural Assistants 80

29. Relation to Stimulation of People's Interest to Entry Qualifications of Agricultural Assistants. 81

30. Relation of Enthusiasm to Entry Qualifications of the Agricultural Assistants. 82

31. Relation of Discipline to the Entry Qualifications of the Agricultural Assistants. 83

32. Relation of Devotion to Duty to Entry Qualifications of the Agricultural Assistants. 84

33. Relation of Problem-Solving Techniques to Entry Qualifications of the Agricultural Assistants. 85

34. Relation of Understanding of People's Needs and Problems to Entry Qualifications of the Agricultural Assistants . . 86

CHAPTER 1

INTRODUCTION

The economy of Nigeria has thrived on agriculture for several decades. Up till the present time Nigeria is still satisfying most of her internal demand for food and produces a substantial surplus of exportable commodities to earn foreign exchange.

In Nigeria, agriculture bears three burdens not borne by agriculture in more highly developed countries. It is relied upon as an occupation for about 75 percent of the working population, it constitutes what may be described as a built-in social security system, and it provides the government with the bulk of its revenue. Although petroleum is now contributing more than 58 percent of the Nigerian total export values, agricultural commodities still occupy priority positions as foreign exchange earners.[1]

That agriculture is vital to the economy and well being of the country is beyond dispute. But when one looks at the producer - the man on the land - and his enterprises, one finds low income, hand tools, small acreage, wasteful soil usage, poor crop varieties, low yields, unproductive livestock and family living

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[1]Okezie, J.O.J. A Keynote Address delivered at a West African Conference held in Nigeria at A.B.U., Zaria, December 13th-17th, 1971. The theme of the conference was "Agricultural Education at the Intermediate Level." p. 16.

conditions and diet which even by the simplest standards leave much to be desired.[2]

An assessment of the over-all performance of the agricultural sector during the second National Development Plan period points conclusively to its declining contribution to the Gross Domestic Product (G.D.P.) even though the value added by the sector has been rising in absolute terms. However, viewed against its expected role in the socio-economic development of the country, the performance of the sector in recent years clearly underlines the need for much greater mobilization of resources at all relevant levels of the economy than has hitherto been done. This is of crucial importance since agriculture and its related activities will continue to be the main stay of Nigeria's economy in the foreseeable future.

The traditional Nigerian farming systems are often dismissed as primitive and unworthy of consideration. Nigerian farmers are accused of being too conservative, culturally oriented and unwilling to accept change. The task of motivating farmers to accept change and guiding them to make profitable decisions could prove quite critical in facilitating a rapid advance toward a dynamic agriculture. A country such as Nigeria, where agriculture is relatively less developed and characterized by many small holders faced with a shortage of capital and credit facilities as well as marketing

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[2] Investment in Education, The Report of the Commission on Post-School Certificate and Higher Education in Nigeria, Lagos: Federal Ministry of Education, 1960, p. 101.

problems, the progress in agriculture will depend to a very large extent on an adequate number of well trained agricultural personnel.[3]

The importance of training personnel for agricultural development in any developing country cannot be over-emphasized. Dr. I. S. Audu stressed the value of the training in the Schools of Agriculture in Nigeria where he said:

> Nigeria will continue to rely on these "middle echelon" personnel to bear the brunt of the agricultural development programme well into the 1980's. The truth of the matter is that we just cannot train enough degree holders in the field of agriculture and veterinary medicine to meet the needs of development.[4]

Education and training in agriculture will provide the foundation for agricultural development. In developing economies, the ability and willingness of persons to apply new knowledge are the basis for increasing output of food and creating institutions required for commercial agriculture. In subsistence agriculture, traditional patterns of activity dominate the production of food, and rural people lack knowledge of modern agriculture. If they are to increase their output they must learn scientific methods and must become able and willing to apply them. Education and training

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[3] Onazi, Ochapa C. Comparative Analysis of the Training needs of potential agricultural extension workers, and principal problems of extension in the Northern States of Nigeria. An unpublished Ph.D. Dissertation, College of Education, Kansas State University, 1973, p. 5.

[4] Opening address to the Second Annual Schools Conference by Dr. I. S. Audu, the Ex-Vice-Chancellor of Ahmadu Bello University, Zaria Proceedings of the Second Working Conference on Intermediate Level Agricultural and Livestock Services Training Programmes of Ahmadu Bello University, Zaria, October 28-30th, 1970.

of people on the land are the processes by which this is brought about.

Education and training do make varied contributions to agricultural development and these range from teaching farmers specific skills and training persons to establish and manage marketing, transportation and credit institutions, to developing among people the abilities and attitudes necessary for citizenship and leadership in a modern commercial society.[5] The contributions are mutually reinforcing; people's development of understanding and skill in one area enhances their potential for advancement in others.

In the quest for a magic formula which would open the horizons for development, agriculture looms large as an inevitable possibility. If agriculture were only a matter of hoe, seed, stick and mud, it would be relatively simple but the basic biological process involves a whole net work of human relationships, the transformation of which is bound to be difficult and seldom immediately rewarding. The instrument often called upon to enable actual and potential manpower to meet the task of modernization in agriculture is education and "educational activities."[6]

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[5]Montgomery, George. "Education and Training for Agricultural Development" in Agricultural Development and Economic Growth. eds. Herman M. Southworth and Bruce F. Johnston, Cornell University Press, Ithaca, New York, p. 148.

[6]Castille, Gelia T. "Education for Agriculture" in Education and Rural Development: The World Year Book of Education, 1974. Evans Brothers Limited, London, p. 331.

The Schools of Agriculture in the Northern States of Nigeria train the States' manpower needs and the trainees are drawn from a little wide range of entry qualifications. As it is the case with any educational institution, be it a University, a Polytechnic College, a College of Education, that draws its candidates from a wide range of entry qualifications, the Schools of Agriculture in the Northern States are surely concerned about the effects of the entry qualifications on performance both in terms of school achievement and on the job performance with a view to establishing which one should be given a heavier weighting as regards admission consideration and to establish which one would be most predictive of performance and efficiency rate.

Purpose of the Study

The major objective of this study was to determine the relationship that might exist between in school achievement and on the job performance of the Northern States' Schools of Agriculture entry qualifications so as to be able to establish which entry qualification is more indicative of success both in the certificate course in General Agriculture and in on the job performance of the graduates. An attempt would be made to use the results of the *study:*

(a) to establish the relative predictive validity of the entry qualifications into the Northern States' Schools of Agriculture; and

(b) in the light of possible revisions in the educational or training policies governing the admission requirements into the Northern States' Schools of Agriculture.

From these determinations problems would be identified, making possible the formulation of strategies that could be recommended to the Northern States' Ministries of Agriculture officials and external assistance personnel as they strive to make improvements in the non-degree technical training of the agricultural manpower.

Statement of the Problem

The major problem of this study may be stated thus: What relationship exists between students entry qualifications, levels of achievement in the certificate course in General Agriculture, and job performance in the field?

In particular, the study would attempt to examine and answer the following empirical questions:

1. Is there any difference between the entry qualifications and the achievement quality in the certificate course in general agriculture?

2. What associations exist between the previous knowledge in agriculturally related subjects, work experience, and achievement in the certificate course in General Agriculture?

3. What is the relationship between previous qualifications, training, and job performance?

4. Which of the entry qualifications would be the best predictor of achievement in the certificate course and in the

field input and output analysis?

Hypotheses

The following hypotheses were developed for the study:

1. That the level of academic achievement in the certificate course in General Agriculture is independent of the candidate's entry qualification.

2. That the quality of job performance in the field is independent of entry qualifications.

3. That the quality of job performance in the field is independent of level of academic achievement and worker characteristics.

4. That there is no significant relationship between entry qualifications and worker characteristics.

Assumptions of the Study

The following assumptions have been made for this study:

1. There is considerable diversity in the background characteristics of the students of the Northern States' Schools of Agriculture.

2. Students in the Schools of Agriculture are motivated by factors of economic consideration and hopes for a better life.

3. Students in the Northern States' Schools of Agriculture are aware of the premium the Schools of Agriculture authorities place on quality and improvement of the quality of performance in the in-school training and the products of these schools are aware of the premium the ministry officials and other employers place on

the efficiency and effectiveness in job performance.

4. Students in the Schools of Agriculture have the understanding that these schools have limited number of places so they were admitted because of the presumed likelihood of high success or achievement in the certificate course in General Agriculture and high degree of efficiency on the field.

5. The courses offered in the Schools of Agriculture, i.e. the subject matter areas have not been planned based on any previous education experiences of the students.

6. Teachers or Tutors in the Schools of Agriculture are aware of the maxim that the selection of appropriate teaching procedures should be guided by the instructional objectives, the nature of the subject matter and the entering behaviour of the students.

7. The curricula of the Schools of Agriculture are planned based on, among other needs, the needs of the society to be served.

8. The views and ratings of the supervisors of the Agricultural Assistants bear a true reflection of the field performance quality.

Scope and Limitations of the Study

The Schools of Agriculture in the Northern States that are as of now functioning for the purpose of training Agricultural Assistants are as follows:

1. School of Agriculture, Bauchi.
2. School of Agriculture, Bakura.
3. School of Agriculture, Kabba.

4. School of Agriculture, Samaru.

5. School of Agriculture, Yandev.

The investigation was confined to two Schools of Agriculture in the Northern States viz: Schools of Agriculture Kabba and Samaru for the following reasons:

1. These schools are relatively the oldest so the validity of the entry qualifications would best be demonstrated, and

2. They are the two schools so far which have the largest number of graduates in the field.

Even though the School of Agriculture, Samaru runs courses in Home Economics for Women and Farm Mechanization for men these aspects fall without the precincts of this study.

For the second phase of the study i.e. the comparison of entry qualifications, and performance on the field, two states among the former six Northern States were selected. These were former Benue-Plateau and North Central States.

Significance of the Study

There are two major entry qualification categories to the Schools of Agriculture in the Northern States viz: Those who had been trained in Farm Training Centre, and those who had been through Secondary School Education. There have been assumptions that one entry qualification category is better than the other both in the in school and on the job performance.

Agricultural Education in any nation is viewed as a knowledge delivery system whose over-all purpose is to help farmers achieve

better knowledge and understanding and to change their behavior and practices in order to improve productivity, income and general well being for themselves, their families and their neighbours. This makes this sort of research very compelling for the following reasons:

1. There is an urgent need for increasing numbers of trained personnel in agriculture in Nigeria as a whole. This implies that the Schools of Agriculture in the Northern States, with their limited number of places and training facilities to offer to candidates, cannot afford the luxury of admitting those whose likelihood of success is small at the expense of denying entry to those whose likelihood of success is high. To do this would be extremely wasteful not only of individual talent but of societal resources as well.

2. The Schools of Agriculture in the Northern States, as it has always been proclaimed both at their opening and closing sessions, are obsessed with quality and with the improvement of quality. It would therefore be self-confounding to keep admitting students who cannot make a success of the training offered while those who can actually and really advance the frontiers of knowledge in agriculture are kept out.

Another significant aspect of this study is the recommendation of James Kincaid in a report on "The strategies for the improvement of agricultural extension work and non-degree agricultural training in Nigeria." He recommended that more deliberate attention should be devoted to a determination of what is expected of a majority of trainees upon their completion of a

particular training curriculum.[7]

Definition of Terms

In carrying out a research it is necessary to operationally define important terms that are vital in order to ensure clarity and similarity of meaning. Terms often times have a plethora of meanings. The following terms are therefore defined in the context of their specific use in this study.

Northern States: The states created out of the former Northern Region of Nigeria by the Federal Military Government's decree in May, 1967.

Schools of Agriculture: The Vocational Agricultural Schools which are major training institutions for direct servers i.e. agricultural extension agents. They train the bulk of agricultural extension agents who are in direct contact with the farm people.

Entry Qualification: This refers to the qualification the candidate had at the time of admission into the School of Agriculture in the Northern States. The qualifications identified have been basically Secondary School Education and Farm Training Centre cum field experience qualifications.

School Achievement: This refers to the academic performance in the subjects taught at the Schools of Agriculture.

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[7]Kincaid, James M. Strategies for the Improvement of Agricultural Extension work and Non-degree Agricultural Training in Nigeria. Consortium for the study of Nigerian Rural Development (East Lansing: Michigan State University, September, 1968), p. 141.

Performance: This refers to the quality of work of an individual and his ability at discharging his duties.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The literature in the relationship between entry qualifications, in and out of school performances is not extensive particularly in Nigeria where little or nothing has so far been published in the area. The studies that have so far borne any relevance have concerned themselves with the predictive validity of entry qualifications.

The purpose of this review is to discuss what information is available in Nigeria and elsewhere as it is considered pertinent to the present study and to explore the link between education, individual opportunity and individual success. Specifically the author wishes to examine the proposition that: the post-school opportunity and performance of a pupil is related to his achievement in school and the relationship is that higher achievement is associated with success and lower achievement is associated with lack of success.[1]

The everyday connections frequently made between educational attainment and life success are based on observations of different

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[1] Levin, Henry M. et al. "School Achievement and Post-School Success: A Review": Review of Educational Research, Volume 41, Number 1, February, 1971.

individuals at each level of educational attainment. Consequently it is not known in any controlled or scientific way what would have happened to a particular individual had he obtained more schooling or had he not gone to school at all. Knowledge is even limited further by the tendency of highly educated individuals to have other attributes which might explain their greater success. The quantity and quality of one's schooling may be directly related to an individual's ability, his family's location and wealth, his motivation, cultural milieu, his race, etc. Thus the ostensible connection between schooling and success may merely reflect the greater possibilities open to persons with a number of other helpful attributes rather than being an effect of education perse.

Factors of College Success

Research designed to identify factors which have significant relationships to college success has been quite productive. Freeman's[2] study established the validity of group intelligence tests as predictors of college success. Aiken's[3] more recent review, citing studies conducted in Utah, Florida, Georgia, and elsewhere concluded that average grades in the high school were valid as

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[2]Freeman, Frank S. "Predicting Academic Survival", Journal of Educational Research, Volume 23, 1931, pp. 113-123.

[3]Aiken, Lewis R. "Rank in High School Graduating Classes of various sizes as a Predictor of College Grades" Journal of Educational Research, Volume 48, October 1964. pp. 56-60.

predictors of college success. The literature is replete with studies complementary to the above references studying factors related to college success. There is no doubt concerning the relationship of such factors as intelligence to academic success, however it is admitted that there are many cases where the relationships are not especially high. D. Super noted this point and reported that numerous summaries yield ranges from 0.30 to 0.80 with the modal r^s being 0.40 to 0.50 when the intelligent tests and the high school grades are the variables used.[4]

Research on Pre-requisites

Decisions about the necessity and scope of course pre-requisites generally rely upon anecdotal evidence, personal experience and common sense.

Fortunately, more objective procedures exist for resolving the oft - times hotly debated matter of pre-requisites. Unfortunately, however, these empirical approaches appear to have been completely overlooked by educators. A review of educational literature revealed only one systematic study of the value of pre-requisites. Van Fenstermaker and Roberts[5] utilized Multiple Regression techniques to examine the relationship between grades in

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[4]Super, D. Appraising Vocational Fitness (New York, Harper and Brothers), 1949.

[5]Fenstermaker, J. Van and Roberts, L. E. An Analysis of factors influencing student Performance in Business Finance: Collegiate News and Views, Volume 26, 1972-73, pp. 21-23.

the Upper Division Business Finance Course and grades in a variety of lower division classes. Pryor and Gordon[6] worked on a statistical model for the examination of the validity of Pre-requisites. They intended to develop and demonstrate an empirical method for estimating the validity of course prerequisites. Unlike the model advanced by Van Fenstermaker and Roberts[7] their model utilized information concerning exposure to pre-requisite courses. The findings of the study revealed that a student's record of academic success is a better forecaster of performance in the target courses than the sequence of specific courses to which he has been exposed previously. It became clear that current policies governing pre-requisites which do not acknowledge individual differences in demonstrated learning ability of students should be revised. To this end, it was suggested that a more realistic approach would allow students with high Grade Point Averages to ignore some or all preliminary requirements. A more conservative version of the policy would be to allow bright students to enroll in pre-requisites and advanced courses concurrently. The less brilliant students would be required to complete successfully the pre-requisite courses prior to undertaking the advanced work.

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[6]Pryor, N. M. and Gordon, M. E. "A Statistical Model for the Examination of the Validity of Prerequisites", Educational and Psychological Measurement, Volume 34, Number 2, Summer 1974.

[7]Fenstermaker, J. Van and Roberts, L. E. op. cit., pp. 21-23.

Predictive Validity of Entry Qualifications

A study conducted by Bakare and Majasan[8] titled "Predictive validity of Ibadan University Entry Qualifications" used 1,000 students who were admitted into the University of Ibadan between 1962 and 1969. These students represented a stratified random sample selected from a total number of 2147. In analyzing the data, the mean score of each student in both the entry qualification examinations and in the examinations in the years in the university were taken and were subjected to a correlation analysis using the means of the entry qualification examinations as predictors and the mean scores in the sessional examinations as criteria.

This study revealed that there was correlation between students performance in the various entry examinations and the relevant university examinations. On the whole it was found that G.C.E. 'A' Level and the H.S.C. examinations are the more predictive of degree performance than the Preliminary Year Examination. It was also found that the size of the validity coefficients for entry qualifications and degree performance was low because the significant coefficients ranged from 0.3 to 0.5. Thus meaning that entry qualifications account for only between 9 and 25 percent of

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[8]Bakare, C. G. M. and Majason, J. A. "The Predictive Validity of Ibadan University Entry Qualifications." African Journal of Educational Research, Volume 1, Number 1, April 1974.

variance in degree performance. The remaining 75 percent is left unaccounted for thus rendering the entry qualifications useless for the purpose of meaningful prediction of degree performance. It was concluded that there is a generally low predictive validity of the various entry qualifications into the University of Ibadan and other universities as indicated by the studies of Knowles and Black[9] Conklin and Ogston[10], Endler and Steinberg[11] in Canada, and by Sanisbury[12], Choppin[13] and Davey and Randell[14] in the United Kingdom. Nisbet and Welsh[15] found that a number of preliminary analyses of

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[9]Knowles, D. W. and Black, D. B. (1965). "Factors influencing the Prediction of Freshman Success at the University of Alberta, Edmonton," Alberta Journal of Educational Research, Volume 11, Number 2, pp. 71-82.

[10]Conklin, R. C. and Ogston, D. G. "Prediction of Academic Success for Freshman at the University of Calgary". Alberta Journal of Educational Research, Volume 7. pp. 185-192.

[11]Endler, N. S. and Steinberg, D. (1963). "Prediction of Academic Achievement at the University Level", Personnel and Guidance Journal, Volume 41, Number 8. pp. 694-699.

[12]Sanisbury, A. B. (1970). "Supplementary Predictive Information for University Admission" Research into Higher Education, 1969, London.

[13]Choppin, B. H. L. (1972). The Prediction of Academic Success, London, National Foundation for Educational Research.

[14]Davey, A. G. and Randell, G. A. (1971). "Ways of Improving Selection of Students," University Quarterly, Volume 26, Number 1, pp. 66-76.

[15]Nisbet, J. and Welsh, J. (1966). "Predicting Student Performance". University Quarterly, Volume 20, Number 4, 1966. pp. 468-480.

this kind have failed to give promising results. They said it would appear that a substantial part of the variation in students' performance in university is basically unpredictable from evidence available at the time of entry to university. A more promising line of inquiry would therefore seem to be the identification of the earliest warning signs of failure after a student has begun his course of study on the principle that a good prediction of final performance can be got from the performance in the initial stages of a period of training or study.

Research into the problem of the predictive validity of entry qualifications in West African Universities located in the Anglophone countries have hitherto produced only a set of equivocal findings. Gilbert[16] in Sierra Leone compared the degree performance of students admitted into the preliminary year course. He found out that in the B.A. General examination in Arts as well as in Economic Studies, there were fewer failures amongst "A" Level entrants than among those who were from the Preliminary Year. However, students from the Preliminary Year Course performed better than "A" Level entrants in the science subjects. In contrast to these findings, a study at the University of Nigeria, Nsukka,[17]

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[16]Gilbert, D. (1970). "The Development of Sixth Form and Preliminary Year University Courses in Sierra Leone 1954-1967". West African Journal of Education, Volume XIV, Number 2, pp. 110-115.

[17]University of Nigeria (1966). Progress Report, January to June, 1966, Nsukka, Nigeria, p. 97.

found no significant difference in the proportion of students with the various entry qualifications who subsequently received various classes of honours degrees at the graduation from the University in 1965.

Fafunwa[18] reporting a study from the same university found that in degree examinations, direct entry students performed better than Preliminary Year Students in liberal arts subjects while the latter group performed better in Science and Technical subjects.

Long[19] in a study titled "Academic Performance of Direct Entry and Preliminary Year Students" looked into the performance of these two entry qualification categories in one science - based subject i.e. in agriculture. He obtained information on 48 male graduates who had completed the Bachelor of Science (Agriculture) at the University of Nigeria, Nsukka in 1964, 1965, 1966. The measure of academic performance was the mean Grade Point Average of each group i.e. the direct entry and the Preliminary Year Students. It was noted that the seven graduates who had enrolled as direct entry students did somewhat better than the forty-one graduates who had entered as Preliminary Students in courses taught in the Faculty of

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[18] Fafunwa, A. Babs (1967). New Perspectives in African Education, Lagos, MacMillan and Co., (Nigeria), 1967.

[19] Long, James S. "Academic Performance of Direct Entry and Preliminary Year Students." West African Journal of Education, Volume 14, Number 3, October 1970.

Agriculture. It is the opinion of the author of this research that the results might have been different had equal number of candidates been selected from both entry qualification categories.

It was recommended in the event of the contradictory findings that since high correlation between entry qualifications and university success is unattainable, researchers should give up the myth of prediction and turn their attention to the study of high level academic work as a process, the study of situational factors determining university performance and the measurement of university success itself. Few reasons were advanced to explain the low predictive validity of Ibadan University and other Universities' entry qualifications.

1. Both the predictor and the criterion examinations could themselves have low reliabilities and this would result in low correlations between them;

2. Students admitted into the University of Ibadan form a highly selected group. The variance or spread of the scores of this type of group on examinations is much less than for normal groups and this restriction of spread would tend to produce lower correlations than an unselected group;

3. Many students take subjects at the university which are different from those taken at the entry qualification examinations;

4. There are many situational factors in the three or four years of University study itself which tend to reduce the predictive validity of entry qualifications. These situational factors can be itemized thus:

(a) the quality of University teaching;

(b) the student's personal adjustment to University life;

(c) the presence or absence of emotional tension;

(d) crises in the student's life;

(e) student's study habits and attitude to academic work.

Although several research results show insignificant differences in performance amongst the entry qualifications, it is the opinion of the writer that if the authors had employed more streneous statistical analysis such as the Multivariate Analysis of variance, simple analysis of variance, Multiple Regression Analysis or simple regression analysis, covariance analysis in a research of this calibre with such seeming importance they would have been able to discover more prominently significant correlation coefficient levels. The prediction of the probability of success of the candidates prior to their enrolling in the University could have been done by developing a Multiple Regression Equation. Also a Simple Regression Equation would have been developed using the performance of the candidates in the entry qualification examinations as the predictors and the University variables as the measure.

Ohuche[20] in a study titled "Academic Achievement of Nigerian Undergraduates as a function of Previous Educational Experiences"

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[20]Ohuche, R. O. (1974). "Academic Achievement of Nigerian Undergraduates as a Function of Previous Educational Experiences" West African Journal of Education, Volume XVIII, Number 2, 1975. pp. 111-115.

used more than one statistic. He used the Multiple Regression Analysis to predict the probability of success of the candidates in terms of performance prior to their enrolling in the Universities in the United States. He also developed the simple regression equation using the performance in the entry qualification examinations as the predictors and the University variables as the measure. He went on to use the analysis of covariance to discover if there was any significant difference in academic achievement between undergraduates who completed the equivalent of sixth form and those who went to United States after only completing the equivalent of the ordinary secondary school. He used the pre-University predictor variable as the covariate and the cumulative grade point average as the measure.

He analyzed his results and came to a conclusion that:

1. Previous educational experiences, as measured by the grade in the School Certificate Examination, of Nigerian Undergraduates attending institutions of higher learning in the United States could not be used to predict satisfactorily the academic achievement of such students as measured by their cumulative grade point averages.

2. A satisfactory predictor of academic achievement for the Nigerian undergraduate was his grade point average at the end of his first term in a higher educational institution in the United States. Furthermore, his cumulative grade point average one year later was a better predictor variable than this.

3. Nigerian undergraduates who completed the equivalent of the sixth form programme performed better than the rest.

Clark[21] in her study for a doctoral dissertation found out that significantly more Ghanain undergraduates studying in the United States were passing who held the equivalent of the advanced level General Certificate of Education than otherwise.

School Achievement and Job Performance Relationships

To date research studies have been quite unsuccessful in identifying the factors which significantly relate to occupational success. Thorndike[22] sought correlations between the scores on vocational tests at the age of 14 and criterion for judging vocational success taken 4-8 years later, but did not obtain results of practical value. Latham[23] gave a battery of 27 aptitude tests to 1,600 high school seniors and conducted a follow up of these students 1 year after graduation. In reference to the study, Tyler[24] wrote: "...there seems to be no evidence whatever that individuals going into work which a counsellor would have considered suitable on

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[21]Clark, W. Violet Esther (1963). "Ghanain Students in the United States, 1959-60." Unpublished Ph.D. thesis, University of Michigan, 1963.

[22]Thorndike, E. L. et al. (1934). Prediction of Vocational Success. (New York, The Commonwealth Fund), 1934.

[23]Latham, A. J. (1951). "Job Appropriateness: A One-Year Follow-up of High School Graduates," Journal of Social Psychology, Volume 34, pp. 56-68.

[24]Tyler, Leona E. (1961). The Work of the Counsellor, (New York: Appleton-Century-Crofts, Inc.), 1961.

the basis of test scores get along better than those who go into unsuitable work." In 1955-56 Thorndike and his colleagues[25] sent questionnaires to about 16,000 men who had been given the comprehensive Air Force Battery of tests in 1943. The questionnaire sought information relative to the career success of these men. From a return of 10,000 the results showed almost no correlation between test scores and career success as determined in the study.

Coppedge[26] in a study titled "Relation to selected variables from High School Records to occupational and college success" had an opinion that a basic concern of the schools must be that of securing information on each student which will be useful in guiding the student in selecting the most desirable programme of studies, and in formulating appropriate vocational choices. In consideration of the findings of his study, it was concluded that colleges are justified in using such variables as high school grades, teacher ratings etc. as standards for college admission purposes. There is a real need for the improvement of the guidance services which are provided for that segment of the student body which is not college bound. The information which is often found in records of high

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[25]Thorndike, R. L. et al. (1961). 10,000 Careers (New York: Wiley), 1959.

[26]Coppedge, Flloyd L. (1969). "Relation of Selected Variables from High School of Records to Occupational and College Success", Journal of Educational Research, Volume 63, Number 2, October 1969.

school students is insufficient for predicting occupational success. It is very likely that this condition is due, in part, to the material having been placed in the records by personnel who were thinking in terms of the student's future in college rather than his future in the world of work. There is every reason to believe the data which is placed in the records of those who are destined for employment upon graduation from high school should be placed there for the purpose of being useful for employment purposes rather than for predicting college success. At the present time it is rather obvious that much of the data which is commonly included in the students records of the non-college bound student, while it may be useful in pre-graduation decision making is not highly valuable in terms of relating to future job success. In view of the findings which indicated that the selected variables were not significant indicators of occupational success it was concluded that school personnel in co-operation with employers should involve themselves in selecting variables which are more useful as indicators of occupational success, and that the present practice of using variables such as those in the study for making references to employers and predicting occupational success should either be discontinued or engaged in with considerable caution. Teachers and parents as well as the students must become aware of the fact that those variables which indicate academic success do not necessarily indicate occupational success.

Educational Level and Job Performance Relationship

Harrison[27] conducted a study titled "Work and Motivation: a study of village level agricultural extension workers in the Western States of Nigeria. He compared the performances of the Agricultural Assistants entry qualification categories. He found out that the recruitment into both the agricultural assistant and field overseer cadres is dominated by the criterion of educational qualifications. Emphasis on educational qualification would appear to stem from the belief that higher educational qualification generally indicate greater ability, and that a man with greater ability will make a more effective extension worker. He discovered that the data gathered in his study showed however that educational qualification is not directly correlated with extension worker behaviour, it seems to be in fact inversely correlated. He found out too that the data indicated that there is extremely high correlation between "work-behaviour" and "over-all performance". He also deduced from the study that there is a high correlation between "work-behaviour" and the "abilities" required of the village extension worker.

His findings in the final analysis did not support the assumptions on which the present recruitment policy rests. It would seem

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[27]Harrison, R. K. (1970). "Work and Motivation: a Study of Villege Level Agricultural Extension Workers in the Western State of Nigeria" in Studies in Nigerian Administration, ed. D. J. Murray, (Institute of Administration, University of Ife, Nigeria), 1970. pp. 209-258.

that while higher educational qualifications may indicate greater intellectual ability, they do not necessarily indicate a higher endowment of the abilities required of an extension worker, no evidence is available any where to suggest that unusual abilities deriving from intellectual capacity are required for village level extension work; on the contrary, it would seem that the abilities required are possessed by many people and are brought out by the greater motivation which manifests itself in better work behaviour.

In an answer to a question as to why those with higher educational qualifications are less motivated to work well, he gave the following reasons:

1. The acceptance by most other Government Departments and firms of the assumed relationship between educational qualifications and performance;

2. The relatively low prestige amongst job seekers of agricultural work;

3. The pay and general conditions of service do little to counteract the generally low regard in which the work is held.

As regards the academic performance quality of the two groups of Agricultural Assistants trained at the School of Agriculture at Akure, he compared the average scores of the four graduating classes in 1965, 1966, 1967, and 1968. He found out that there is a significant difference in final examination scores, but by no means as large a gap as would be expected from the higher qualification holders. With the average performance of

the higher qualification holders less than six percentage points higher despite their enormous advantages, it seems fairly clear that higher educational qualifications does not mean what it is assumed to mean.

The fitures he got from his study show that even under the present assessment system, which he said is poorly indicative of future performance on the job, Field Overseers who have undergone the preliminary science training are perfectly capable of completing the course successfully. He contended that if the training were to be modified to put more emphasis on the practical training, if the assessment was altered to try and assess the abilities which will be required on the job, there is every likelihood that the Field Overseers would score at least as highly, and a strong possibility that they would score more highly than the higher qualification holders. He concluded that if the Field Overseers can do as well as their higher qualification holder rivals, and if those with less education perform better on the job, the present recruitment policies would seem to need reconsideration.

CHAPTER 3

HISTORICAL PERSPECTIVES OF AGRICULTURAL EDUCATION AND EXTENSION SERVICES IN THE NORTHERN STATES

A historical perspective of agricultural education and extension service in the Northern States seems pertinent at this point because the background information is essential to the understanding and appreciation of this study.

Much has been accomplished in the training of intermediate level personnel in agriculture since the publication of the Ashby Commission report which stressed the need for greatly increased emphasis on agricultural research, extension and agricultural education at all levels in Nigeria. However the output from the Schools of Agriculture in Nigeria is hardly enough or adequate to meet the needs of agricultural development of the present time. The large scale expansion in agricultural programmes in the country has created a greater demand for the "middle echelon" personnel in agriculture. These expansions necessitate a re-examination of the programmes of the training institutions to determine whether they are preparing the trainees in subject matter content and depth which will serve the needs of the individuals when they get on the job and whether the training provided serves the long term needs of Nigeria's agricultural development.

Manpower requirements for agricultural development have led the governments to create training facilities for the production of basic staff such as Agricultural Assistants, Home Economic Agents etc. These establishments have a definite role to play in achieving agricultural development and promoting the welfare of the rural population in a regular and satisfactory way.[1]

Sub-Degree Level Agricultural Education in the Northern States of Nigeria

Agricultural education at the sub-degree level has made a much earlier start in Nigeria than agricultural education at the degree level which has a recent history. A National Department of Agriculture was established by the British Colonial Administration in 1921 which had as part of its functions, the introduction of agricultural education for the training of Nigerians and the establishment of the beginning of an extension service in Nigeria.

In 1931, the first School of Agriculture was opened at Samaru in the former Northern Region. The Samaru School of Agriculture and the School of Agriculture, Ibadan established with the establishment of the Department of Agriculture at Moor Plantation, jointly served and provided the basic manpower needs of the Department of Agriculture in Nigeria until 1954 when a new constitution

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[1] Sam, Pierre D. "Training Institutions of Intermediate Level", Agricultural Education at the Intermediate Level. Report of a West African Conference held in Nigeria at Ahmadu Bello University, Zaria, December 13th-18th, 1971. p. 75.

(McPherson's Constitution) was introduced resulting in the regionalization of government departments. The Samaru School of Agriculture then came under the direct control of the Northern Nigerian Ministry of Agriculture with headquarters at Kuduna.

In 1964, the second School of Agriculture was opened at Kabba in the present day Kwara State by the Ministry of Agriculture, Northern Region. The purpose of the school was to supplement the training at Samaru School of Agriculture and to cater for the special needs of extension workers in the riverain areas of the north. Following the abolition of the regional governments in 1968 and the creation of new states, the Samaru and Kabba Schools of Agriculture were transferred to Ahmadu Bello University and in 1971 the two Schools were in-corporated into the Division of Agriculture and Livestock Services Training (D.A.L.S.T.). The Ahmadu Bello University has also initiated arrangements for a third School of Agriculture which has been established at Bakura to train extension workers with specialization in irrigation agronomy.

With the creation of new states, the hitherto existing Schools of Agriculture in the Northern States could not cater for manpower needs of agricultural development adequately so two states, former Benue-Plateau and North Eastern States, decided to establish their independent Schools of Agriculture at Yandev and Bauchi respectively. These schools were established primarily for the supplementation of the training at Samaru and Kabba Schools of Agriculture. The purpose of these two Schools of Agriculture is

first and foremost to provide the manpower needs of the individual states since depending on Samaru and Kabba Schools of Agriculture might retard agricultural development and progress in the two states. The decision to establish these Schools of Agriculture was prompted by the fact that a small quota is normally all that is allowed each state.

The main function of these Schools of Agriculture in the Northern States is to provide training in agriculture, home economics, animal health, animal husbandry and extension education for young men and women who will assume technical positions in the extension services and research institutions in Nigeria, as well as in neighboring African countries.

Bauchi and Yandev Schools of Agriculture offer mainly a two year certificate course in General Agriculture while Samaru and Kabba Schools of Agriculture offer in addition to a two year certificate course in General Agriculture two year diploma level courses. Bakura School of Agriculture however offers two year certificate course in irrigation agronomy. Students admitted into the certificate course are mostly secondary school graduates. A few Field Overseers of proven competence are allowed a chance to do the certificate course as an inservice course for upgrading them. The diploma programmes in the Samaru and Kabba Schools of Agriculture are essentially inservice courses for upgrading extension personnel for the Ministries of Agriculture in the Northern States. The trainees at the certificate course levels

form the bulk of the "middle-echelon" personnel. These middle level technicians are responsible for extension work in the rural environment so they play an important role in the promotion of agricultural development. They are in direct and continuous communication with the farming community as active change agents. Until recently, the training programmes of intermediate level schools were in general unsuitable to the development needs of agriculture in the tropical countries and were too often inspired by programmes developed by the former colonial powers. They were too theoretical and the intermediate level technician received an encyclopaedic training without being prepared to adapt to the new and different situations that he would meet during his working career. These intermediate-level staff are responsible for the productivity and improvement of rural enterprises and for giving instructions to farmers.

The schools do not train farmers but those who would work with or serve farmers. The success in boosting agricultural production depends to a great extent on the intermediate level personnel produced in these schools because they are the ones who would put the results of scientific experiments and research of the higher institutions into practice on the field.[2]

The Schools of Agriculture in the northern states have as one of the feeder school systems, the Farm Training Centres which

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[2]Dikko, Alhaji Umaru. Opening Address presented at the Conference of the Division of Agriculture and Livestock Services Training held at Mando Road, Kaduna, (18th-20th March, 1974).

train people in the basic rudiments of agriculture as a vocation. The trainees qualify from these institutions as Agricultural Instructors or Field Overseers. Admission to the Farm Training Centres requires a minimum of primary school education or lower secondary qualification. The sequence of the programme follows the effective sequence of field activities on the farm i.e. the succession of activities during the production cycle. The practical training sessions are as far as possible, inserted in the course of the teaching programme and coincide with the most important periods in the production cycle.

Another feeder school system for these Schools of Agriculture is the secondary school. Candidates are selected from the lot that has gone through the five year secondary education without necessarily obtaining the West African School Certificate (W.A.S.C.). Candidates are also drawn from those who have been able to pass the over-all West African School Certificate examination. While the admission into the Schools of Agriculture is on competitive basis for the graduates of the Farm Training Centres, it is not for the candidates who have had secondary education. They are asked to indicate by application letters to their states' Public Service Commissions their willingness to take a career in agriculture.

The Bakura, Samaru, and Kabba Schools of Agriculture are administered by the Ahmadu Bello University, while those of Yandev and Bauchi are respectively administered by the former North Eastern and Benue-Plateau States' Ministries of Agriculture.

Agricultural Extension Service

This aspect of this study is important because the Schools of Agriculture in the Northern States offer training for agricultural extension workers. The extension service in Nigeria had a modest beginning in 1921, when the Department of Agriculture was established at Moor Plantation, Ibadan. The main emphasis of the Department was research and experimental works on export crops.

Extension work then consisted mainly of providing services to farmers. In 1954, when the regional constitution was introduced in Nigeria, separate Ministries of Agriculture were established in each of the new regions. Extension workers in the new regions were still mainly concerned with the supervision and maintenance of agricultural schemes of the government. In Northern Nigeria, this concerned the maintenance of seed multiplication schemes, experimental farms, a few demonstration unit farms, soil conservation, and minor irrigation schemes. Advisory service and the actual contact with farmers was left to the Native Authority agricultural staff, who, although well meaning, lacked adequate technical training in agriculture and modern extension teaching methods. The Ministry of Agriculture, Northern Region was divided into six main divisions: General Administration, Field Services, Irrigation, Education and Training, Produce Inspection and Pest Control. Agricultural extension came under the Field services division. In the extension organization, Agricultural Officers or Superintendents were put in charge of Divisions and they had Assistant Agricultural

Instructors (A.I.) filling the lower staff positions. At the bottom of the extension organization were Agricultural Instructors who maintained direct contact with the farmers and were the main strength of the extension service in carrying out its function of disseminating agricultural information. However, they were also the least educated and were most inadequately trained for this important function. Most individuals were appointed Agricultural Instructors after completing elementary education. They were given nine months of training in technical agriculture at Farm Training Centres located spatially throughout the region.

The political events in Nigeria between 1966 and 1970 and the constitutional changes which took place resulted in the creation of six new states out of the former Northern Region: Kwara, Benue-Plateau, North Central, North Eastern, North Western and Kano states. These new states established among other Ministries the Ministry of Natural Resources. This ministry was made up of four main divisions: Agriculture, Forestry, Veterinary Services, and Co-operatives. The agricultural division was sub-divided into several units.

The primary function of the extension service in the new states was that of disseminating information concerning improved agricultural practices to the farmer and his family in the rural community. There has been a general realization that the value of scientific research and practical effort in agriculture depends upon the degree to which the results are made the common property of the farming community.

In 1968, the Extension and Research Liaison Section which was established by the Ministry of Agriculture was transferred to the Ahmadu Bello University. The main functions of this section were two-fold:

1. to bring the problems of farmers to the attention of research staff;
2. to transform the results of research into a form that extension workers and farmers could easily understand.

The Extension Research Liaison Section of the Institute for Agricultural Research has helped to ensure a two-way flow of agricultural information between the two agencies.

Although the extension services have principally an educational function, they have also been responsible for providing essential agricultural production inputs for farmers, since the agri-business sector is still at its developmental stage. The extension workers are responsible for seed multiplication and distribution, fertilizer sales and distribution, and making available a supply of plant materials and pesticides. The extension service also undertakes other activities to boost agricultural production such as tractor hiring units, crop production programmes, farm settlement and land reclamation schemes. Other activities include assisting farmers with marketing of produce, organizing farmers' co-operatives and young farmers' programmes. The extension workers are also responsible for conducting field experiments

for research workers at the Ahmadu Bello University and for collecting crop data and meteorological reports.[3]

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[3]Onazi, Ochapa C. op. cit., pp. 11-17.

CHAPTER 4

METHODOLOGY

Research on the relationship that exists between entry qualifications, school achievement of the Northern States' Schools of Agriculture students and the quality of their job performance entailed a number of methodological approaches. The study was done in two major phases: Phase one dealt with the relationship between entry qualification and school achievement while Phase two dealt with the job performance quality of the graduates of the Schools of Agriculture in the Northern States.

Selection of Respondents and Sampling Procedure

(i) Agricultural Assistants in School

The subjects for the Phase one of the study were drawn from those admitted into the Kabba and Samaru Schools of Agriculture between 1971 and 1973. These subjects represented an entry qualification category or stratum. Students who repeated classes were not selected. In each of the entry qualification categories i.e. secondary and non-secondary school educational qualifications, ten students were randomly selectedper set from the Samaru School of Agriculture. This means that on the whole, there were sixty students whose entry qualifications were analyzed against their performance in the final first and second year examinations.

(ii) Agricultural Assistants in the Field

Agricultural Assistants who had graduated between 1971 and 1973 were potentially available for inclusion in the study groups. In former Benue-Plateau State, twenty four Agricultural Assistants were contacted by the author while in former North-Central State twenty were contacted. These were all graduates of the certificate course in General Agriculture during the period under consideration. The responses of these Agricultural Assistants were subjected to statistical analysis.

Because of the quota policy of admission, it was discovered that there were really few Agricultural Assistants who had completed the certificate course within the period chosen i.e. 1971-1973, who were employed in the study area. It was, therefore, not appropriate to employ a random sample selection procedure. Efforts were instead made to obtain responses from all Agricultural Assistants who met the criteria of the study.

(iii) Agricultural Superintendents (Supervisors)

For the second phase of the study, twenty-five Agricultural Superintendents were contacted. These were those who were in direct supervision of the work of the field Agricultural Assistants in the divisions of former North-Central and Benue-Plateau States. The assessment of the job performance quality of the Agricultural Assistants by these Agricultural Superintendents (Supervisors) were also subjected to a non-parametric Chi-square statistic to ascertain validity and reliability.

Development of Instrument

For the second phase of the study titled "Job Performance Analysis of the Agricultural Assistants", structured or close ended questionnaire was used and it required respondents to check or rank one item from a list of alternatives in their order of importance. The closed form questionnaire was employed because it was believed that the respondent's attention was maintained at a higher level using this format and in addition the process of tabulation and analysis was simplified. One or two open-ended questions were asked where it was difficult to frame a structured question.

Two instruments were used to obtain data for the second phase of the study. The first was designed for responses from the Agricultural Assistants and the second was for the Agricultural Superintendents. Both instruments were essentially similar in both content and structure except that the one for the Agricultural Assistants asked in addition for personal background information while the one for the agricultural superintendents was more related to job performance analysis of the Agricultural Assistants.

The questionnaire on job performance analysis was divided into two sections:

Section A: This was intended to obtain responses pertaining to general background information about the Agricultural Assistants. This section contained nine questions to be answered by the Agricultural Superintendent (Supervisor).

Section B: This was intended to obtain information pertaining to job orientation i.e. the attitude, devotion and sense of commitment to duty, general outlook to work etc., of the Agricultural Assistants. This section contained nine major questions to be answered by the Agricultural Superintendents.

Pretesting the Questionnaire

The draft questionnaire for Agricultural Assistants was first tested on a few former students of the Schools of Agriculture in the Northern States who worked in and around the town of Gboko. These Agricultural Assistants were experienced in extension work and other varying assignments in the Ministry of Agriculture, former Benue-Plateau State, Nigeria. As a result of this trial administration, the instrument was modified in respect to content and clarity of the questions.

The revised draft questionnaire was again administered to other graduates of the Northern States' School of Agriculture working in Gboko Division of former Benue-Plateau State. This second pretesting indicated the need for further modifications to simplify terminology and to improve the comprehension of the content and directions for completing the questionnaire.

Collection of Data

All the data for the study relating to job performance and sub-university level agricultural education were collected partly through personal contact and by mail from respondents. Most of the

Agricultural Assistants respondents were contacted at monthly divisional meetings in respective agricultural divisional headquarters.

The questionnaire forms filled and returned to the author accounted for 61.36 percent of the Agricultural Assistants surveyed and 60.0 percent of the Agricultural Superintendents who supervised the Agricultural Assistants. This was deemed a satisfactorily level of return considering the physical hardships involved in reaching all the potential respondents, the number of trainees who enter the Schools of Agriculture yearly, and the number of graduates who are promoted to the superintendent cadre.

Out of the number of students belonging to each entry qualification category, ten were selected at random from each set of Kabba and Samaru Schools of Agriculture and their school achievement data were collected by obtaining their grades from the examination results files in the agricultural schools attended.

The students' entry qualifications were obtained from their records in their respective schools of agriculture in the northern states. Their grades in the first and second year's final examinations were the first and second year's final examinations were similarly obtained. Information was also obtained regarding the final grade of certificate i.e. Grade One, Two, Three or attendance certificate awarded to each graduate.

Information recorded on the questionnaire forms completed by the Agricultural Assistants and the Agricultural Superintendents who directly supervise them was carefully analyzed partly by

tabulation and by descriptive analysis.

Statistical Analysis

Three statistical procedures were selected to analyze the data collected during the study.

(i) The mean scores of the subjects taken in each of the first and second year's examinations were calculated. These sets of mean scores were then subjected to rank-order correlation coefficient analysis.

(ii) The academic records of the candidates admitted on the basis of their training in the Farm Training Centres (F.T.C.) and suitable field experience and of those admitted on the basis of having gone through secondary school education were obtained. Their final grades of pass in the certificate course in General Agriculture were also obtained. The number of candidates in Grade One, Two, Three, attendance was compared on the basis of entry qualification using the chi-square statistic to determine the significance of the difference in quality of performance for the two entry qualification categories. Chi-square was also used to analyze the responses from the questionnaire for the Agricultural Superintendents (Supervisors) to determine the statistical significance of association between each worker characteristic variable selected for the study and the quality of job performance.

(iii) The data obtained by the use of the two instruments designed for responses from the Agricultural Assistants and the Agricultural Superintendents were analyzed using percentages and

descriptive narratives.

Significance Level Chosen

The probability level P = .05 of significance was selected as a basis for accepting or rejecting the hypotheses tested. Thus, if the probability was at or less than 5 times in one hundred (P .05) that the observed difference could be attributed to chance, the research hypothesis was rejected; if the observed difference was greater than 5 times in one hundre (P .05) through the operation of chance factor, the research hypothesis was not rejected.

Summary

This chapter describes the method used in collecting the data for the study. General information about the Agricultural Assistants and their personal background characteristics as well as their job performance quality ratings were obtained by means of structured or close-ended questionnaire. These were administered to Agricultural Assistants who had graduated between 1971 and 1973 and to the Agricultural Superintendents who supervise these and other Agricultural Assistants.

Collected data were statistically analyzed to test four main hypotheses and the results of the analysis are reported in the Chapter that follows and in Chapter 6.

CHAPTER 5

PRESENTATION AND ANALYSIS OF DATA

The Sample

TABLE 1

Number of Agricultural Assistants Respondents

State	Population	Actual Number of Respondents	Percentage
Benue-Plateau	40	26	65.0
North-Central	30	18	60.0
Total	70	44	62.5

The data were collected from those subjects who attended and graduated with Agricultural Assistant Certificates from the Northern States' Agricultural Schools between 1971 and 1973 only. All other Agricultural Assistants holding the same certificates but who graduated either before or after the stated period were not considered. Out of a sample of 44, 24 Agricultural Assistants had no secondary education while 20 had secondary school education.

TABLE 2

Number of Agricultural Superintendents Respondents

State	Population	Actual Number of Respondents	Percentage
Benue-Plateau	25	20	80.0
North-Central	10	5	50.0
Total	35	25	65.0

The data were collected only from the Agricultural Superintendents who were directly involved in the supervision of the work of the Agricultural Assistants. Other Agricultural Superintendents who were not thus functioning were omitted from the exercise.

General Information about the Agricultural Assistants

In this part of the study, the general background information obtain
obtained from the Agricultural Superintendents (Supervisors) pertaining to Agricultural Assistants was analyzed through the use of percentages.

TABLE 3

Length of Service of the Agricultural Assistants

Period in years	Number of Subjects	Percentage
Less than 4	0	0
4 - 5	2	5
5 - 6	4	10
6 - 7	10	22
7 - 8	8	18
Over 8	20	45
Total	44	100

The length of service information obtained about the Agricultural Assistants working in the Ministries of Agriculture in Benue-Plateau and North-Central States was computed in percentages. The percentages ranged from 5 to 45 percent. By this computation, 45 percent of the Agricultural Assistants had served for over 8 years, 40 percent had served between 6-8, while 15 percent had put in between 4-6 years. Those who had put in between 4-6 years were mainly those who were recruited from secondary schools while those who had had over 7 years of service were those who had joined the Ministry of Agriculture as Agricultural *Instructors or Field Overseers.*

TABLE 4

Entry Qualifications of Agricultural Assistants

Qualifications	Number of Subjects	Percentage
Farm Training Centre	24	55
West African School Certificate failed	11	25
West African School certificate pass	9	20
G.C.E. 'O' Level	0	0
Total	44	100

The entry qualification information about the Agricultural Assistants admitted into the Schools of Agriculture indicated that 55 percent of them had not had a secondary school education, but had been trained at a Farm Training Centre as Agricultural Instructors thereby acquiring the requisite qualification for admittance into the Schools of Agriculture to read for the Certificate in General Agriculture, 25 percent of the Agricultural Assistants had completed secondary school but were unable to meet the requirements for the award of the West African School Certificate (W.A.S.C.) while 20 percent of the group completed a secondary school education and qualified for the award of the West African School Certificate.

TABLE 5

Grade of Pass in the Agricultural Assistants Course

Grades	Number of Subjects	Percentage
Grade One	18	40
Grade Two	19	44
Grade Three	7	16
Attendance	0	0
Total	44	100

The information regarding the grade of pass in the certificate course in General Agriculture indicated that 40 percent of the Agricultural Assistants in the study groups passed the certificate course in Grade One or with Distinction, 44 percent passed in Grade Two or with Credit while a small number representing only 16 percent passed in Grade Three or obtained an ordinary pass.

The data in Table 6 indicate that 39 percent of the Agricultural Assistants were assigned general extension work, while 25 percent of them were engaged in research experiments. Farm Management duties involved 18 percent of them, with less than 20 percent of the sample teaching in Farm Training Centres or Farm Institutes in the two States former (North-Central and Benue

Plateau States).

TABLE 6

Duties of the Agricultural Assistants

Duties	Number of Subjects	Percentage	Rank Order
1. General Extension work	17	39	1
2. Farm Management	8	18	3
3. Research Experiments	11	25	2
4. Farm Institute teaching	5	11	4
5. Farm Training Centre teaching	3	7	5
Total	44	100	

Opinions of Agricultural Assistants Regarding Agricultural Assistant Course

In this part of the study, the views of the Agricultural Assistants were obtained so as to determine whether or not the course as offered could influence the quality of job performance of the Agricultural Assistants.

The data in Table 7(a) as analyzed indicated that 12.6 of the mean responses were in strong disagreement, 11.8 simply disagreed, 5.6 were undecided, 8.8 agreed with while 5.2 strongly agreed with the statements about the certificate course in General Agriculture.

TABLE 7(a)

Agricultural Assistants' Opinions about the Agricultural Assistants Course

Statements about the course	Opinions About the Course				
	Strongly Disagree	Dis-agree	Unde-cided	Agree	Strongly Agree
Course as given is too general	6	8	8	13	9
Course of study is not adapted to community needs	16	12	8	4	4
Course fails to give adequate vocational training	14	13	2	10	5
Too much text and not enough of field work	11	10	5	12	4
There is too much physical work involved	14	16	5	5	4
Mean Responses	12.6	11.8	5.6	8.8	5.2

The data in Table 7(b) indicate the comments of the Agricultural Assistants on the value of the certificate course to them both in their present occupation and in other ways (personal, family,o community). In this aspect, 35 of them indicated that the course had been very valuable, 7 said that it had been just valuable, while only 2 of them indicated that they were undecided about the value of the course.

TABLE 7(b)

Value Ratings of the Agricultural Assistants Course

Value Ratings	Number of Responses
Very valuable	35
Much valuable	7
Undecided	2
Of little value	0
Of no value	0
Total	44

Another dimension of the problem was that the Agricultural Assistants were asked to suggest means of improving the Agricultural Assistant course so as to make it more effective. The following were the suggestions advanced:

1. Staffing quality should improve, no staff should be engaged on part-time.
2. The library should be stocked with better books.
3. The laboratory should be standardized.
4. Practicals should be alloted the same amount of time as the theory courses.

5. Tours should be organized to expose students to what obtains outside the school environment.
6. Samaru and Kabba and other Schools of Agriculture should exchange students.

Personal Characteristics of the Agricultural Assistants

In this part of the study, the personal background data of the Agricultural Assistants were analyzed also using percentages.

TABLE 8

Age Distribution of Agricultural Assistants

Age	Number of Subjects	Percentage
Less than 19	0	0
19 - 24	22	50
25 - 30	12	27
31 - 36	10	23
Over 36	0	0
Total	44	100

The data in Table 8 indicate that at the time of the study 50 percent of the Agricultural Assistants sampled were below 25 years of age 27 percent of them were between 25 and 30 years of age but above 25 years, while 23 percent of them were above 30 years of age. The

relatively younger ones i.e. below 25 years of age were those who were recruited directly from secondary schools into the Ministry of Agriculture while those who were from 25 years old and above were those who had been in the field before as Field Overseers or Agricultural Instructors.

TABLE 9

Marital Status of Agricultural Assistants

Status	Number of Subjects	Percentage
Married	30	68
Single	14	32
Divorced	0	0
Total	44	100

The data in Table 9 indicates that 32 percent of the Agricultural Assistants surveyed were unmarried while 68 percent of them were married with children.

TABLE 10

Place of Birth of the Agricultural Assistants

Localities	Number of Subjects	Percentage
Village	44	100
Town	0	0
City	0	0
Total	44	100

The data in Table 10 indicate that everyone of the Agricultural Assistant sampled was brought up in a village.

TABLE 11

Father's Occupation

Occupations	Number of Subjects	Percentage
Farming	42	95
Trading	0	0
Teaching	0	0
Others	2	5
Total	44	100

The data in Table 11 indicate that 95 percent of the fathers of the Agricultural Assistants sampled had farming as their major occupation, while 5 percent of them were engaged in occupations other than farming like trading, carpentry, etc.

TABLE 12(a)

Factors Responsible for Choosing a Career in Agriculture

Factors	Number of Subjects	Percentage
1. Fathers' Occupation	0	0
2. Out of interest in agriculture	42	95
3. Career Master's advice	0	0
4. A friend's influence	0	0
5. No alternative	2	5
6. Other	0	0
Total	44	100

The data in Table 12(a) indicate that 95 percent of the Agricultural Assistants joined the Ministry of Agriculture because they were interested in it, while 5 percent indicated that it was because they had no alternative employment at that time.

TABLE 12(b)

Parents' Professional Preferences for their children

Professions	Number of Subjects	Percentage
Medicine	30	68
Teaching	7	18
Engineering	4	9
Nothing	3	5
Total	44	100

The data in Table 12(b) indicate that 68 percent of the Agricultural Assistants sampled had stated that their parents would have wanted them more to train as Medical Doctors, 18 percent said it was Teaching, 9 percent said it was Engineering while 5 percent said their parents had no particular choice of profession for them.

The data in Table 13(a) indicate that 40 percent of the Agricultural Assistants sampled indicated that they were very satisfied, 35 percent stated that they were just satisfied while 25 percent of them indicated that they were very dissatisfied with the Agricultural job.

TABLE 13(a)

Degree of Satisfaction with Agricultural Job

Satisfaction Degree	Number of Subjects	Percentage
Very satisfied	18	40
Just satisfied	16	35
Undecided	0	0
Dissatisfied	0	0
Very dissatisfied	10	25
Total	44	100

The data in Table 13(b) indicate the degree of satisfaction of the Agricultural Assistants with their salaries. Twenty percent of them said they were very satisfied, 30 percent said they were just satisfied, 20 percent said they were dissatisfied,

TABLE 13(b)

Degree of Satisfaction with Salary

Satisfaction Degree	Number of Subjects	Percentage
Very Satisfied	9	20
Just Satisfied	13	30
Undecided	3	5
Dissatisfied	9	20
Very Dissatisfied	10	25
Total	44	100

The analysis of data in Table 14 indicate that Mean Rank of 3.0 is distributed around Research Experiments, teaching in Farm Institute, teaching in Farm Training Centre, Farm Management had the lowest Mean Rank (3.2) while extension work had the highest (2.1).

TABLE 14

Duty Preferences of Agricultural Assistants

Duties	Rank Order					Mean Rank
	1	2	3	4	5	
1. Extension work	17	13	6	5	3	2.1
2. Research Experiments	7	13	13	6	5	3.0
3. Teaching in Farm Institute	5	8	15	9	7	3.0
4. Teaching in Farm Training Centre	8	3	13	15	5	3.0
5. Farm Management	6	10	7	8	13	3.2

* Mean Rank is calculated using the following formula:

$$\frac{\Sigma(\text{Rank X frequency})}{N}$$

Where Σ = summation

N = the total population

The analysis of the first and second year school achievement of the graduates from 1971-1973 using the rank-order correlation is shown in Table 15. Ten candidates were randomly selected. The correlation coefficients for the three years ranged from -0.13 to 0.73. Substantial correlation is shown between the school achievements in 1971. Using eight degrees of freedom, the values did not indicate a statistical significance at 0.05 level. That of 1972 ranged from

-0.13 to 0.05; this was also not statistically significant at 0.05 level; that of 1973 graduates ranged from 0.46 to 0.60. These values though suggesting a positive correlation, were not statistically significant at 0.05 level.

TABLE 15

Rank-Order Correlation of the Agricultural Assistant Course Examinations(1971-1973) with Entry Qualifications

Year	*First Year* Examinations	*Second Year* Examinations	*Degree of* Freedom
1971	r = 0.60	r = 0.73*	8
1972	r = 0.05	r = 0.13	8
1973	r = 0.60	r = 0.46	8

p = .05, df = 8 * = Significant

Hypotheses Tested

The following hypotheses were tested.

(A) Ho: That the level of academic achievement in the certificate course in General Agriculture is independent of entry qualifications.

(B) Ho: That the job performance quality in the field is independent of both entry qualifications and level of academic achievement.

(C) Ho: That the job performance quality in the field is independent of the worker characteristics. The univariate components of this hypothesis are:

1. interest
2. ability or capability.
3. practical skills
4. technical knowledge
5. attitude to work
6. devotion and sense of commitment.

(D) Ho: That there is no significant relationship between entry qualifications and worker characteristics. The univariate components of this hypothesis are:

1. interest
2. ability or capability
3. practical skills
4. technical knowledge
5. attitude to work
6. stimulation of people's interest
7. discipline
8. devotion and sense of commitment
9. problem-solving techniques
10. relation to local people
11. understanding of people's problems
12. programme development
13. programme relation to people's needs.

In order to test each of the null hypotheses, chi-square (X^2) test of independence was employed and the probability level P .05 was used as a level at which the hypothesis could be rejected.

Rationale for using Chi-square

Chi-square had been chosen as one of the statistical procedures in analyzing the data in this study for the following reasons:

1. The data consisted of frequency distributions.
2. Comparison between groups was to be effected.
3. Null hypotheses were to be tested.
4. Members of the sample were classified into categories.

TABLE 16

Data Relating Level of Achievement to Entry Qualifications

Qualifications	Grade One	Grade Two	Grade Three	Attendance	Total
Non-Secondary School	9	35	26	2	72
Secondary School	7	38	18	2	65
Total	16	73	44	4	137

$X^2 = 9.45$, df = 3, $P < .05$, Significant

The data in Table 16 give the calculated chi-square value 9.45 which is greater than the chi-square table value 7.82 at .05 level of significance. Hypothesis A predicates that the level of academic achievement is independent of entry qualifications. This hypothesis is therefore not rejected.

TABLE 17

Data Relating Job Performance Quality
to Entry Qualifications

Qualifications	Job Performance Quality			
	Excellent	Very Good	Good	Total
Non-Secondary School	6	8	10	24
Secondary School	3	6	11	20
Total	9	14	21	44

$X^2 = 1.71$, df = 2, $P > .05$; Not significant.

The data in Table 17 give the calculated chi-square value 1.71 which is less than the chi-square table value 5.99 at 0.05 level of significance. This means the hypothesis B which predicates that job performance quality in the field is independent of entry qualifications cannot be rejected. The table appears to show that the job performance quality of the Non-Secondary school products is better than the secondary school products.

TABLE 18

Data Relating Job Performance Quality to
Level of Academic Achievement

Academic achievement	Job Performance Quality			
	Excellent	Very Good	Good	Total
Grade One	5	10	3	18
Grade Two	8	77	4	19
Grade Three	0	0	7	7
Total	13	17	14	44

$X^2 = 19.52$; df = 4; $P < .05$; Significant.

The data in Table 18 give the calculated chi-square value 19.52 which is greater than the chi-square table value 9.45 at 0.05 level of significance. The hypothesis also predicates that the job performance quality in the field is independent of the level of academic achievement. This hypothesis is therefore rejected.

TABLE 19(a)

Data Relating Level of Interest to Job Performance Quality of Agricultural Assistants Without Secondary School Education

Interest Levels	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	3	0	2	5
High	3	4	7	14
Average	0	2	3	5
Total	6	6	12	24

$X^2 = 6.72$; df = 4; $P > .05$; Not significant

TABLE 19(b)

Data Relating the Level of Interest to Job Performance Quality of the Agricultural Assistants with Secondary School Education

Interest Levels	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	0	2	1	3
High	0	6	4	10
Average	0	1	6	7
Total	0	9	11	20

$X^2 = 4.35$; df = 4; $P > .05$; Not significant

The data in Table 19(a) and (b) give the calculated chi-square values 6.72 and 4.35 which are lesser than the chi-square table value 9.49 at 0.05 level of significance respectively. The result in Table 19(a) and (b) show that the level of interest is not significantly related to the job performance quality of the two groups of Agricultural Assistants. Hypothesis C which predicates that the job performance quality in the field is independent of the level of interest is not rejected for the two groups of Agricultural Assistants.

TABLE 20(a)

Data Relating Ability to the Job Performance
Quality of the Agricultural Assistants
Without Secondary School Education

Ability	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	3	3	0	6
High	4	6	5	15
Average	0	0	3	3
Total	7	9	8	24

$X^2 = 9.96$; df = 4; $P < .05$; Significant

TABLE 20(b)

Data Relating Ability to The Job Performance
Quality of the Agricultural Assistants
With Secondary School Education

Ability	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	0	1	2	3
High	3	6	0	9
Average	0	1	7	8
Total	3	8	9	20

$X^2 = 14.35$; df = 4; $P < .05$; Significant

The data in Table 20(a) and (b) give the calculated chi-square values 9.96 and 14.35 which are greater than the chi-square table value 9.49 at 0.05 level of significance respectively. The result in Table 20(a) and (b) shows that level of ability is significantly related to the job performance quality of both the Agricultural Assistants with and without secondary school education. This indicates that the hypothesis that the job performance quality in the field is independent of ability or capability should be rejected.

TABLE 21(a)

Data Relating Practical Skills to Job Performance Quality of The Agricultural Assistants Without Secondary School Education

Practical Skills	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	2	1	3	6
High	3	4	6	13
Average	0	1	4	5
Total	5	6	13	24

$X^2 = 3.29$; df = 4; $P > .05$; Not significant

TABLE 21(b)

Practical Skills and Job Performance Quality of the Agricultural Assistants with Secondary School Education

Practical Skills	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	0	2	0	2
High	3	6	2	11
Average	0	2	5	7
Total	3	10	7	20

$X^2 = 10.33$; df = 4; $P < .05$; Significant

The data in Table 21(a) and (b) give the chi-square value 3.29 and 10.33 which are lesser and greater than the chi-square table value 9.49 at 0.05 level of significance respectively. The result in Table 21(a) shows that practical skills are not significantly related to the job performance quality of the Agricultural Assistants without secondary school education, but the result in Table 21(b) shows that practical skills are significantly related to the job performance quality of the Agricultural Assistants with secondary education. The hypothesis that the job performance quality in the field is independent of practical skills is therefore accepted for the former group while it is rejected for the latter.

TABLE 22(a)

Technical Knowledge and Job Performance Quality
of The Agricultural Assistants Without
Secondary School Education

Technical Knowledge	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	2	1	4	7
High	2	7	3	12
Average	0	1	4	5
Total	4	9	11	24

$X^2 = 13.09$; df = 4; P $<$ .05; Significant

TABLE 22(b)

Technical Knowledge and Job Performance Quality
of the Agricultural Assistants With
Secondary School Education

Technical Knowledge	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	3	1	0	4
High	3	2	4	9
Average	0	2	5	7
Total	6	5	9	20

$X^2 = 8.31$; df = 4; $P > .05$; Not Significant.

The data in Table 22(a) and (b) give the chi-square value 13.09 and 8.31 which are greater and lesser than the chi-square table value 9.49 at 0.05 level of significance respectively. This result shows that technical knowledge is significantly related to job performance quality in the field for the former group but not for the latter. The hypothesis that job performance quality is independent of technical knowledge in agriculture is therefore rejected for the former group but it is not rejected for the latter group (Table 22(b).

TABLE 23(a)

Attitude and Job Performance Quality of Agricultural Assistants Without Secondary School Education

Attitude	Job Performance Quality			
	Excellent	Very Good	Good	Total
Excellent	2	0	0	2
Very Good	3	8	6	17
Good	0	0	5	5
Total	5	8	11	24

$X^2 = 15.10$; df = 4; $P < .05$; Significant.

TABLE 23(b)

Attitude and Job Performance Quality of Agricultural Assistants With Secondary School Education

Attitude	Job Performance Quality			
	Excellent	Very Good	Good	Total
Excellent	2	2	2	6
Very Good	1	2	1	4
Good	4	3	3	10
Total	7	7	6	20

$X^2 = 0.74$; df = 4; $P > .05$; Not significant.

The data in Table 23(a) and (b) give the calculated chi-square value 15.10 and 0.74 which are greater and lesser than the chi-square table value 9.49 at 0.05 level of significance respectively. The result in table 23(a) shows that attitude is significantly related to the job performance quality of the Agricultural Assistants without secondary school education, while Table 23(b) shows that attitude is not significantly related to job performance quality of the Agricultural Assistants with secondary school education. The hypothesis that the job performance quality in the field is independent of attitude to work is therefore rejected for the former group but it is accepted for the latter.

TABLE 24(a)

Devotion to Duty and Job Performance Quality of Agricultural Assistants Without Secondary School Education

Devotion to duty	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	0	2	1	3
High	5	8	6	19
Average	0	0	2	2
Total	5	10	9	24

$X^2 = 9.89$; df = 4; $P < .05$; Significant

TABLE 24(b)

Devotion to Duty and Job Performance Quality
of the Agricultural Assistants
With Secondary School Education

Devotion to duty	Job Performance Quality			
	Excellent	Very Good	Good	Total
Very High	3	1	0	4
High	3	5	3	11
Average	0	2	3	5
Total	3	5	12	20

$X^2 = 6.70$; df = 4; $P > .05$; Not Significant

The data in Table 24(a) and (b) give the calculated chi-square values 9.89 and 6.70 which are greater and less than the chi-square table value 9.49 at 0.05 level of significance respectively. The result in Table 24(a) shows that devotion to duty is significantly related to the job performance quality of Agricultural Assistants without secondary school education, but the result in Table 24(b) shows that this variable is not significantly related to the job performance quality of the Agricultural Assistants with secondary school education. The hypothesis that the job performance quality is independent of devotion to duty is rejected for the former group, but it is accepted for the latter.

TABLE 25

Level of Interest and Entry Qualifications
of Agricultural Assistants

Entry Qualifications	Interest Levels			
	Very High	High	Average	Total
Non-Secondary School	5	14	5	24
Secondary School	3	10	7	20
Total	8	24	12	44

$X^2 = 1.58$; df = 2; $P > .05$; Not Significant.

The data in Table 25 give the calculated chi-square value 1.58 which is less than the chi-square table value 5.99 at 0.05 level of significance. This result shows that interest is not significantly related to entry qualifications of the Agricultural Assistants. The hypothesis that there is no significant relationship between entry qualifications and worker characteristics, i.e. interest in this case, is accepted.

TABLE 26

Relation of Ability to Entry Qualifications of the Agricultural Assistants

Entry Qualifications	Ability			
	Very High	High	Average	Total
Non-Secondary School	6	15	3	24
Secondary School	3	9	8	20
Total	9	24	11	44

$X^2 = 5.90$; df = 2; $P > .04$; Not Significant.

The data in Table 26 give the calculated chi-square 5.90 which is less than the chi-square table value 5.99. This result shows that ability and entry qualifications are not significantly related. The hypothesis that there is no significant relationship between entry qualifications and worker characteristics (ability) is therefore accepted.

TABLE 27

Relation of Practical Skills Ratings to
Entry Qualifications of the
Agricultural Assistants

Entry Qualifications	Practical Skills			
	Very High	High	Average	Total
Non-Secondary School	6	13	5	24
Secondary School	2	11	7	20
Total	8	24	12	44

$X^2 = 2.48$; df = 2; $P > .05$; Not Significant.

The data in Table 27 give the calculated chi-square value 2.48 which is less than the chi-square table value 5.99. This result shows that there is no significant relationship between entry qualifications and worker characteristics (practical skills). The hypothesis that there is no significant relationship between entry qualifications and worker characteristics is therefore accepted.

TABLE 28

Relation of Technical Knowledge to the Entry Qualifications of the Agricultural Assistants

Entry Qualifications	Technical Knowledge			
	Very High	High	Average	Total
Non-Secondary School	7	12	5	25
Secondary School	4	9	7	20
Total	11	21	12	44

$X^2 = 1.28$; df = 2; $P > .05$; Not Significant.

The data in Table 28 give the calculated chi-square value 1.28 which is less than the chi-square table value 5.99 at 0.05 level of significance. The result showed that there is no significant relationship between technical knowledge in agriculture and entry qualifications. The hypothesis that there is no significant relationship between entry qualifications and worker characteristics was accepted.

TABLE 29

Relation of Stimulation of People's Interest
to Entry Qualifications of the
Agricultural Assistants

Entry Qualifications	Level of Stimulation of People's Interest			
	Very High	High	Average	Total
Non-Secondary School	7	13	4	24
Secondary School	4	9	7	20
Total	11	22	11	44

$X^2 = 2.23$; df = 2; $P > .05$; Not Significant.

The data in Table 29 give the calculated chi-square value 2.23 which is less than the chi-square table value 5.99 at 0.05 level of significance. The result shows that stimulation of people's interest is not significantly related to entry qualifications. The hypothesis that there is no significant relationship between worker characteristics (stimulation of people's interest) and entry qualifications was accepted.

TABLE 30

Relation of Enthusiasm to Entry Qualifications
of the Agricultural Assistants

Entry Qualifications	Level of Enthusiasm			
	Very High	High	Average	Total
Non-Secondary School	4	18	2	24
Secondary School	2	13	5	20
Total	6	31	7	44

$X^2 = 2.86$; df = 2; $P > .05$; Not Significant.

The data in Table 30 give the calculated chi-square value 2.86 which is less than the chi-square table value 5.99 at 0.05 level of significance. The analysis showed that there is no significant relationship between worker characteristics and entry qualifications. The hypothesis that there is no significant relationship between worker characteristics (enthusiasm) was accepted.

TABLE 31

Relation of Discipline to the Entry Qualifications of the Agricultural Assistants

Entry Qualifications	Discipline			
	Very High	High	Average	Total
Non-Secondary School	8	10	6	24
Secondary School	3	8	9	20
Total	11	18	15	44

$X^2 = 3.60$; df = 2; $P > .05$; Not Significant.

The data in Table 31 give the calculated chi-square value 3.60 which is less than the chi-square table value 5.99 at 0.05 level of significance. The result shows that there is no relationship between worker characteristics (discipline) and entry qualifications. The hypothesis that there is no relationship between entry qualifications and worker characteristics (discipline) is therefore accepted.

TABLE 32

Relation of Devotion to Entry Qualifications
of the Agricultural Assistants

Entry Qualifications	Devotion to Duty			
	Very High	High	Average	Total
Non-Secondary School	3	19	2	24
Secondary School	4	11	5	20
Total	7	30	7	44

$X^2 = 3.16$; df = 2; $P > .05$; Not Significant.

The data in Table 32 give the calculated chi-square value 3.16 which is less than the chi-square table value 5.99 at 0.05 level of significance. This result shows that there is no significant relationship. So the hypothesis that there is no significant relationship between entry qualifications and worker characteristics (devotion to duty) is accepted.

TABLE 33

Relation of Problem-Solving Techniques to Entry Qualifications of the Agricultural Assistants

Entry Qualifications	Degree of Problem-solving Technique			
	Very High	High	Average	Total
Non-Secondary School	2	16	6	24
Secondary School	0	12	8	20
Total	2	28	14	44

$X^2 = 2.86$; df = 2; $P > .05$; Not Significant.

The data in Table 33 give the calculated chi-square value 2.86 which is less than the chi-square table value 5.99 at 0.05 level of significance. This result shows that there is no significant relationship so that hypothesis that there is no significant relationship between entry qualifications and worker characteristics (problem-solving techniques) is accepted.

TABLE 34

Relation of Understanding of People's Needs and Problems to Entry Qualifications of the Agricultural Assistants

Entry Qualifications	Understanding of People's Needs			
	Very High	High	Average	Total
Non-Secondary School	6	14	4	24
Secondary School	3	10	7	20
Total	9	24	11	44

$X^2 = 2.46$; df = 2; $P > .05$; Not Significant.

The data in Table 34 give the calculated chi-square value 2.46 which is less than the chi-square table value 5.99 at 0.05 level of significance. This result shows that there is no significant relationship so the hypothesis that there is no significant relationship between entry qualifications and worker characteristics (understanding of people's problems and needs) is accepted.

Summary

In this Chapter the data gathered during the investigation were analyzed and the findings based on the analysis were presented.

The findings were as follows:

1. The data on duties of the Agricultural Assistants indicatded that general extension work was by far preferred followed by research experiments. Other assignments such as farm management and teaching in various agricultural institutions were less preferred or were ranked very low.

2. Analysis of opinions of Agricultural Assistants about the Agricultural Assistants course showed that they had a favourable opinion about the course. They however offered some suggestions which would help improve the course so as to make it more effective. These suggestions included staffing situation, improvement of the library and laboratory, exchange of students between agricultural schools, conduct of tours to acquaint students with problems outside Schools of Agriculture, and equal allotment of time to theory and practical courses. The opinions of the Agricultural Assistants were obtained about the course in order to determine if they could influence the quality of job performance in the field.

3. Background characteristics analysis of the Agricultural Assistants indicate that seventy-seven percent of the Agricultural Assistants surveyed were between 19 - 30 years of age, were married, were brought up in villages, and their fathers' main occupation was farming. They joined the Ministry of Agriculture because they were interested and they stated that they were satisfied with the salary paid to them.

4. Rank-Order correlation of course examinations (1971 - 1973) depicted a substantial correlation between the school achievement in

1971 and to some extent in 1973 but a very low correlation for 1972. The distribution around the grades of pass in the General Certificate course showed that the non-secondary school leavers were somehow better than the secondary school leavers. The analysis also showed a significant relationship at 0.05 level thus meaning that entry qualifications and school achievement are significantly related. The Farm Training Centre qualification is slightly more predictive of performance in the General Certificate Course than the secondary school educational qualification. This therefore renders these entry qualifications to some extent useless for the purpose of meaningful prediction of performance in the Certificate Course.

5. Relation of worker characteristics to job performance quality showed a significant relationship between level of school achievement, ability level, attitude to work, interest, practical skills and job performance quality. The other worker characteristics were not found to be significantly related at 0.05 level. Relation of worker characteristics to entry qualifications however showed no significant relationship at 0.05 level of significance. These worker characteristics were related to entry qualifications and job performance quality ratings in order to test the appropriate hypotheses.

CHAPTER 6

DISCUSSION OF THE FINDINGS

General Information about Agricultural Assistants

Several important factors were revealed in this study which concerned both school achievement and the job performance quality of the Agricultural Assistants. Specifically age, length of service, entry qualifications, grade of pass in the course examinations, duties of the Agricultural Assistants were some of the factors that were used to investigate both the school achievement and job performance quality in the field.

The data in Table 3 showed that 63 percent of the Agricultural Assistants sampled had worked more than seven years for the Ministry of Agriculture and constituted those who had no secondary education. The data also revealed that 15 percent of the sample had secondary education and had worked from 4 to 6 years with the Ministry of Agriculture. The remaining 22 percent constituted a mixed group of secondary and non-secondary school leavers. This group had people who had worked from 6 to 7 years for the Ministry.

The study revealed that a larger proportion of the Agricultural Assistants sampled comprised mainly those without secondary school education. About 55 percent of them did not complete secondary school, while 25 percent of them had failed W.A.S.C. Examination. It could

be inferred from the evidence of this study that in the certificate course as well as in the field, there were usually fewer candidates with West African School Certificate qualifications. This could be explained in terms of the less attraction the agricultural employment has in Nigeria coupled with lack of promotion prospects in the Ministry of Agriculture. There are usually more openings in other spheres of employment for the School Certificate holders and for quite sometime the Ministry of Agriculture had been used as a dumping ground for those not holding School Certificate and for those who failed secondary school. The other openings for the School Certificate holder could be the Universities, the Polytechnics, the Colleges of Education, other Vocational Institutions, etc.

The study revealed as reported in Table 5 that the Agricultural Assistants in the study groups had displayed a sound academic performance in the General Certificate Course in Agriculture.

The Agricultural Superintendents or Supervisors were asked to associate the school achievement levels of the Agricultural Assistants sampled with their job performance quality. They indicated that there were cases when negative correlation could be noticed or observed for example, an Agricultural Assistant who performed very well academically might be rated very much below average, and one might not be very good or excellent in academic performance, but his job performance quality might be good, excellent and so on. For such negative correlation, they attempted to explain as follows:

1. The Agricultural Assistant with sound academic performance might become frustrated because there are no prospects for progress to higher positions.

2. The situation outside a School of Agriculture might not be conducive to good job performance quality.

3. Delay in appointment might cause loss of interest in the job.

4. Lack of incentive while the staff is in the field.

5. The Agricultural Assistant with poor academic standing becomes scared by an idea to be a redundant staff so he works hard to counteract his school achievement quality.

The data in Table 6 showed that 39 percent of the Agricultural Assistants sampled for this study were assigned general extension work. This shows the importance the Ministries of Agriculture in the former North-Central and Benue Plateau States attached to extension to combat the problem of extending the agricultural knowledge and information. This distribution could be explained in terms of the conscious efforts to meet the manpower demand in the area of extension services so as to change the goal regarding the ratio of agricultural extension workers to farmers as overall development proceeds. In the 1960s the goal of the various state Ministries of Agriculture was one extension worker for each 2,000 farm families in the Northern States. At the time of this study, most Northern States had a target goal of about one extension worker for each 1,000 farm families.

Agricultural Assistants' Opinions about the Agricultural Assistants' Course

The data in Table 7 indicate that 56 percent of the respondents disagreed with the negative statements about the course. It is therefore not surprising that 95 percent of the Agricultural Assistants had said that the Certificate Course was valuable to them both in their present occupation and in other ways (personal, family, or community) This high percentage tends to give an indication of the personal as well as family satisfaction derived by those who had the privilege to be trained in an agricultural field. Those who said they were undecided might be the ones who are still not committed to the course of a vocational agriculture as a career. When the agricultural assistants were asked to give suggestions on how to improve the certificate course in general agriculture at the various agricultural institutions they responded as follows:

1. Staffing quality should improve; no staff should be engaged on part-time basis.
2. The library should be stocked with better books.
3. The laboratory standards should be improved.
4. Practical work in the field should be alloted the same amount of time as the theory courses.
5. Tours should be organized to expose students to what obtains outside the school environment
6. Students' exchange programme should be developed between the Northern States' Schools of Agriculture.

Agricultural Assistants' Background Characteristics

(i) Age

The ages of the Agricultural Assistants as reported in Table 8 indicate that 77 percent of them were below 30. This indicated that a majority of the Agricultural Assistants in the field are relatively young and it seems to point to the fact that emphasis had been placed upon encouraging youth to take to agriculture. This might stem from a belief that a consistent replacement of the relatively old agricultural workers with the more energetic and better educated youth of the present era would greatly enhance the image as well as the production facets of agriculture.

(ii) Marital Status

The data in Table 9 indicate that 68 percent of the Agricultural Assistants surveyed were married with children, hence a heavier family responsibility than the 32 percent who were single. This high percentage of married people represented the older people in the study groups.

(iii) Localities of the Agricultural Assistants

It was revealed from the study that all the Agricultural Assistants surveyed were born in villages instead of towns or cities in Nigeria. It was also revealed that they had had farming background and experience. This is confirmed by the occupation of their fathers as was reported in Table 11, for 95 percent of their fathers had farming as their main occupations.

(iv) Choosing a Career in Agriculture

It is revealing and encouraging to note that the basic motive for choosing a career in agriculture given by 95 percent of the Agricultural Assistants sampled was interest, and not the advice of the career master, friends' influence, father's, occupation etc. A small percentage of the sample (5) chose agriculture because there was no other alternative employment at that material time.

The extent of satisfaction with the agricultural job is presented in Table 13(a). The data indicate that 75 percent of the Agricultural Assistants expressed satisfaction with their agricultural job, whereas 25 percent were very dissatisfied. Apparently, there were sufficient number of Agricultural Assistants who did not like the agricultural job. Perhaps the influence of the situation outside the Schools of Agriculture has adverse effects on the Agricultural Assistants. This is confirmed by the fact that only 50 percent of them said they were satisfied with the salaries paid to them, 45 percent said they were dissatisfied while 5 percent of them were undecded as reported in Table 13(b).

(v) Duty Preferences

The data in Table 14 indicate that majority of the Agricultural Assistants preferred to do extension work as was denoted by the mean Rank of 2.1 since it was revealed in Table 6 that 39 percent of the Agricultural Assistants were engaged in extension work, this might be a factor that might influence hard work.

Correlation Coefficients of Examination Results

The results of the examinations taken for three years (1971-1973), reported in Table 15, revealed that the non-Secondary School leavers were more consistent in their academic performance than the secondary school leavers. It was revealed that the final Agricultural Assistant examinations had low correlations between them. This might be because the Agricultural Assistants course examinations themselves might have had low reliabilities. Also students who come to the Agricultural Schools in the Northern States take subjects which are different from the ones they took at entry qualification examinations and performance in these new subjects might tend to reduce correlations.

Relation of Level of School Achievement to Entry Qualifications

The data in Table 16 were used to test the hypothesis that the level of academic achievement was independent of entry qualifications. It was revealed that entry qualification was significantly related to level of academic achievement at .05 level of significance and so the hypothesis was rejected. The observed frequencies also showed that the non-secondary school group had an edge over those who had had secondary school education. This indicates that heavy emphasis on criterion of higher educational qualifications might be misleading. An implication for this inference is that for the allocation of available agricultural school places to candidates, a heavier weighting should not be given to those who had had secondary school

education, this could mean, for instance, that a secondary school education should not indicate automatic admission into the agricultural schools. Other factors such as interest, rural living, orientation, ability, attitude to work, etc., might be used in conjunction with the fact of a secondary school background.

The data in Table 17 and the analysis indicate that job performance quality is not significantly related to entry qualifications. This justified the acceptance of the hypothesis that job performance in the field is independent of entry qualifications. This means that educational qualification was not directly correlated with the agricultural worker behaviour. It could be that the less educated show greater ability and therefore do a better overall job. It would seem that while higher educational qualifications might apparently indicate greater intellectual ability, they did not necessarily indicate a higher endowment of the abilities required for agricultural job; on the contrary, it would seem that the abilities required were possessed by many people and were brought out by the greater motivation which manifests itself in better work behaviour.

The data in Table 18 and the analysis indicate that job performance quality was significantly related to the level of academic achievement. These data were used to test the hypothesis that the job performance quality is independent of the level of academic achievement. The hypothesis was therefore rejected. This means that in ordinary normal situations, quality of job performance should correlate very well with the quality of school achievement.

Relation of Worker Characteristics to
Job Performance Quality

Hypothesis C predicates that the job performance quality in the field is independent of worker characteristics. In testing this null hypothesis, the data in Tables 19 - 24 were used. It was revealed that there was a significant relationship between job performance quality of the Agricultural Assistants without secondary education and the following variables: ability, technical knowledge in agriculture, attitude to work, and devotion and sense of commitment to duty, whereas variables such as interest, practical skills were not found to be significantly related to the quality of their jobs. For the Agricultural Assistants with secondary school education, variables such as ability and practical skills were found to be significantly related to the quality of their jobs whereas variables such as interest, technical knowledge in agriculture, attitude to work, devotion and sense of commitment to duty were found not to be significantly related to the quality of their jobs. This points to the fact that for the Agricultural Assistants without secondary school education, one could use variables such as ability, technical knowledge in agriculture, attitude to work, and devotion and sense of commitment to duty to statistically explain job performance quality while for the Agricultural Assistants with Secondary School education only variables such as ability and practical skills could be used to statistically explain the quality of their jobs. The calculated percentages from the data however indicate that these as well as those that were not significantly related to the quality of the jobs

of the two groups of Agricultural Assistants might be used to show trends regarding the quality of Agricultural Assistants.

Relation of Worker Characteristics to Entry Qualifications

Hypothesis D predicates that there is no significant relationship between entry qualifications and worker characteristics. In testing this hypothesis, the data in Tables 25 - 34 were used. It was found that worker characteristics were not significantly related to entry qualifications so the hypothesis was accepted at .05 level of significance. The results point to the fact that worker characteristics are not acquired by attaining a given level of education before entry into the agricultural certificate programme. These characteristics manifest themselves in the event of an assignment. They are therefore latent qualities.

Summary

In this chapter, the results of the analysis of the data gathered during the investigation were discussed. A number of variables relating to job performance quality were discussed. They included interest, ability or capability, practical skills, technical knowledge in agriculture, attitude to work, devotion and sense of commitment to duty, school achievement. The following variables were found to have significant relationship to job performance at .05 level of significance. These were:

1. interest
2. ability

3. attitude to work

4. practical skills

5. school achievement.

The remaining variables were found not to be significantly related to job performance at .05 level of significance.

The coefficient of correlation analysis was performed on the results of the groups of the Agricultural Assistants. The analysis showed a high correlation coefficient for 1971 set, very low correlation for 1972 set, a high correlation for the first year examination for 1973 set, but the second year examination for the same 1973 set showed a low correlation.

The opinion of the Agricultural Assistants about the General Agricultural Certificate Course were also analyzed and the results showed they have a favourable opinion about the course except for minor suggestions made for improving the course.

CHAPTER 7

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study sought to investigate the possible relationships that might exist between entry qualification, school achievement and job performance. It was hoped that such information might facilitate the revision in admission procedures so as to admit those whose likelihood of success was greatest. A second purpose of the study was to determine the degree of correlation between school achievement and job performance. The following specific objectives were developed for the study:

1. to develop a method of estimating the relationship that exists between entry qualifications and academic performance in the General Agriculture Certificate Course;
2. to find out the effectiveness of each of the entry qualifications in predicting performance;
3. to identify the relative predictive validity of the entry qualifications for academic success;
4. to determine some characteristics of the candidates that could be associated with the quality of their job performance in the field;
5. to use the results of the study to propose possible revisions in the policies governing the admission

criteria into the Northern States' Agricultural Schools.

After reviewing the literature and studies related to the relationship between entry qualifications, academic achievement, job performance, a set of questionnaires was developed for collecting the data. The job performance questionnaire, completed by the Agricultural Superintendents who supervised the Agricultural Assistants, contained a total of 18 items, while the personal background data questionnaire, completed by the Agricultural Assistants, contained 27 items. Data regarding the school achievement of the Agricultural Assistants respondents in the General Agriculture Certificate course were procured from the records in the agricultural schools they attended.

In each of the questionnaires, multiple choice items were supplied and the respondents were required to tick the answer that best represented their opinion.

The data for the study were collected from 25 Agricultural Superintendents, 20 from the former Benue-Plateau and five from the former North Central States, while a total of 44 Agricultural Assistants were contacted from the two states. The questionnaires were not mailed to the respondents, but instead a personal contact method was used to collect the data at monthly staff meetings held at the divisional headquarters.

Analysis of the data involved the development of frequency distributions and calculating percentage for most of the items in the

questionnaires. The data regarding the school achievement of the Agricultural Assistants were analyzed using rank-order correlation and Chi-square statistic. Also Chi-squared statistic was used to analyze the relationship between worker characteristics, job performance, and entry qualifications. For all tests of significance analyzed in this study, the five percent probability level was used as criterion for accepting or rejecting the results.

Conclusions

A number of conclusions could be drawn from this study:

1. the majority of field Agricultural Assistants had put in more than seven years into the agricultural services;
2. the majority of the field Agricultural Assistants did not complete secondary school. They were recruited into the Ministry of Agriculture as Field Overseers or Agricultural Instructors and were trained at the Farm Training Centre;
3. the majority of the Agricultural Assistants were engaged in general extension work and this agreed with their own duty preferences. They were also satisfied with their job;
4. the Agricultural Assistants had favourable opinion about the General Agricultural Certificate course. They also stated that the course was of value to them both in their present occupation and in other ways - personal, family or community;
5. majority of the Agricultural Assistants sampled were below the age of thirty years, were married with children, were living in villages, had had farming background, their

fathers were mainly farmers and they joined the Ministry of Agriculture because they were interested in agriculture;

6. the level of school achievement in the Certificate Course in General Agriculture was significantly related to entry qualifications. The non-secondary school group performed better in the Schools of Agriculture than the secondary school group;
7. the quality of job performance in the field could be explained by work behaviour, the level of school achievement, interest, ability, attitude to work and practical skills;
8. worker characteristics are not acquired by attaining a given level of education before entry into the agricultural certificate programmes. They only manifest themselves in the event of an assignment. They are therefore latent qualities.

Recommendations

Following the findings from the study, the following general recommendations could be made:

1. In view of the findings from the study and in view of the fact that non-secondary school leavers perform better than the secondary school leavers both in the school achievement and in the quality of job, recruitment into the Agricultural Assistant cadres should not be dominated by the criterion of educational qualifications. This is thus recommended because the data gathered in this study

showed that educational qualification is not directly related to job performance. The best performers among the Agricultural Assistants considered for the study were less educated. This suggests that the secondary school leavers should be admitted first into the Farm Training Centres so that they would become thoroughly orientated before being admitted into the Schools of Agriculture. This may reduce their deficiency in the field work and school achievement.

2. Recruitment polity also needs to pay more attention to age, marital status, socio-economic background. It might be that older workers who are married and by implication have greater family responsibilities are likely to be more concerned about making a career within the agricultural job they have chosen.
3. The selection process into the Schools of Agriculture should be revised and attempts should be made to assess the candidate's potential ability to live and work contentedly and effectively in a rural area and among village people before being selected for training as an Agricultural Assistant.
4. There should be a well established policy whereby experienced field workers are not selected for further training or higher positions on the basis of time in a position, but more on ability, potential and outstanding work performance.

Implications and Suggestions for Further Study

This study has covered an aspect of the relationship that may exist between entry qualifications, school achievement and field performance of the graduates of the Northern States' Agriculture Schools. An attempt was also made to analyze the job performance of the Agricultural Assistants in the field using the job performance ratings of the Agricultural Superintendents. This was done in order to identify those variables that could be used to explain the quality of job performance.

The conclusions and recommendations made were based on findings from the data collected from the Agricultural Superintendents on the Agricultural Assistants' job performance and from the Agricultural Assistants on their personal background data and opinions about the General Agricultural Certificate course offered in the Northern States' Agricultural Schools.

The study has not touched on the training institutions themselves, their operations, facilities, level of performance, future projections and policies governing the operations. Future researches could therefore look at these training institutions as factors that could explain school achievement and job performance quality.

It has been possible to specify relationships between job performance and other variables. The study has revealed the significance of the entry qualifications as they relate to school achievement, and school achievement as it relates to job success. There is need for further investigations into the problems that inhibit good

quality performance and attempt to find solutions to them. In particular, efforts should be made to study the situational factors determining school achievement and job performance, and the measure of school and job success. Such investigations would provide more information for better understanding of the relationship between entry qualifications, school achievement and job performance.

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APPENDIX A

QUESTIONNAIRE FOR THE SUPERVISORS OF THE AGRICULTURAL ASSISTANTS IN THE NORTHERN STATES OF NIGERIA

Job Performance Analysis of Agricultural Assistants

Section A: General Information

1. Name of the Agricultural Assistant.....
2. State in which employed.....
3. Division of posting in the State.....

   (Please mark X in the box against whichever of the following alternative answers best answers the question).

4. How long has he worked under you?

   _____ Less than six months.

   _____ Six months - one year

   _____ One year - one year six months

   _____ One year six months - two years.

   _____ Over two years.

5. School of Agriculture he attended

   _____ Kabba

   _____ Samaru

6. His entry qualification(s) into the School of Agriculture.

_____ Farm Training Centre Qualification.

_____ W.A.S.C. Failure.

_____ W.A.S.C. Pass

_____ G.C.E. 'O' Level

_____ Others (Please specify) .....

7. Year he completed the Agricultural Assistant Course:

____ 1971 _____ 1972 _____ 1973 _____ 1974

8. Grade he obtained in the Agricultural Assistant Course:

_____ Grade One

_____ Grade Two

_____ Grade Three

_____ Other (Please specify) .....

9. What duties have you assigned to the Agricultural Assistant(s) working under you?

_____ Extension work.

_____ Farm Management.

_____ Research Experiments.

_____ Teaching in a Farm Training Centre.

_____ Teaching in a Farm Institute.

_____ Other (Please specify) .....

Section B: Job Orientation

1. Indicate the level of interest the Agricultural Assistant has shown in his work since he graduated from the School of Agriculture.

   ____ Very highly interested.

   ____ Highly interested.

   ____ Averagely interested.

   ____ His interest is below average.

   ____ Not interested at all.

2. Indicate the level of ability or capability possessed by the Agricultural Assistant to carry out assignments:

   ____ Very highly capable.

   ____ Highly capable.

   ____ Averagely capable.

   ____ Below Average in capability.

   ____ Not capable at all.

3. Please rate how the Agricultural Assistant has demonstrated the possession of practical skills in Agriculture:

   ____ Very highly practical.

   ____ Very practical.

   ____ Average practical ability.

   ____ Below average.

   ____ No practical skills at all.

4. Please rate any one of the following attributes as they apply to your Agricultural Assistant(s).

(i) Technical Knowledge in Agriculture

____ Very high

____ High

____ Average

____ Below Average

____ Very Low.

(ii) The way he stimulates the interest of the people with whom he works:

____ Very good.

____ Good

____ Average

____ Below Average

____ Very Poor.

(iii) His attitude to work.

____ Very highly enthusiastic

____ Highly enthusiastic

____ Averagely enthusiastic

____ Below average

____ Very poor.

(iv) Discipline:

____ Very highly disciplined

____ Highly disciplined

____ Averagely disciplined

_ Below Average

____ Very Poor.

(v) Devotion and sense of Commitment to study

____ Very highly devoted

____ Highly devoted

____ Averagely devoted

____ Below average

____ No devotion at all.

(vi) Approach to Problems (Techniques)

____ Very good.

____ Good.

____ Average.

____ Below average.

____ Very poor.

(vii) Understanding of Problems and needs of the Local People

____ Very good.

____ Good.

____ Average.

____ Below average.

____ Very poor.

5. How would you describe the general performance of your Agricultural Assistant in the field?

____ Very satisfactory

____ Quite satisfactory

____ Satisfactory

____ Below average

____ Not satisfactory

6. What do you consider as being responsible for the answer you have given in No. 5 above? (Please delete if inapplicable).

   (a) Satisfactory/unsatisfactory attitude to work.

   (b) The Agricultural Assistant course did/did not adequately prepare him for the work or assignment.

   (c) Inadequate/adequate supply of working materials or tools.

   (d) He is very innovative/uninnovative.

   (e) He is very creative/uncreative.

7. How would you compare the job performance quality of an Agricultural Assistant who had had agricultural working experience and the one who had had none in the following assignments.

   (a) An Agricultural Assistant with prior agricultural working experience is:

   ____ Very much better at extension work.

   ____ Much better at extension work.

   ____ Just better at extension work.

   ____ Not better at all at extension work.

   ____ Very much poorer at extension work.

   (b) An Agricultural Assistant without prior agricultural working experience is:

   ____ Very much better at assignments other than extension work.

   ____ Much better at assignments other than extension work.

   ____ Just better at assignments other than extension work.

   ____ Very much poorer at assignments other than extension work.

8. Please match the quality of performance of the Agricultural Assistant in School of Agriculture with his quality of performance in the field.

In-School Performance	Performance in the Field
(a) Grade One Certificate	(a) Excellent
(b) Grade Two Certificate	(b) Very Good
(c) Grade Three Certificate	(c) Good
	(d) Average
	(e) Below Average
	(f) Very Poor.

In case of negative correlation, please advance reason(s) to explain.

.....

.....

9. In the Ministry of Agriculture, there are basically two categories of Agricultural Assistants:

(i) Those who had had Farm Training Centre Training.

(ii) Those who were recruited from Secondary Schools.

Please indicate which of the categories:

(a) adapts more to the local conditions.

(b) understands more and carries out instructions from the Ministry of Agriculture Headquarters.

(c) writes more comprehensive and succient monthly reports.

(d) has better human relations.

APPENDIX B

QUESTIONNAIRE FOR THE AGRICULTURAL ASSISTANTS IN THE MINISTRIES OF AGRICULTURE, NORTHERN STATES OF NIGERIA

Personal Background Data

1. Respondent's Name .....

2. Primary School Attended .....

3. Post-Primary Institution Attended .....

4. Farm Training Centre Attended .....

5. School of Agriculture Attended with dates.

____ Kabba

____ Samaru

6. Year of completion of Agricultural Assistant Courses.

____ 1971

____ 1972

____ 1973

____ 1974

7. How old were you when you took the Agricultural Assistant Course?

____ 19 - 20 years

____ 21 - 22 years

____ 23 - 24 years

____ 25 - 26 years

____ 27 - 28 years

____ 29 - 30 years

____ 31 - 32 years

____ Over 32 years

8. What is your marital status?

____ Married with children

____ Married without children

____ Single

____ Divorced.

9. If married, how many wives have you?

____ One

____ Two

____ Three

____ Four

____ More than four.

10. If you have children, how many are they?

____ One

____ Two

____ Three

____ Four

____ More than four

11. Where did you mainly grow up? Do you classify it as a:

____ Village

____ Town

____ City

12. Your highest general education level:

____ Primary seven

____ Junior Secondary Education.

____ Sat for W.A.S.C. but failed.

____ W.A.S.C.

____ G.C.E. 'O' Level - One paper

13. What was/is your Father's occupation?

____ Farming

____ Trading

____ Teaching

____ Other (Please specify).....

14. If a farmer, what is/was his main farming practice?

____ Use of Tractors.

____ Use of hand hoe.

____ Work bulls.

____ Use of fertilizer and pesticides.

____ Use of improved seeds.

15. Did you ever work on the farm?

____ Yes

____ No

If yes, how many years (State actual years).....

16. How long have you worked for the Ministry of Agriculture?

____ Less than six months.

____ 6 months to 1 year.

____ 13 months to 2 years.

____ 25 months to 3 years.

____ 37 months to 4 years.

____ 49 months to 5 years.

____ More than 5 years.

17. What position have you held since you completed Agricultural Assistant Course. Give date for each position held.

Date	Position	Primary Responsibility

18. State factors that were responsible for your choosing a career in Agriculture:

____ It is my fathers occupation.

____ I am merely interested in it.

____ The careers master in my school advised me to do so.

____ A friend of mine in the Ministry of Agriculture influenced me.

____ There was no alternative for me.

____ Other (Specify) .....

19. If your father did not influence your agricultural career, what career/job would he prefer you to follow (Pick one)

____ Engineering

____ Teaching

____ Medical Profession

____ Law Profession

____ Administration

____ Other (Please specify) .....

20. To what extent are you satisfied with the agricultural job? (Check one)

____ Very satisfied.

____ Satisfied.

____ Undecided.

____ Dissatisfied.

____ Very dissatisfied.

21. How satisfied are you with your annual income from agricultural job? (Check one)

____ Very satisfied.

____ Satisfied.

____ Undecided.

____ Dissatisfied.

____ Very dissatisfied.

22. Of what value has the Agricultural Assistant Course in the School of Agriculture been:

(a) to you in your present occupation (check one)

____ Very valuable

____ Of much value.

____ Undecided.

____ Of little value.

____ Of no value.

(b) to you in other ways such as personal, family or community (check one).

____ Very valuable.

____ Of much value.

____ Of little value.

____ Undecided

____ Of no value.

23. How would you rate the efforts of the government of your state in supporting agricultural activities?

____ Very satisfactory

____ Satisfactory

____ Undecided

____ Poor

____ Very poor.

24. How would you rate the interest of the people in your community for the agricultural activities?

_____ Very satisfactory

_____ Satisfactory

_____ Undecided

_____ Poor

_____ Very poor

25. I would like you to tell how you feel about the following statements regarding the Agricultural Assistant Course in the Schools of Agriculture. There are no right or wrong answers to these statements. In each case check the column that best represents your own ideas about each statement.

	Strongly Disagree	Dis-agreed	Unde-cided	Agree	Strongly Agree
(a) Course of is not adapted to community needs					
(b) Course as given is too general					
(c) Course fails to give adequate vocational training					
(d) Academic level of students is too low					
(e) Students do not take the course seriously					
(f) Too much text and not enough field work					
(g) There is too much physical work involved					

25. Please indicate below the changes you think should be made in the training programme to make it more effective. (Give three suggestions.)

1. _____

2. _____

3. _____

Please rank the following duties in order of preference.

Duties	Rank
1. Extension work (General)	
2. Research Experiments	
3. Teaching in a Farm Institute	
4. Teaching in a Farm Training Centre	
5. Farm Management	
6. Other (please specify)	
_____	
_____	