A STUDY OF POSSIBLE RELATIONSHIPS AMONG INTELLIGENCE, INTEREST, AND ACHIEVEMENT OF BEGINNING STUDENTS IN EIGHT SELECTED OKLAHOMA VOCATIONAL AGRICULTURE DEPARTMENTS

by

Eugene Harvey Ross

Bachelor of Science

Oklahoma State University

Stillwater, Oklahoma

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e: Eugene Harvey Ross Date of Degree: July, 1967

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le of Study: A STUDY OF POSSIBLE RELATIONSHIPS AMONG INTELLIGENCE, INTEREST, AND ACHIEVEMENT OF BEGINNING STUDENTS IN EIGHT SELECTED OKLAHOMA VOCATIONAL AGRICULTURE DEPARTMENTS.

es in Study: 23 Candidate for Degree of Master of Science

or Field: Agricultural Education

pe and Method of Study: The population of the study included one hundred twenty-eight vocational agriculture I students enrolled i eight selected schools. Schools were selected by random sample from a five county area, largely due to their availability for st and test administration. Intelligence scores were obtained for e student enrolled and classified into high, middle and low intelli gence levels. Student interest was determined by administering a interest inventory prepared especially for agriculture students. Interest scores were then divided into high, middle and low. The grades used in the study were those received in agriculture at th end of the freshman year.

lings and Conclusions: A comparison of the levels if interest and grades received for all one hundred twenty-eight students was mad This comparison revealed no direct relationship between the level of students interest and the grades they received except that one student who exhibited a low interest score did receive a grade of during his first year of enrollment in vocational agriculture.

Another comparison between student intelligence level and the gra received did reveal a marked difference in favor of those student of higher intelligence levels.

The conclusion is definitely reached that these areas can greatly assist in attaining a clearer understanding of the students behav It was readily recognized that the degree of interest in a subjec is not nearly as important for success as the individuals' intell gence level. However, this study did not refute an assumption th a certain minimum level of interest is highly desirable for the attainment of high scholastic performance..

While not included in the study it is the opinion of the investi- gator that such attributes as hard work, patience, strong desire, and the ability to get along with one's fellow man cannot be disregarded when assessing the individuals chances for success, both academically and professionally.

SER'S APPROVAL_____

A STUDY OF POSSIBLE RELATIONSHIPS AMONG INTELLIGENCE, INTEREST, AND ACHIEVEMENT OF BEGINNING STUDENTS IN EIGHT SELECTED OKLAHOMA VOCATIONAL AGRICULTURE DEPARTMENTS

Thesis Approved:

_____

Thesis Adviser

_____

_____

Dean of the Graduate College

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le completing the study.

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CHAPTER I

INTRODUCTION

We have all heard this statement many times "The ;on that I didn't work too hard at that assignment because I wasn't interested in the subject." The ıre of this statement leads us to think that if we had lents in vocational agriculture who were all interested ;he subject that our jobs would be much more simple and students would accomplish more.

Since most of us can agree that interest in a subject .mportant to the student, it has always been a mystery ;he writer to know just how much the student's interest 'ocational agriculture influences the grades that he ;ives in that subject.

In this study the student's intelligent scores will ;ompared with their interest scores, then these scores . be compared to their grades received in vocational .culture.

It is hoped that this study will help clarify the ıtionship between students' interest and achievement in ıbject.

Statement of the Problem

This study attempts to determine the value of interest
es and intelligence scores of nineth grade vocational
culture students by comparing their grades received
ng their first year in agriculture.

The questions important to the study are as follows:

1. Will students with high interest scores and low intelligent scores receive satisfactory grades?
2. Will students with high intelligent scores and low interest scores receive satisfactory grades?

Basic Assumptions

This study is conditioned by the following assumptions:

1. Teachers respond to interested, motivated students regardless of intelligence.
2. High intelligence students can achieve easier than low ability students; therefore, they should receive better grades.

Purpose of the Study

This study was designed to determine the value of
rest for nineth grade vocational agriculture students
rd success within a subject.

In this study of eight different vocational agriculture
ers an attempt was made to determine whether there
ny relationship among:

1. Student with high interest scores and low intelligent scores receiving satisfactory grades.
2. Student with low interest scores and high intelligent scores receiving satisfactory grades.

Scope of the Study

This study included eight chapters located in five nties in Oklahoma. The five counties that were selected e Muskogee, Okfuskee, McIntosh, Okmulgee, and Cherokee. counties were selected due to their convenience in ation.

The eight chapters that were selected by random sample e Boynton, Checotah, Haskell, Morris, Muskogee, Okemah, ha, and Talequah. One hundred twenty-eight students e enrolled in Agriculture I within these eight chapters t were selected.

The five counties and eight chapters were selected h the intention that the information obtained would be licable to a large portion of the state.

How the Study was Conducted

Subjects included in this study were one hundred nty-eight Vocational Agriculture I students who were olled in the eight selected vocational agriculture pters located within a five county area. The eight pters used were selected by random sample from the five nties that were selected because of their location from nton.

The instrument used for determining the students' rest in vocational agriculture was a standardized rest inventory test developed at the Pennsylvania State ersity, Department of Agricultural Education, Universit , Pennsylvania, by Drs. R.W. Walker, G.Z. Stevens, and Hoover.

The tests were ordered from the Pennsylvania State ersity by the writer and delivered to each vocational culture teacher in the respective schools included. he time of delivery of the test, instructions were give he teacher covering methods of administration. The s were given during the fall semester of 1965-66. he end of the spring semester of 1966 the tests were ected. Also the grades of the students and their lligence scores were attained at this time.

The intelligent scores used in this study were ved from tests given by the different schools at the or high school level, in each case the tests used standardized California, Minnesota, or Iowa tests ectively.

The grades used in the study were grades given by the hers at the end of the students' freshman year.

After securing the students interest and intelligent es they were classified into low, medium, and high. The es were classified by the letters A, B, C, D and F.

Definitions of Terms Used

ievement: To gain by work or effort. The ability to "catch on" or understand instructions and underlying principles; the ability to reason and make judgements. closely related to doing well in school.

ies: The grades used in this study were the grades given the student by his vocational agriculture teacher

erest: The Pennsylvania Vocational Agriculture Interest Inventory classified the interest scores into three catagories, high, medium and low. The high interest scores fell into the range of 66 and above, the middle interest scores were 43 to 65 and the low interest scores were 42 and lower.

Q.: Intelligence Quotient = $\frac{\text{Mental Age}}{\text{Chronological Age}}$ X 100 (Multiplication by 100 merely eliminates the decimal points).

Definition of an I.Q. score. We can now define what i meant by the intelligence quotient, or I.Q. The intelligence quotient is the ratio of mental age to chronological age.

itude: A mental position or feeling with regard to a subject.

relation Coefficient (r): Correlation is a measure of the degree to which variables vary together or a measure of the intensity of association. When r is near o linear correlation is small, when r is near +1 or -1 linear correlation is high.

ificance level: Refers to the probability of the event occuring due to chance. Example = .01, it is likely that one time out of a hundred the event could occur due to chance.

CHAPTER II

REVIEW OF LITERATURE

A considerable amount of work has been conducted ıting to intelligence, interest, and achievement by ɜr individuals. As we review some of the data presented ɔhe following discussion, it is the desire of the author ɔ some helpful knowledge will be acquired by the reader the purpose of clarifying the data presented in ɔter III of this study.

Practically every teacher has met a student whose elligence test score is high but who is not succeeding school, even the brightest students may have difficulty school if they are not appropriately motivated or have r work habits. "An intelligence test is a measure of t a person has learned from his general experience." (4) intelligence test is absolutely reliable, although most them are highly reliable. "On the average a child's elligence test scores may vary as much as plus or minus e points because of the unreliability of the measuring trument itself." (4) Other variations in students' I.Q. be due to the changes or differences within the ividual. One individual may be listless and irrespon- le while another is alert and keen with response to

y question. "It is a noticeable fact that a very
e percent of the individuals group themselves into the
age classification. We may attribute this generally to
hereditary and environmental influences brought about
ng the life of the individual." (2) Men have spent
s studying and measuring the physical traits of
nity in order to find a basis for measuring the
al traits. Today we have hundreds of mental tests,
of which give us some insight to the students' mental
ity. "We are convinced that, while none of these
s will correlate perfectly with each other, they do,
marked degree, give us an insight into the child's
ity as compared to the ability of his classmates." (2)
There has long been a desire on the part of test
rts for a nationwide standard scale to which all measur-
instruments of whatever kind and wherever published
d be equal. "As a representative of an organization
h uses a large number of tests produced by half a dozen
ore different publishers, I am convinced that a common
e for obtaining derived scores on all tests would be a
t boom to measurement in the United States." (1) A
ary statement pertaining to the reliability of test
d be: "The scores on the parts of the test should be
able in the study of groups, but they are too low in
ability to be useful in the study of individuals." (1)
One of the most frequently used and least clearly
rstood words in our vocabulary is interest. Carter (5)

iders interest as "the ultimate resolution of the viduals attempts to fit into a group wherein his stment is satisfying and satisfactory." Among parents mmon statement is that "my child can do anything he is rested in." They feel that a student's interest can be ed on or off like a water faucet. Clinically we can call to mind students that showed marked improvement r shifting to a field of greater interest; conversely, an point to students failing from the lack of interest.

Strong (5) concluded that clear-cut interest types to exist and could be isolated on a test as early as tenth grade. He also stated that "neither ability achievement measures show a substained correlation with pational interest scores in the school years." There ome evidence with adult testing programs and occupation-uccess. We may never achieve one hundred percent sfaction for the task we are doing, but we may achieve y-one percent liking and forty-nine percent disliking. efore, we will continue doing the task assigned to us; wise, we will continue to gripe a little about the ikes of our assignments.

In the above discussions we have considered intelli-e scores and interest scores. A brief discussion erning grades may be of value before entering into ter III. A summary statement concerning grades may Our judgements of intelligence of a student does not nd exclusively on intelligence test scores. As

chers we have intelligence test data available, but judgements of a child's ability are also influenced his attitude toward school." (1)

With the above opinions in view, let us enter into actual data relating to the study.

CHAPTER III

PRESENTATION OF DATA

The purpose of this study was to deal with the ent's success in vocational agriculture within the of interest, intelligence and grades. As we enter that vast area of human behavior, we explore an area has only had its surface scratched so far as reliable ictions toward human reactions when they are subjected particular set of conditions.

The data presented in Table I contains information ected from the eight schools used in this study. schools will only be identified by a number, not by . Identifying the schools by name is not necessary the information needed in this study; however, it may f interest to know that the schools used were Boynton, otah, Haskell, Morris, Muskogee, Oktaha, Okemah, Talequah.

One of the first outstanding observations of this e is the variation of grading systems used within the erent schools. While visiting with the teachers ring the grading systems used, it was observed that no teachers used exactly the same methods of grading. Some hers valued supervised farming programs high, while

DISTRIBUTION OF STUDENT RANKINGS WITHIN THE AREAS OF INTELLIGENCE, INTEREST AND GRADE RECEIVED IN AGRICULTURE

School No.	Total No. of Students	Intelligence Level No. of Students Ranking:			Interest Level No. of Students Ranking:			Grades Received No. of Students Receiving				
		High	Med.	Low	High	Med.	Low	A	B	C	D	F
1	12	6	3	3	10	2	0	1	3	6	2	0
2	12	2	6	4	9	3	0	5	4	3	0	0
3	31	7	9	15	12	13	6	11	11	9	0	0
4	10	2	2	6	5	3	2	1	4	2	3	0
5	26	5	8	13	13	11	2	10	7	4	4	1
6	16	4	5	7	7	7	2	4	11	1	0	0
7	14	3	5	6	1	7	6	2	7	1	3	1
8	7	3	1	3	6	0	1	1	2	1	3	0
Totals, all Schools	128	32	39	57	63	46	19	35	49	27	15	2

ers felt that leadership, attitude, and farm mechanic lls were more important. Some variation in grading tems can be expected; however, each teacher should ablish the grading system that most accurately measures student's achievement within the various areas of ruction.

Comparing the number one with the number three school, number one school had fifty percent of its students in high intelligence group and gave one A, three B's, C's, and two D's. Now let us observe that forty-eight ent of the students in number three school were in the intelligence group. It gave eleven A's, eleven B's, an e C's. This difference can be explained by the grading tem used. The number one school was following the rmal curve" system of grading compared with the number e school who based its grades on classroom achievement, n mechanics, fairs, shows, and contests, supervised ning, F.F.A. meetings attended, and attitude.

A standardized grading system was not used by all ools; however, the teacher's judgment, along with the ting programs, may be the most accurate method of suring the student's achievement at the present time.

The information presented in Table II relates an eresting story about students studying vocational lculture. Observe that sixty three of the one hundred nty-eight students, or forty-nine percent were highly erested in vocational agriculture. Forty-six of the

idents or thirty-six percent showed a middle interest in
eir subject, and nineteen of the students, or fifteen
rcent fell into the low interest group. This high
erest among vocational agriculture students relates a
ry promising opportunity for the teacher of agriculture.

Another comforting fact about Table II was that
enty-nine percent of the students that were highly
erested in agriculture were in the high intelligence
oup. Only sixteen percent of the low interested group
ssessed high intelligence. This comparison revealed tha
e students that were highly interested in agriculture
re also the brighter more capable ones.

The grades received by high, middle and low intereste
idents did not show as much relation as did their intere
ores compared with their intelligence scores. The reaso
r these differences could be numerous. Either the
allenge is not great enough for the brighter students to
rk at their capacity, or the slower students are working
rder to bring themselves up with the bright ones. Or,
could be that the slower students are being encouraged
stay in agriculture by the teacher giving them higher
ades than they deserve.

TABLE II

A COMPARISON OF THE LEVEL OF INTEREST AND GRADES RECEIVED BY ONE HUNDRED TWENTY-EIGHT NINETH GRADE VOCATIONAL AGRICULTURE STUDENTS IN EIGHT OKLAHOMA HIGH SCHOOLS

?el of ;erest in .culture	No. of Students	Intelligence Level No. of Students			Grade Point Average
		High	Med.	Low	
High	63	18	20	25	2.8
Middle	46	7	17	22	3.0
Low	19	3	2	14	2.2

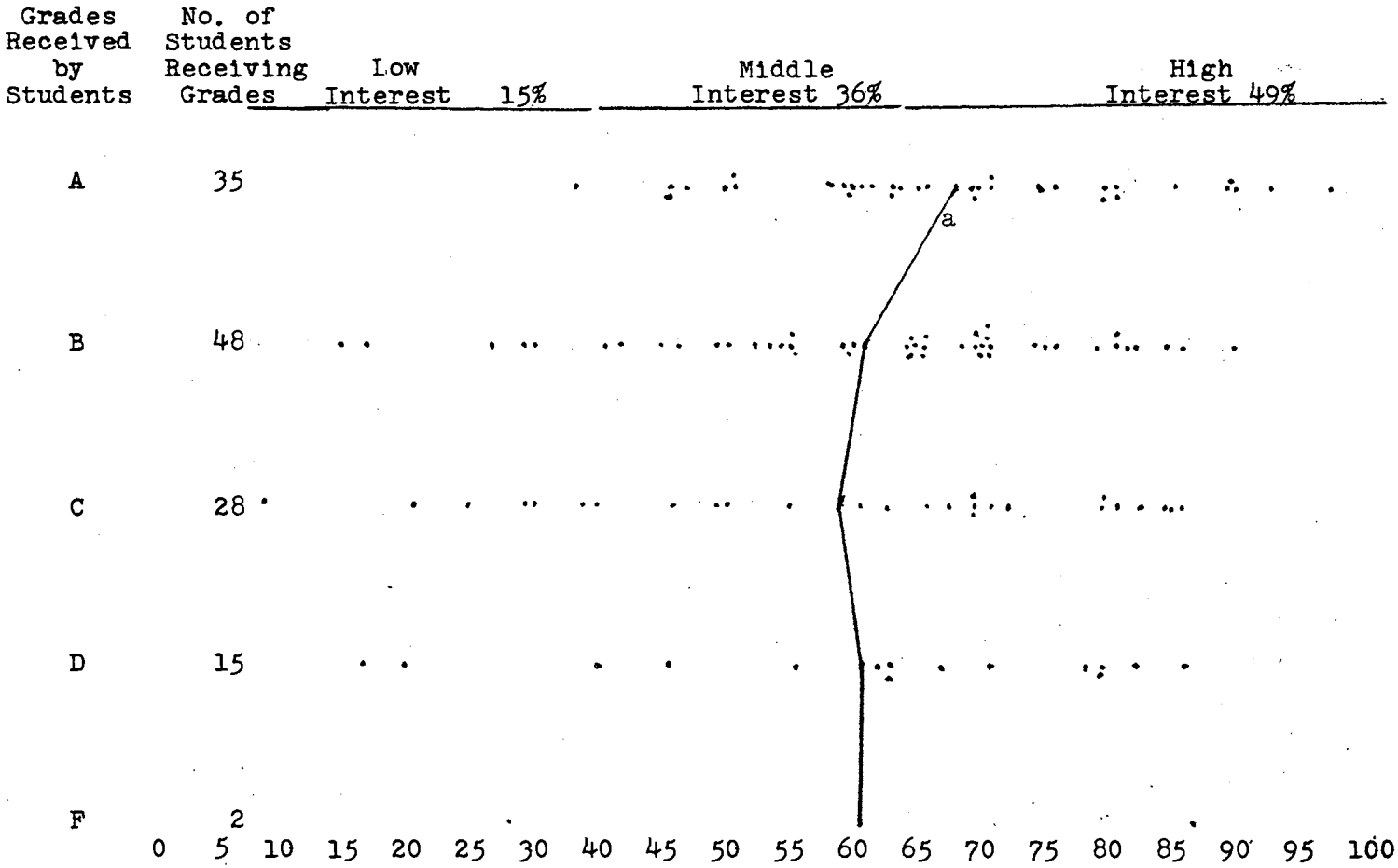
The information presented in Table III shows a direct ıtionship between the intelligence level of students the grades they received. The high intelligence group ɜived a grade point average of three point three, the lle intelligence group scored a three point one, and the intelligence group averaged a two point four. An 'age interest score of sixty-five was attained by the ı intelligent group, the middle and low intelligence ıps' interests did not decline in relation to their lligence. The middle intelligent group averaged an rest score of fifty-seven, and the low intelligent p averaged fifty-eight.

Another interesting observation brought to our ntion in Table III is the number of students found at various intelligence levels. Sixty of the one hundred ty-eight students possessed low intelligence, thirty- possessed average intelligence and twenty-nine were in high intelligence group. This means that forty-seven ent of the students, used in the study, were in the low lligence group. This is the natural trend that one ı expect to find among vocational students; however, ıll of our students are of low intelligence, only ɾ-seven percent. The remaining fifty-three percent of ıge and high intelligent students should be an inspi- ɔn to any dedicated vocational agriculture teacher.

TABLE III

A COMPARISON OF LEVEL OF INTELLIGENCE AND GRADES RECEIVED BY ONE HUNDRED TWENTY-EIGHT NINETH GRADE VOCATIONAL AGRICULTURE STUDENTS IN EIGHT OKLAHOMA HIGH SCHOOLS

vel of lligence	No. of Students	Interest Average	Grade Point Average
High	29	65	3.3
verage	39	57	3.1
Low	60	58	2.4



[a]Verticle line showes average interest scores among the grades.

[b]The correlation of .141 < .174 at the .05 level

The vertical line in Figure I connects the average terest scores among the grades received by the one ndred twenty-eight students used in the study. The udents that received high interest scores received score eraging sixty-seven point fifty four. The B students ceived scores averaging sixty-one point four, the C udents averaged fifty-eight point seventy-five, the D udents averaged sixty-one point two, and the F students erage was sixty point five. Figure I clearly reveals at the F students interests scores were only seven point low the A students, and the B, C, D, and F students all ssessed approximately the same amounts of interests.

This conclusion is further confirmed by the low rrelation between the interest scores and grades. The rrelation of .141 is less than the amount required for gnificance at the .05 level.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Summary

This study was designed to determine the relative
ue of the extent of agricultural interest for nineth
de vocational agriculture students toward academic
cess in vocational agriculture.

In this study of eight different vocational agricultur
pters an attempt was made to determine whether there
any relationship between:

1. Students with high interest scores and low intelligence scores as related to scholastic accomplishment in vocational agriculture.
2. Students with low interest scores and high intelligence scores as related to scholastic accomplishment in vocational agriculture.

This comparison revealed no direct relationship
ween the level of students interest and the grades they
eived except only one student exhibiting a low interest
re received a grade of A during his first year of
ollment in vocational agriculture. Another comparison
made between the students intelligence level and the

des received. This comparison did reveal a marked ference in favor of those students of higher intelligenc els receiving the higher grades.

Conclusions

As a result of this study it was the experience of investigator that a broader understanding in the area intelligence, interest and grades was acquired. The clusion is definitely reached that knowledge acquired ir se areas can greatly assist in attaining a clearer erstanding of the student's behavior.

Interests are agreed to be learned phenomena. "It granted that interests are shaped by varying important ces other than those brought to bear by educational stems." (5) Most writers agree that interest must be rned. "Individuals are rarely in a position to know ir own interests in various fields prior to actual ticipation in those fields." (5)

As a final statement, it can be readily recognized at the degree of interest in a subject is not nearly important for success as the individual's intelligence rel. However, this study did not refute an assumption at a certain minimum level of interest is highly sirable for the attainment of high scholastic performanc

While not included in the study, it is the opinion the investigator that such attributes as hard work,

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VITA

Eugene Harvey Ross

Candidate for the Degree of

Master of Science

rt: A STUDY OF POSSIBLE RELATIONSHIPS AMONG INTELLIGENCE, INTEREST, AND ACHIEVEMENT OF BEGINNING STUDENTS IN EIGHT SELECTED OKLAHOMA VOCATIONAL AGRICULTURE DEPARTMENTS.

r Field: Agricultural Education

raphical:

Personal Data: The writer was born in Micawber, Oklahoma, March 28, 1926, the son of Carl and P.K. Ross.

Education: The writer attended grade school at Micawbe in Okfuskee County, and was graduated from the Paden High School in May, 1944. In September, 194 he enrolled at the Oklahoma State University and completed two years of college. In 1956 the write reentered Oklahoma State University as a part-time student, and in 1960 he received his Bachelor of Science degree with a major in Agricultural Education. In 1962 he entered the Graduate School of the Oklahoma State University from which he received the Master of Science degree with a major i Agricultural Education in July, 1967.

Professional Experiences: The writer entered into the United State Navy in February, 1945; served as a MM3c in the engineering log room aboard the U.S.S. Savo Island, CVE 78. After honorable discharge i June, 1946 he accepted a job as a veterans agriculture teacher in June, 1948. In 1952 he bought into a John Deere Implement business. After two years in business he sold his interest and bought into a ranching operation where he remained until 1960. In July 1960 he accepted a job as vocationa agriculture teacher at the Boynton High School, Boynton, Oklahoma, where he has completed seven enjoyable years at that assignment.