

THE USE OF INDEPENDENT STUDY IN KANSAS HIGH SCHOOL
PRODUCTION AGRICULTURE COURSES

2148-5608A

by

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B. S., Kansas State University, 1963

A MASTER'S REPORT

submitted in partial fulfillment of the
requirements for the degree

MASTER OF SCIENCE

Agriculture Education

College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1974

Approved by:


Major Professor

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Document

ACKNOWLEDGEMENTS

The assistance and advice received from Dr. James Albracht, Major Professor; Dr. Ralph Field and Professor Howard Bradley, Teacher Education; and Professor Paul Stevenson, Agriculture Engineering, sre greatly appreciated. Appreciation is also expressed to the vocational agriculture instructors who responded to the questionnaire used in this study.

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Chapter 1

INTRODUCTION

Independent study has been a part of the learning process for many years in high school vocational agriculture courses, however, up to the time this report was made, it had been practiced almost exclusively in the agriculture mechanics courses while being virtually absent in the production agriculture courses such as crop and animal science.

Reasons for this imbalance may have been a larger and more varied amount of training equipment, larger and more easily accessible working area (shop), and the greater emphasis on skill proficiency as stressed in agriculture mechanics courses. Factors inherent to the production agriculture courses in the classroom that may have detracted from their adaptability to independent study were limited space, a larger amount of cognitive material covered, and a lack of sufficient instructional aids.

While the above may have been substantial contributors to the limited use of independent study, they did not take into account the intangible factors such as tradition, perceptions and teacher attitudes that might reinforce the resistance to change from the traditional teaching methods in production agriculture courses.

Statement of the Problem.

The purpose of this study was to determine a) to what extent independent study was being used in production agriculture courses in Kansas vocational agriculture programs, b) in what forms it was being used, c) reasons why it was not more widely used, and d) suggestions for the expansion of independent study.

Hypotheses

The factors most commonly associated with the lack of independent study programs in production agriculture courses were a lack of personal experience with procedures for starting and using independent study programs, and a lack of financial resources.

Definition of Terms

The following definitions used for this study may differ slightly from those in common usage.

Independent study. Learning that allows students to progress independently, with some guidance, by giving them greater freedom and responsibility for the subject matter content and/or speed of learning as opposed to the traditional "all students learn the same thing at the same time" approach. This term is often used interchangeably with individualized instruction.

Production agriculture. Subject matter taught in the classroom with little laboratory or observation or "hands on" type learning to supplement teacher instruction.

Agriculture mechanics. Subject matter taught with a substantial portion of time spent in shop improving physical skills such as welding and machinery repair.

Programed study guides. Written material designed to allow a student to learn subject matter in step by step progressions independently with limited help by the instructor.

Self-concept. The belief that one has in himself and his ability to function in a self-directed manner independent of the influence of his environment.

Significance of the Study

This study was important because while much was available to guide those teachers and administrators who wanted to use independent study techniques, many educators had not considered using independent study because of misconceptions or misinformation concerning its effects and usage.

This study was aimed at determining those factors that limited the use of independent study in vocational agriculture courses and to make recommendations for increasing the number of students exposed to this type of learning.

Limitations of the Study

This study was limited to thirty nine randomly selected Kansas high school vocational agriculture instruc-

tors who were teaching production agriculture courses.

The accuracy of the information gathered for this study was limited to the respondents ability to interpret the questions as the author had intended and the author interpreting the snswers as the respondents had intended.

Chapter 2

REVIEW OF THE LITERATURE

In reviewing the literature concerning independent study programs, three main areas of writing stand out: benefits of independent study, structure of independent study programs, and the procedures for establishing independent study programs.

Reasons for Independent Study

Much has been written about the student as an individual and how to teach him as an individual. Information on the subject was available for all phases of education including vocational agriculture, according to Rannels (1).

This interest in independent study came about from the concern of educators and parents that merely factual learning had taken too much of the students time at the expense of the development of the individual person in terms of self-concept.

Tremendous physical and mental differences between students are the reasons for the necessity of individualizing instruction according to Wolfson (2). In fact, according to Hall (3), one individualized study program was started in a school when it was found that

students in one grade differed by as much as ten grade levels measured by standard achievement tests.

Despite the fact that other standard achievement testing showed no significant changes in student abilities from independent study, there were substantial changes in student attitudes expressed by drops in absenteeism, coupled with greater self-assertion and self-actualization according to Thorwald (4). Young (5) showed that this enhancement of personalities - especially where disadvantaged students were concerned - had proven to be more important than merely factual learning for the purpose of attaining successful entry into the labor force upon graduation.

Specifically, the advantages of an independent study program, according to a book entitled "Individually Prescribed Instruction" (6), were that slower pupils should not be pushed faster than their capabilities. Students studying something of interest (sometimes self-initiated), and the student starting at his own level. Conversely, there were some individual characteristics that could not be met by independent study techniques such as group oriented or slow changing students who would benefit more from traditional classroom techniques. However, these differences could be attended to by conscientious application of both individual and group learning practices.

The above reference also stated that the student was not the only one who stood to gain from an independent study program. By using it, the teacher could improve

himself, and the assistance he provided to the student, by becoming more aware of the gaps in a students learning. Also more responsibility would be given to the student, and the student would help in planning the program of study and determination of goals.

Structure of Independent Study Programs

The structure of independent study programs ranged from mass-produced, and sometimes computerized, programed material that allowed a student to study specified subject matter at his own pace, according to Georgiales (9), down to self-directed learning that stressed self-responsibility and regulation divorced from any course requirements, according to Wedemeyer (7).

Independent study in high school vocational agriculture courses had generally been closer in structure to the latter. It often took the form of having students read magazine articles or book passages about a specific subject during a short period of time. Crop and other identification learning also became a form of independent study when students were given free time for that purpose. On the upper level of independent study, some instructors had students study almost completely on their own about specific subjects of job occupations through the use of complete learning guides.

Despite this wide range of structural differences, there were some aspects of independent study that should have been common to all of them in order for the students

to gain maximum benefit. According to Ringis (8), they were: a) concept focus, b) behaviorally stated objectives, c) multiple learning activities and methods, d) diversified learning resources, e) evaluation, and f) breadth and/or depth of suggestions for post-study work. Georgialies stated that basically, the curriculum should be divided into small, success oriented components which clearly state performance objectives. Shultz (10) added that the methods used should build on the students background and use achievement and not time as a determinant of student ability.

Often overlooked, but probably the most important ingredient of an independent study program, according to Bjorkquist (11) was the teacher.

Factors Limiting the Use of Independent Study

Even though there were very real benefits to be gained by the use of an independent study program and much literature was available on the subject, it was still not widely used.

Wedemeyer stated that a lack of money and space available to educators contemplating the use of more sophisticated independent study programs was one reason for its limited use. Other tangible reasons, according to Gibbons (12) were rigid grade reporting procedures and rigid organization of classtime that cramped the less structured style of independent study.

Dell (13) said that a lack of teacher preparation was also a cause of the limited use of independent study.

Many teachers had not been trained in its use; either before or after they began teaching. Georgialies stated that not only would new instructional techniques have to be learned, but a new pattern of thought towards the process of independent study would have to be developed. Also, according to Elmlinger (14), the embarking on efforts to individualize their instructional programs caused many teachers to leave many familiar practices behind which tended to cause insecurity.

Another limiting factor, according to Tunk (15) was that the actual role of the instructor would have to change. Instead of being an instructor, he would take on the unfamiliar role of instructional manager. In addition, Dell said that the teachers work load would be increased from having to set up objectives for each student and comfortable classroom activities would have to be discarded. Wedemeyer stated that many parents and educators doubted the effectiveness of independent study; holding to the belief that students learned better in groups, and that students would be wasting their time. In fact, according to Elmlinger, students themselves might react unfavorably towards a new and unfamiliar independent study program.

Establishing an Independent Study Program

Preventing or overcoming the previously mentioned problems surrounding an independent study program could be done but a conscientious effort would be needed by teachers and administrators for it to succeed, according to Elmlinger.

He gave several steps that should be followed by instructors before starting an independent study program.

1. Become thoroughly familiar with the professional literature underlining the philosophy and methodology of independent study.

2. Make sure materials are readily available in the necessary quantities and varieties.

3. Involve the principal and other teachers in the program by explaining what it is and asking questions.

4. Decide whether to start with one or all sections of a departmental organization.

5. Explain to the class what will be done and why.

6. Explain to the parents what will be done and why.

7. Get under way.

While this procedure would be extremely beneficial to the success of the program it would not help the teacher who was not convinced that he should set up an independent study program in the first place. Elmlinger said this was where the principal and superintendent should come into the picture by offering advice, encouragement and understanding to the teacher who was wary of changing traditional patterns of instruction.

Other factors that may have been used to involve teachers in changing methodology, according to Gagne (16) were in-service training to provide teachers with conceptual understanding of individualized learning and awarding

incentive salary increments related to teacher performance.

Chapter 3

METHOD OF RESEARCH

In order to meet the objectives of determining the present status of and gathering suggestions for the improvement of independent study in production agriculture courses, a questionnaire was developed for distribution to randomly selected vocational agriculture instructors in Kansas.

Selection of Subjects

The population from which the subjects were selected were all Kansas high school vocational agriculture instructors as listed, alphabetically by post office name, in "Agriculture Education Instructors of Kansas 1973-74 Secondary".

It was decided that thirty nine subjects would be sufficient, assuming a 60% return, to obtain sufficient information from which to complete the study. From the above mentioned list of instructors, every fourth instructor, starting with the first, was chosen to receive a questionnaire.

Development of the Questionnaire

The author became interested in independent study and got his ideas for developing the questionnaire, from

exposure to independent study techniques while a graduate student at Kansas State University.

The questionnaire, which included thirty seven items, consisted of questions covering seven areas: personal and school background, starting and using independent study programs, types of independent study programs in use, methods of assisting students in using independent study, opinions about independent study, and why independent study was used more often in agriculture mechanics courses than in production agriculture courses. The author also wished to obtain information on how teachers would desire to have assistance in the use of independent study programs.

The questions used were of three types: questions to which responses consisted of varying quantities such as number of students and years teaching experience, questions to which responses were restricted to pre-selected answers, and unstructured response questions.

The questionnaire was validated by a Delphi technique involving staff in the Agriculture Education Department at Kansas State University and graduate students who had been teachers of vocational agriculture.

Treatment of Data

Frequency statistics were used to tabulate the responses of the teachers of vocational agriculture. The responses of the instructors who returned the questionnaire were divided into two groups: those who used independent study and those who did not use independent study in their

production agriculture classes.

The data was presented in tabular form and a narrative presentation was made of the findings in Chapter 4. Chapter 5 was devoted to the summary, conclusions and recommendations concerning independent study.

Chapter 4

ANALYSIS OF DATA

The information in Chapter 4 analyzes the responses of twenty eight Kansas high school vocational agriculture instructors to a questionnaire concerning the present status of and recommendations for independent study programs in production agriculture courses. The completed questionnaires were divided into two groups: those instructors (fifteen) who used independent study programs, and those instructors (thirteen) who did not use independent study in their classes.

Because of the varied types of questions used in the questionnaire, the responses were analyzed according to the following format:

1. Questions to which responses consisted of varying quantities, such as number of students and years of teaching experience, were totaled within the respective groups of instructors who used and did not use independent study and then divided by the number of instructors responding in each group. The resulting averages were then presented.

2. Questions for which returns were restricted to pre-selected responses were presented by frequency statistics for comparisons between groups.

3. Unstructured responses were requested for the third type of question used. Responses were listed and frequency statistics compared the returns for each group.

Following the guidelines just mentioned, the responses to the questionnaires were tabulated and analyzed. It was observed that several instructors failed to answer all of the questions. Reasons for this may have been that a particular answer may have been unknown, the questions did not apply, skipping a question inadvertently, or inconsistency of mode of questioning throughout the questionnaire. It should be noted, however, that the group of instructors that used independent study were more consistent in answering the questions than the other group of instructors.

Twenty nine instructors responded to the questionnaire. However, one instructor returned the questionnaire saying he taught only agriculture mechanics and therefore his responses would not be relevant. For this reason, the analysis of data was based on the responses of twenty eight instructors.

The information in Chapter 4 was tabulated and analyzed in seven separate groups: 1) personal and school background, 2) starting and using independent study programs, 3) types of independent study programs in use, 4) methods of assisting students using independent study, 5) opinions about independent study, 6) why independent study is used more often in shop than production agriculture courses,

and 7) what assistance would be of the greatest help towards increasing the use of independent study.

Personal and School Background

The data in Table 1 indicated that both the instructors who used independent study and those that did not use it had exactly the same average number of years of teaching (9.2) and had the same number of FFA members in their chapters (43.4).

Other data indicated that the instructors who used independent study had been at their present locations longer (8.6 years) than those that did not use independent study (6.8 years). Also, the instructors using independent study had smaller Freshmen and Senior classes although their Sophomore classes were larger while the Junior classes of both groups were relatively the same.

The annual budgets indicated that the instructors using independent study had more funds at their disposal (\$11,000) than instructors not using independent study (\$10,200). The data also indicated that instructors who used independent study were more likely (5 of 10 respondents) to have a school farm than instructors who did not use independent study (2 of 10 respondents). The response on the uses of school farms were small and the data was not analyzed.

The responses in Table 1 did not reveal any real differences between groups of instructors that might indicate an influence as to whether or not an instructor

Table 1

The Responses of Twenty Eight Vocational
Agriculture Instructors About Their
Personal and School Background

Questions on Personal and School Background	Fifteen using ind. study	Thirteen not using ind. study
1. Years taught vocational agri- culture (average)	9.2	9.2
2. Years present location (average)	8.6	6.8
3. Number of students in your classes (average)		
Freshmen	15.9	20.4
Sophomore	16.8	14.9
Junior	14.0	14.1
Senior	11.4	13.9
4. Number of FFA members (average)	43.4	43.4
5. Annual vocational agriculture budget (average)	\$11,000 ^a	\$10,200 ^b
6. Does the school have a farm?		
yes	5	2
no	10	10
7. School farm used for:		
crops	5	0 ^c
livestock	1	0

^aFrom eleven respondents

^bFrom five respondents

^cThe two instructors not using independent study
and answering yes to question six did not answer
question 7

was using independent study although the smaller Freshmen and Senior classes belonging to the instructors who used independent study might indicate a more relaxed atmosphere which could be conducive to independent study. The larger annual budgets of the instructors that used independent study may indicate that they had more money to use in setting up their programs although the wide range of individual responses (from \$800 to "virtually unlimited") and the number of instructors who did not know or did not answer makes the data inconclusive. The fact, as shown in Table 1 that instructors who used independent study were more likely to have a school farm could be interpreted to mean that they had a better chance to give the students a greater amount of subject related practical experience that would fit well with an individual study program.

Starting an Independent Study Program

The data in Table 2 relating to getting an independent study program started shows that the most common reason (5 of 15 responses) for getting a program started was the instructors recognition that the students had varying abilities or interests that could not be met through conventional means of learning. The next most common (3 of 15 responses) reason given was the wide course coverage. In getting help for setting up an independent study program, more than 50% (9 of 15 responses) of the instructors said that they did the job themselves.

The responses of the instructors in Table 2

indicated that a good number of instructors were aware of the primary reason for independent study - meeting the needs of individual students. The responses also indicated that most instructors had instituted their independent study programs on their own which may have indicated that the programs were not as effective as they might have been if experience gained by others had been available.

Table 2

The Responses of Fifteen Vocational Agriculture
Instructors who used Independent Study Programs

Questions	Number of responses
1. If you use independent study, what influenced you to start using it?	
Varying student abilities/interests	5
Wide course coverage	3
Areas where instructional ability lacking	1
Easier to teach	1
Class offered in school	1
Already in use	1
College instruction	1
Personal goal	1
No response	1
2. If you use independent study, where did you get help in setting it up?	
Self	9
Principal	2
ACE program	2
Published materials	1
No response	1

Other data illustrated that only three instructors out of the twenty eight responding to the questionnaire had ever used a form of independent study and later dropped it. Reasons given were: lack of time, scheduling problems, and lack of good organized material.

Information in Table 3 shows that a lack of funds was not a prominent factor in limiting or preventing the use of independent study, however, a lack of information about independent study was a factor for 66% (10 of 15 responses) of the instructors who used, and 100% (10 of 10 responses) of the instructors who did not use independent study.

Table 3

The Responses of Twenty Eight Vocational Agriculture
Instructors About Factors Influencing the Use
of Independent Study

Questions	Fifteen using ind. study	Thirteen not using ind. study
1. Has lack of school money prevented or limited your use of independent study?		
yes	2	3
no	13	8
2. Has a lack of information about independent study prevented or limited your use of it?		
yes	10	10
no	5	0

While it appeared that a lack of money was not as big a problem in getting an independent study program started as originally thought, the data in Table 3 indicated that a lack of information was. This coupled with the earlier response that many instructors set up their own independent study programs with little help, indicated that more assistance was needed on the teaching level.

Other factors mentioned by the instructors as preventing or limiting the use of independent study are given in Table 4.

Table 4

The Responses of Twenty Eight Vocational Agriculture Instructors Showing Other Factors That Limited or Prevented the Use of Independent Study

Answers	Number of responses
Lack of time	8
Space	2
Lack of Materials	2
Number of students	1
Lack of knowledge about independent study	1
Students not adapted	1
Scheduling problems	1
Size and equipment	1
Not sure of independent study value in education	1
No response	11

As seen in Table 4, a lack of time was mentioned as affecting the use of independent study in eight of eighteen useable responses, while a lack of materials and the number of students were each mentioned twice. Of the eight instructors responding that a lack of time affected their use of independent study, six were using independent study at the time and two were not.

Analysis of the information in Table 4 indicated that not only was a lack of time a major factor limiting or preventing the use of independent study, but also that the instructors who had experiences with independent study were more aware of this factor than the instructors who did not use independent study.

Types of Independent Study Programs in Use

Data in Table 5 reports that the most common method of independent study was unscheduled time where students studied on their own for credit (11 of 15 instructors) while regularly scheduled classes in various forms were mentioned no more than five times each.

The more frequent use of unscheduled time for independent study indicated that possibly a smaller number of students were benefiting from independent study than if it had been used in regular classes. Further analysis of Table 5 indicated that eight of the eleven instructors who used the unscheduled time for independent study had also listed a lack of information (Table 3) as a factor limiting the use of independent study. This lack of information may

be what was restricting the use of independent study in regularly scheduled classes. The responses showing which methods of independent study were used in COOP programs were not numerous enough to suggest anything beyond that many instructors were not using the COOP program.

Table 5

The Responses of Fifteen Vocational Agriculture
Instructors Using Independent Study to the
Types of Programs They Were Using

Types of programs	No. of responses for prod. ag. courses ^a	No. of responses for COOP courses
1. Unscheduled time of free period where students study on their own for credit.	11	0
2. Regularly scheduled classes where independent study and lecture type learning are used alternately.	5	3
3. Regularly scheduled classes where students study, full time, the same curriculum material but proceed at their own pace.	5	2
4. Regularly scheduled agriculture education classes where students learn full time through independent study about topics they choose.	3	3

^aThere are more than fifteen total responses because several instructors used more than one type of independent study.

Methods of Assisting Students
Using Independent Study

The data in Table 6 was designed to compare the actual methods of assisting students using independent study with the theoretical assistance that would be provided by those instructors not using independent study.

This data reported that in guiding students, an outline of basic information was more popular than programmed material and oral instructions with both the instructors that used and did not use independent study. In assisting the students using independent study, both groups of instructors indicated a preference for helping the students individually over assistance by another teacher or student. The data in Table 6 also indicated that the instructors of both groups were more inclined to encourage rather than require students to seek their own sources of information and to conduct laboratory exercises. Instructional materials indicated as being most popular by both groups of instructors in assisting students were books and magazines. Nine of fifteen instructors using independent study indicated they used materials made especially for independent study while none of the instructors not using independent study indicated an inclination to use these types of materials.

Analysis of the data in Table 6 illustrated there was little difference concerning the assistance given the students between the actual practices of the instructors using independent study and the opinions of the instruc-

Table 6

The Responses of Twenty Eight Vocational Agriculture
Instructors to the Type of Assistance Provided
Students Using Independent Study

Statements	Fifteen using ind. study	Thirteen not using ind. study ^a
1. In guiding your students, do you provide:		
An outline of basic information to be learned	7	6
Programed study guides	4	1
Oral instruction only	4	1
Other	1	1
No response	0	4
2. In assisting students, do you:		
Help them alone	12	8
Use student help	7	3
Have another teacher help you	3	0
Other	2	0
No response	0	3
3. Is the student:		
Encouraged to seek his own sources of information	7	5
Provided with a list of possible outside sources of information	7	3
Required to seek his own sources of information	2	0
No response	1	3

Table 6 (continued)

Statements	Fifteen using ind. study	Thirteen not using ind. study
4. In connection with independent study programs is the student:		
Encouraged to conduct laboratory exercises	8	4
Required to conduct laboratory exercises	4	2
No laboratory facilities are available or used	2	2
No response	1	3
5. Is the student		
Encouraged to carry out a project related to his area of study	6	3
Required to carry out a project related to his area of study	6	3
Neither of the above	1	1
No response	1	4
6. What instructional materials do you have for use by the students:		
Books and magazines	13	7
Slides or filmstrips	10	4
Written materials made especially for independent study	9	0
Models or charts	6	1
Other	0	1
No response	1	3

^aThese thirteen instructors were not using independent study but were asked to answer based on their perceptions of what they might do if they were.

tors who did not use independent study, except where the use of materials made for independent study was concerned. Nine of the fifteen instructors using independent study said they used materials made for independent study while none of the other group of instructors were of the opinion that they would. This could indicate that the instructors who did not use independent study were unaware of independent study methods which was substantiated earlier in Table 3 which illustrated that all of the instructors who did not use independent study indicated a lack of information as limiting or preventing their using it.

Opinions about Independent Study

Information in Table 7 indicated how the opinions of the instructors using independent study and those not using independent study compared regarding the effectiveness of independent study and when the students should be exposed to it. The data reported that the instructors who used independent study perceived that students should not be exposed to independent study until they were Juniors while the other group of instructors felt that the Sophomore level would be appropriate. Both groups of instructors were unanimous in their opinions that independent study was helpful to the student's self-concepts although they were less sure of the positive effects to the students grades. On the question of whether a two teacher department was more likely to have an independent study program than a one teacher department, the instructors not using

Table 7

The Responses of Twenty Eight Vocational Agriculture
Instructors Regarding Their Opinions About
Independent Study

Questions	Fifteen using ind. study ^a	Thirteen not using ind. study ^a
1. What is the earliest year you would expose your students to independent study?		
Freshmen	4	2
Sophomore	1	4
Junior	8	2
Senior	0	1
2. Will independent study raise a students self-concept or confidence more than the traditional method of learning?		
Yes	13	5
No	0	0
3. Will independent study raise a students grades more than the traditional method of learning?		
yes	7	4
no	3	3
4. Will a two teacher department be more likely to have indepen- dent study than a one teacher department?		
yes	8	5
No	4	5
5. Will students receive less attention from the teacher if independent study is used?		
Yes	6	4
No	8	5

^aNot all instructors answered each question

Independent study were evenly divided while the instructors who used independent study considered by a two-to-one margin that a two teacher department was more likely to have independent study. Both groups of instructors were also fairly evenly divided on whether or not students would receive less attention from the teacher if independent study were used.

The responses of the instructors in Table 7 indicated that the instructors that used independent study were more inclined to start independent study with older (Junior) students than instructors that did not use independent study (Sophomore). The responses of both groups of instructors to the effect of independent study on a student's self-concept and student grades was consistent with literature that cited the main benefits from independent study had little or no effect on grades.

Comparison of Independent Study in Shop and Production Courses

From the data in Table 8 giving the responses to the question of why independent study was used more often in shop courses it can be seen that there were many viewpoints. The reasons most frequently mentioned why independent study was used more in shop were: greater student interest (3 of 22 responses), less preparation time (2 of 22 responses), and the limited space and facilities associated with production agriculture classrooms (2 of 22 responses).

The responses of the instructors in Table 8 show

Table 8

The Responses of Twenty Eight Vocational Agriculture
Instructors to Why Independent Study was Used More
Often in Shop Courses Than in Production Courses

Responses	Frequency ^a of responses
Greater student interest	3
Because of limited space and facilities in production agriculture classes	2
No two students progress at the same rate	2
Less preperation time	2
Shop courses readily adaptable to inde- pendent study	2
Because it has to be used	1
Less technical	1
Shop classes better place to allow independent study	1
Students work on shop projects on own	1
More pre-planned programs	1
Easier to set up	1
Fits teaching routine easily	1
More projects to work on	1
Learn more by doing themselves	1
Easier	1
Not in my class	1
No responses	8

^aThere were thirty total responses. Two instructors
gave two responses each.

what advantages the shop courses had over the production courses in adapting to an independent study program. Some of these responses, such as more projects to work on, indicated what might be improved upon in order to get a greater amount of independent study into the production courses.

Assistance Needed to Increase
Usage of Independent Study

The data in Table 9 indicated the type of assistance the instructors perceived would be of the greatest help in increasing the use of independent study in production agriculture courses. From the State Department of Education, the instructors most frequently mentioned assistance in the form of general guidelines (7 of 28 responses), examples of course materials (5 responses), more funds (4 responses) and programed study guides (4 responses) as being most beneficial. Assistance from Kansas State University was desired most frequently in the form of examples of materials and sources of information (3 of 29 responses); followed by training and the development of workshops (3 responses each). From fellow teachers, the instructors felt that cooperation and communications (9 of 29 responses) were by far the most important in increasing the use of independent study. From the local schools, more funds (3 of 29 responses) and a sharing of materials (3 responses) were the most frequently indicated assistance that would be the most helpful.

Table 9

The Responses of Twenty Eight Vocational Agriculture
Instructors About the Type of Assistance Needed
For the Use of Independent Study

Responses	Frequency of responses
1. Assistance from State Department of Education:	
General guidelines	7
Examples of course materials	6
Programed study guides	4
More funds	4
Inservice educational assistance with materials development	1
Willing to accept credit for the study	1
Approve classes on full funds	1
Funding courses on workshops	1
No response	7
2. Assistance from Kansas State University:	
Examples of materials and sources of information	3
Offer training	3
Develop workshops	3
Teach to undergraduates at college	2
Programed study guides	1
In service educational assistance with materials development	1
How to use independent study	1
Guidelines	2
No response	13

Table 9 (continued)

Responses	Frequency of responses
3. Assistance from Other Teachers:	
Communications/cooperation	9
Inservice educational assistance	1
Compile list of materials	1
Study existing materials	1
Work at it	1
Team teaching	1
No response	15
4. Assistance from your school	
More funds	3
Share materials	3
Encourage innovation	1
Evaluation of student needs	1
Smaller class loads	1
Get materials	1
Extend contract for materials development	1
Allow more time	1
Experimental use of new materials	1
Offer courses in independent study	1
Introduce students to independent study at earlier age	1
No response	14

The responses of the instructors in Table 9 indicated, as did the information in Table 3, that more information from all levels of the educational system - especially from the State Department of Education and Kansas State University - could increase the use and effectiveness of independent study. From fellow teachers, the instructors indicated that communications and/or cooperation would be of the greatest help in increasing the use of independent study.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to determine a) to what extent independent study was being used in production agriculture courses in Kansas vocational agriculture programs, b) in what forms it was being used, c) reasons why it was not more widely used, and d) suggestions for the expansion of independent study. The information needed for this study was obtained from responses to a questionnaire sent to thirty nine high school vocational agriculture instructors. Twenty nine (74%) of the instructors responded to the questionnaire.

The following types of information were gathered and analyzed: a) personal and school background, b) starting an independent study program, c) types of independent study programs in use, d) methods of assisting students using independent study, e) opinions about independent study, f) why independent study is used more often in shop than production agriculture courses, and g) what assistance would be of the greatest help in increasing the use of independent study.

Summary

Useable responses were obtained from twenty eight instructors. The responses were tabulated in two groups.

One group included instructors who used independent study and the other group the instructors who did not use independent study. The findings indicated the following:

1. Both the instructors who used and those who did not use independent study had the same average number of years of teaching experience (9.2) and also the same average number of FFA members in their chapters (43.4).

2. Instructors who used independent study had been at their present teaching locations longer (8.6 years) than those that did not use independent study (6.8).

3. A greater percentage (33%) of the instructors who used independent study had school farms at their disposal than did those who did not use independent study (20%).

4. The instructors who used independent study stated the most common reason for starting an independent study program was the varying interests and abilities of students.

5. 50% of the instructors who used independent study said they set up their programs by themselves.

6. A lack of information was responsible for preventing or limiting the use of independent study by 50% of the instructors who used it, and 100% of those who did not use independent study.

7. A majority of both groups of instructors said a lack of funds was not responsible for limiting or preventing the use of independent study, however, 44% of all instructors said a lack of time was.

8. The most commonly used form of independent study was unscheduled time where students studied on their own for credit (11 of 15 instructors). Eight of these eleven instructors had also listed a lack of information as being responsible for limiting their use of independent study.

9. An outline of basic information was listed as the most often used (7 of 15 instructors) method of guiding students through their independent study programs, while only four instructors used programmed study guides for that purpose.

10. Instructors who used independent study were more strongly inclined to encourage rather than require students to seek their own sources of information or conduct laboratory exercises.

11. Most instructors (8 of 13 responding) who used independent study perceived that a student should be a Junior before he is exposed to this type of learning.

12. All of the instructors responding (18) to the effect of independent study on a student's self-concept said it was beneficial.

13. Instructors who used independent study considered by a two-to-one margin that a two teacher department was more likely to be using independent study than a one teacher department.

14. The most commonly mentioned reasons why agriculture mechanics was more likely to have independent study

than production agriculture courses were a) less preparation time for the former, b) greater student interest in agriculture mechanics, and c) the limited space and facilities associated with production agriculture classrooms.

15. In the form of assistance in setting up a program of independent study, 53% of all instructors said they would like to have either programmed study guides, general guidelines, or examples of course materials from the State Department of Education.

Conclusions

As a result of analyzing the findings of this study, the following conclusions were made:

1. The availability of a school farm or laboratory space was conducive to the use of a program of independent study as a supplement to the learning process.

2. Instructors were very familiar with the benefits students stood to gain, in terms of improved self-concept, from a program of independent study.

3. Lack of information was the biggest reason for the limited use of independent study with lack of time being the second most important reason.

4. A small percentage of the total student population was learning by independent study.

5. The quality of learning that these few students were receiving could have been improved with a greater availability of independent study materials.

6. Use of independent study would increase if a

greater number of instructors could be given in-service training on uses and application of independent study.

Recommendations

Based on the conclusions of this study, the following recommendations were made:

1. Information concerning the structure and basic mode of operation of various, readily available methods of independent study should be sent to all Kansas vocational agriculture instructors.

2. A strong effort should be made to assist instructors in the use of independent study methods in regularly scheduled classes.

3. The planned summer classes on independent study for in-service training at Kansas State University in the Department of Adult and Occupational Education should be expanded to include more participants.

4. Small independent study packages covering a lesson plan of no more than three or four days should be distributed to pre-selected instructors who indicate an interest in them. Information would then be gathered on the results of their use.

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APPENDIXES

APPENDIX A.

COVER LETTER

TO:

I am a graduate student at Kansas State University doing research on independent study in Kansas high school agriculture education courses.

Independent study is considered by many educators to be a very valuable tool of learning. Although independent study has long been a major part of farm mechanics courses in the form of individual projects and skill proficiency exercises, it has not been so widely used in crops and soils, animal science, and farm management courses. This research is being limited to the non-mechanics subject matter areas.

The purpose is to find a) what extent independent study is being used in Kansas agricultural education programs, b) in what forms it is being used, c) reasons why it is not more widely used, and d) suggestions for the expansion of independent study.

In order to obtain this information, would you please complete the attached questionnaire and return it in the enclosed pre-addressed envelope by April 25, 1974.

Upon completion of the study, a summary will be sent to all respondents requesting it. Thankyou for your cooperation.

Approved by:
James Albracht

Sincerely,
Henry F. Thorne

APPENDIX B.

QUESTIONNAIRE

I. Personal and School Background (answer by filling in the blanks)

A. Name of school _____

B. Years taught Vocational Agriculture _____

C. Years present location _____

D. Number of students in your classes:

Freshman _____	Junior _____
Sophomore _____	Senior _____

E. Number of FFA Members _____

F. Annual Vocational Agriculture Budget _____

G. Does the School have a farm? yes _____ No _____

H. School farm is used for crops _____ livestock _____

II. Independent Study Programs

DEFINITION: Independent study has many forms but for this survey, it is learning that allows students to progress independently, with some guidance, by giving them greater freedom and responsibility for the subject matter content and/or speed of learning as opposed to the traditional "all students learn the same thing at the same time" approach. The definition doesn't include seed identification, speech contest preparation, etc., that has long been a part of traditional teaching methods.

A. Starting an independent study program. (answer the following questions by filling in the blanks or checking your response)

1. If you use independent study:

a. What influenced you to start using it? _____

b. Where did you get help in setting it up? _____

2. Have you ever used independent study but stopped?
Yes _____ No _____
 3. Has lack of school money prevented or limited your use of independent study? Yes ___ No ___
 4. Has a lack of information about independent study prevented or limited your use of it?
Yes _____ No _____
 5. What other factors may have prevented or limited your use of independent study in your classes?
-

B. Types of independent study programs. (Please circle the following types of independent study programs you use in your department)

1. Regularly scheduled agricultural education classes where students learn, full time, through independent study about topics they choose.
2. Regularly scheduled classes where students study full time the same curriculum materials but proceed at their own pace.
3. Regularly scheduled classes where independent study and lecture type learning are used alternately.
4. Unscheduled time or free period where students study on their own for credit.
5. Other _____

Please indicate the methods which are used when:

6. Co-op or work-study programs are utilized where students learn about work while on the job.
NOTE: Please indicate which of the above types of learning methods (1-5) are used in your general and related instruction classes by circling the corresponding number as follows:
1 2 3 4 5

C. Using independent study, NOTE: Even though you may or may not use independent study, please answer the following questions based on your perceptions and present teaching situations. (Please circle the appropriate response)

1. Providing help to the students using independent study methods.

- a. In guiding your students, do you provide:
1) programmed study guides, 2) an outline of basic information to be learned, 3) oral instructions only, 4) other _____
 - b. In assisting students, do you 1) help them alone, 2) have another teacher help you, 3) use student help, 4) other _____
 - c. Is the student 1) provided with a list of possible outside sources of information, 2) encouraged to seek his own sources, 3) required to seek his own sources of information, 4) other _____
 - d. In connection with independent study programs is the student 1) required to conduct laboratory exercises, 2) encouraged to conduct laboratory exercises, 3) no laboratory facilities are available or used.
 - e. Is the student 1) required, 2) encouraged, 3) neither required or encouraged to carry out a project related to his area of study.
2. What instructional materials do you have for use by the students? a) books and magazines, b) slides or film strips, c) written materials made especially for independent study, d) models or charts, 5) other _____
- D. Opinions about independent study. (Please circle your perceptions of the correct responses and write your answers where indicated)
1. What is the earliest year you would expose your students to independent study? a) Freshmen, b) Sophomore, c) Junior, d) Senior.
 2. Will independent study raise a student's self-concept or confidence more than the traditional method of learning? a) yes, b) no.
 3. Will independent study raise a student's grades more than the traditional method of learning? a) yes, b) no.
 4. Will a two teacher department be more likely to have independent study than a one teacher department? a) yes, b) no.
 5. Will students receive less attention from the teacher if independent study is used? a) yes, b) no

E. General. (Please write your answers to the following questions)

1. Explain why independent study is used more often in shop courses than in production agriculture courses. _____

2. What assistance do you think would be of the greatest help towards increasing the use of independent study in the production agriculture courses by each of the following sources?

a. State Dept. of Education _____

b. Kansas State University _____

c. Other teachers _____

d. Your school _____

F. Do you wish to receive the summary of this research?
a) yes, b) no.

THE USE OF INDEPENDENT STUDY IN KANSAS HIGH SCHOOL
PRODUCTION AGRICULTURE COURSES

by

HENRY FOXALL THORNE

B. S., Kansas State University, 1963

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Agriculture Education
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1974

The purpose of this study was to determine a) to what extent independent study was being used in production agriculture courses in Kansas vocational agriculture programs, b) in what forms it was being used, c) reasons why it was not more widely used, and d) suggestions for the expansion of independent study.

Information for this study was gathered from twenty eight responses to a questionnaire mailed to thirty nine randomly selected Kansas vocational agriculture instructors. The questionnaire, containing thirty seven items, included questions covering seven areas: a) personal and school background, b) starting an independent study program, c) types of independent study programs in use, d) methods of assisting students using independent study, e) opinions about independent study, f) why independent study is used more often in agriculture mechanics than production agriculture courses, and g) what assistance would be of the greatest help towards increasing the use of independent study.

The responses to the questionnaires were tabulated into two groups: those instructors who used independent study and those who did not use independent study.

The findings indicated that 54% (15 of 28 responses) of the instructors responding to the survey used independent study. The most commonly used (11 of 15 responses) method of independent study was unscheduled time where students studied on their own for credit. This indicated

that while more than half of the instructors used independent study, a small percentage of their students actually learned by this method of learning during regular classes.

It was found that the greatest reason for the limited use of independent study, according to 50% of the instructors who used, and 100% of the instructors that did not use independent study, was a lack of information concerning the methodology of independent study. This lack of information was indicated by another response which illustrated that 50% of the instructors who used independent study did not have assistance in setting up their own programs. This indicated that many of the independent study programs in use were not as high quality as they could have been had more information been available.

The findings also revealed several suggestions from the instructors for improving the use of independent study. Sixty eight percent of all instructors responding to the question (17 of 25 responses) of what assistance they would like to have from the State Department of Education indicated they would like to have either programmed study guides, general guidelines or examples of independent study materials.

It was recommended that for the improvement of independent study programs, information on the methodology and types of independent study programs available to Kansas vocational agriculture instructors be disseminated to all instructors.

Also, in-service training in the development

and use of independent study programs should be expanded at Kansas State University to include more vocational agriculture instructors than at present.

A final recommendation was to develop small independent study packages covering a lesson plan of no more than three or four days for a production agriculture course and distribute them to pre-selected instructors who indicated an interest in using them. Information would be gathered on the results of their use.