

THE RELATIONSHIP BETWEEN SELF-DIRECTEDNESS  
SCORES AND FINAL COURSE GRADES IN  
INDIVIDUALIZED INSTRUCTION

By

THELMA RENÉE PETERS  
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Bachelor of Science in Home Economics

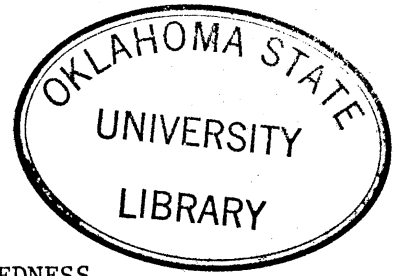
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Thesis Approved:

*Bronwyn Sider*  
\_\_\_\_\_  
Thesis Adviser

*Louanne Matern*  
\_\_\_\_\_

*Lora Cacy*  
\_\_\_\_\_

*Norman N. Nuskam*  
\_\_\_\_\_  
Dean of the Graduate College

1011982

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## CHAPTER I

### INTRODUCTION

Students like independence in their education. They like the opportunity to learn on their own and to progress at a pace that allows them to master a subject (Coombs, 1975). Individualized instruction is a flexible method of instruction that allows students to progress at a rate they desire through a teacher organized course of study. This method also gives students the freedom and independence they desire.

Students themselves are asserting their independence. No longer content with spoonfeeding, they are looking for greater challenges by which they may prove themselves, intellectually and in other ways (Halio, 1966, p. 46).

Students entering college expect required courses to be more demanding of their own abilities, especially those concerned with self-direction in the learning process (Capretta, 1966). Individualized courses provide a means for the student to study and explore at a pace he sets for himself thus allowing for individual differences (Sisler, 1971). Since students do want independent study, it becomes necessary to conduct research to determine what courses are best suited to this method of study and to determine which students will be successful in individualized instruction. Several studies have already been conducted on the methods and procedures of adapting courses to individualized instruction (Dell, 1972; Johnson and Johnson, 1975). A major



concern of researchers has been the determination of what student characteristics are desirable in order to successfully complete individualized instruction.

#### Statement of the Problem

According to Baskin and Keeton (1962) intellectual abilities were not the only factors influencing student achievement. Personality traits also appeared to play an important part in student success. Bigelow and Egbert (1968, p. 37) indicated that "it is increasingly evident that non-intellectual, personality factors seem to have at least as much influence on ability to achieve independently as do intelligence levels."

By analyzing personality characteristics as well as intellectual abilities, it may be possible for teachers to predetermine which students will need assistance to succeed in individualized instruction. Self-estimation, motivation, sociability, and conscientiousness are considered to be among the more prominent personality characteristics which contribute to student success in individualized instruction (Bigelow and Egbert, 1968). Sisler (1971), when using the Edwards Personal Preference Schedule, noted significant differences in characteristics of students who made A's and B's in an individualized instruction course and students who made D's and F's. According to Sisler (1971), however, more information was needed regarding student characteristics which contribute to success.

One problem encountered in the early usage of individualized instruction was the teacher's inability to predetermine which students were self-motivating. McDonald (1975) stated that if the teacher had

a means of testing or obtaining student information regarding self-motivation, the teacher should then be able to aid students who were known to have low self-motivation and thus be able to help the student avoid what could be a frustrating situation. Wood and McCurdy (1975) stated that by predetermining the student's self-directedness, courses could be better suited for individual students and the teachers could be better prepared to help individual students. Therefore, the purpose of the study was to determine the relationship between self-directedness scores and final course grades of students in courses utilizing individualized instruction.

#### Objectives

To accomplish the purpose of the study, the following objectives were established:

1. To determine whether there was a difference between self-directedness scores of students who had previously participated in courses utilizing individualized instruction and those who had not.
2. To determine whether there was a difference between the final course grades of students who had previously participated in courses utilizing individualized instruction and those who had not.
3. To determine whether there was a difference between self-directedness scores of those students who indicated that they preferred individualized instruction and those who indicated that they preferred traditional lecture.

4. To determine whether there was a difference between the final course grades of those students who indicated they preferred individualized instruction and those who indicated they preferred traditional lecture.
5. To determine whether there was a difference between self-directedness scores of the top 15 percent and the bottom 15 percent of the total group and of each individual course ranked according to final course grades.
6. To determine whether a correlation existed between self-directedness scores and final course grades for the total group.

#### Limitations

Participants in the study were limited to those students who enrolled in and completed CTM 1103, CTM 2213 and CTM 2573 during the fall semester, 1977. These three courses were the only courses being taught utilizing individualized instruction in the Clothing, Textiles and Merchandising Department during the fall semester, 1977.

#### Definitions

The following definitions were used throughout the study:

Independent Study: The student's self-directed pursuit of academic competence in as autonomous a manner as he is able to exercise at any particular time (Dressel and Thompson, 1973, p. 1).

Individualized Instruction: A method of instruction wherein the student progresses at his own pace through a teacher organized course of study in which objectives and learning activities have been provided

to guide the student.

Self-Directedness: The ability to take the initiative in the learning process instead of waiting to be taught (Knowles, 1975).

## CHAPTER II

### REVIEW OF LITERATURE

Rising enrollments in institutions of higher education during the past years have caused educators to seek new approaches to education. Some of the techniques developed to handle large numbers of students have proved to be superior to older methods in terms of student and faculty acceptance and student performance. One such method is independent study (Hartnett and Stewart, 1966).

Rising enrollments are not the only reason educators are looking to independent study. The rapid change in technology and the ever growing mass of knowledge and information make it impossible for a student to acquire in school all the knowledge and skills he will need throughout his lifetime (Torrance, 1966). Constant updating of knowledge must be continued throughout the active life if a person expects to remain effective in his profession. Therefore, a person must perfect the tools of independent study to free himself from reliance upon the teacher. "A student needs to become an initiator as well as a participator if he is to continue his intellectual and cultural growth after he leaves the campus" (Dearing, 1965, p. 52).

Another impetus to independent study is the growing conviction that learning is essentially an active rather than a passive process. The knowledge a student acquires for himself is more quickly assimilated into his immediate experience and tends to be more permanent.

What a teacher provides may be interesting and enlightening, but it remains second hand unless the student can experience it for himself (Halio, 1966).

This growing emphasis on independent study has caused educators to closely examine the effects on learning. Experimentation with independent study has shown it to be an effective method of learning. Hartnett and Stewart (1966, p. 357) stated that researchers need to "gather data to more fully describe the nature of the student who seems able to profit from such an approach." Identification of student attitudes and characteristics which contribute to academic success in independent study and individualized instruction has already begun. According to Bowen (1968),

Self-attitudes have all the dimensions of other attitudes, i.e., content, direction, intensity, importance, salience, consistency, stability, and clarity. Therefore, self-attitudes may be studied as readily as are other attitudes (p. 18).

The review of literature includes a brief history of independent study, a comparison of independent study and individualized instruction and related research.

#### History of Independent Study

Although independent study has currently been receiving a surge of popularity, it is by no means a recent development. One of the oldest independent study programs, which is still in operation, is the Oxford tutorial in England. The student is assigned a tutor when he enrolls and independent study becomes a way of life (Brown, 1968). The student is given personal attention and instruction which will meet his individual needs.

### Honor Programs

Independent study was implemented in the United States in 1869 at Harvard as an alternative to traditional lecture for superior students. Until that time, students had little choice in their education except for their major course of study. By 1920, several colleges had implemented independent study programs. Princeton, Guilford, Reed, and Rice were among the first to offer any form of independent study (Brown, 1968).

The independent study which existed in the 1920's consisted primarily of honor programs for the superior student during his last years of study (Dressel and Thompson, 1973). Instructors supervised the study so closely that the student was not actually working on his own. Because of this close supervision, the honors program caused more work for the instructors and therefore, was dissatisfying to them.

In 1925, honor programs were virtually the only type of independent study offered. The National Research Council, under the direction of Frank Aydelotte, surveyed an unspecified number of higher education institution catalogues and requested course descriptions from those institutions which announced "honor programs" (Aydelotte, 1925). Seventy-five institutions submitted descriptions of programs which consisted of independent study for honors only, or for a small amount of credit toward graduation. Eighteen institutions described programs of independent study for upper-class students. The focus of the study was on voluntary programs so required types of independent study were omitted (Aydelotte, 1925).

Umstatted (1935) published the results of a similar survey he conducted. A survey of catalogues from 333 four-year colleges and

universities was conducted and 54 institutions were found to have independent study programs. The sample was limited to honors programs for which credit toward graduation was received.

In the early 50's, an extensive survey was conducted by Bonthuis, Davis and Drushal (1954) to determine the number and types of independent study programs offered. The catalogues of 1,086 of the 1,093 four-year colleges and universities were examined. Those institutions which had only a few departments supporting independent study were excluded from the study. All or most of the departments in the institutions used in the study participated in the independent study program. Of the 1,086 institutions included in the survey, 286 or 26.3 percent were found to have some type of independent study program (Bonthuis, Davis and Drushal, 1954). Both voluntary and required programs were identified with the majority (78.7%) being voluntary. Most of the programs (79.9%) were for upper-classmen only. Fifty-four percent of the voluntary programs were limited to students with superior marks. This study indicated that grade point and level of study were the main factors in determining who could participate in independent study.

#### Growth of Independent Study

The Carnegie Foundation for the Advancement of Teaching sponsored a comprehensive study of independent study at the College of Wooster during 1953 (Bonthuis, Davis and Drushal, 1957). The first purpose of the study was to provide knowledge of the detailed structure and functioning of independent study programs. The second was to appraise the strengths and problems of the programs with a view toward improvement. To accomplish these purposes, the senior students and faculty members



were asked to supply their opinions of the independent study program. Analysis showed that students and faculty were in close agreement about the program. Most of the students and faculty believed the program should be required of all students in all departments.

The value mentioned by far the most frequently by both groups is the development of the ability to work resourcefully or creatively on one's own, and second for both was the chance to probe intensively into an area of personal interest (Bonthuis, Davis and Drushal, 1957, p. 185).

Although the researchers believed the study could be useful for those concerned with higher education, they did not believe they could judge the claims and weaknesses of independent study from the results of the study.

Many independent study programs were begun during 1956 with grants provided by the Fund for the Advancement of Education. These programs were begun in 16 institutions as part of the teacher's regular classroom procedure and all students were involved. Three of the programs were singled out in the findings, Oberlin College, Antioch College and Vanderbilt University. The Oberlin study was designed to compare the learning of students working independently of the teacher and those students attending regular class sessions. No significant difference in the learning was found. The researchers suggested further research be conducted to examine the relationship of student personality factors to achievement in learning (Baskin, 1960).

The experiment at Antioch College included 19 courses with the prime objective being to improve the quality of education. The findings showed that no teaching procedure was favored as a way to help students gain more or produce a higher quality work. The study did show a savings of time for instructors once the independent study

program had been established (Baskin, 1960).

The Vanderbilt study (Baskin, 1960) included a total of eight different subjects. In this study students performed as well and learned as much in independent study programs as students taught by the traditional lecture. The students reported that independent study had a beneficial effect on their study habits (Baskin, 1960).

Another major survey of institutions was conducted by Felder (1964) in the 60's. Of the 445 institutions responding, Felder found 66 percent offered independent study. The majority of the colleges had regularly scheduled conferences between students and instructors. Half of the colleges surveyed still limited independent study opportunities to students of junior and senior standing.

Evidence of the growth of independent study came during 1969. Brick and McGrath (1969) published the results of an attempt to estimate some of the innovative trends in American liberal arts colleges. The report showed independent study as one form of innovation and noted the growing availability to all students. The relationship of independent study and the student's personality and educational goals was also gaining more emphasis in research.

#### Comparison of Independent Study and Individualized Instruction

Independent study programs have taken on a variety of forms. The procedures range from those which involve an open, highly permissive relationship between student and instructor in which the student defines and develops his own course plans, to those which are highly structured and guided (Dearing, 1965). Independent study may also vary

from an individual working alone to several individuals working in small groups. Most programs provide for some kind of instructor-student contact and this may range from appointment meetings with no formal classroom contact to a reduced number of regularly scheduled class sessions (Baskin, 1960).

#### Types of Independent Study

According to Dearing (1965) independent study may occur in any of the following ways:

1. A student may follow a course syllabus with directed readings and have little contact with the instructor except for setting up the tasks and testing the final accomplishments.
2. The student may have the continuing help of the instructor but pursue his own interests where they take him instead of following a course syllabus.
3. The student may be freed of attending class sessions but is expected to cover the same material on his own, in teams or in small groups.
4. The student may be expected to accomplish on his own the goals usually supported by classroom procedures of lecture and discussion with the aid of films, taped lectures, programmed materials, texts, and assigned readings.
5. The student may be expected to take his independent study off campus pursuing an individual report.

#### Differences

This great variety in methods and procedures has lead to the

synonymous use of independent study and individualized instruction but differences do exist. Individualized instruction is considered more structured and does not put as much responsibility on the student (Fleck, 1971). Gronlund (1974, p. 2) defined individualized instruction as "adapting instructional procedures to fit each student's individual needs so as to maximize his learning and development." Independent study allows the student to have a major part in determining what he will study and what objectives he will pursue. In individualized instruction, the instructor establishes the goals and objectives the student is to pursue. The pace and method of learning is usually determined by the student (Gronlund, 1974). Sisler (1971, p. 1) stated that "Individualized instruction provides for independent study on the part of the student using a carefully developed study guide which allows for individual differences and self-pacing."

#### Individualized Instruction at Bucknell

In 1965, Bucknell University conducted one of the first experiments with individualized instruction at the college level. Dr. J. William Moore (1968, p. 12) coordinated the continuous progress plan (CPP) and stated that "continuous progress teaches the student to pace himself and to value personal achievement." The plan allowed students to learn on their own using a wide variety of materials designed for individualized instruction. The students did not attend regular classes but were responsible to a particular professor whom they saw when needed.

The major concern of the experiment was subject mastery for each student (Moore, 1968). The CPP course was structured in units and,

when the student believed he was ready, he took an examination. If the grade of B or above was earned, the student was given the next unit. If not, the teacher would recommend that the student (1) schedule appointments for tutoring, (2) take a fresh approach by using tapes, printed materials or films or (3) go back to his original material and review areas of weakness (Moore, 1968). Until mastery of the material was shown by the examination, the student was not allowed to proceed.

The CPP was accepted by the students. Enthusiasm for having some control of their education was expressed by most of the students. They also liked the variety in teaching methods and the self-pacing (Moore, 1968). Lack of motivation on the student's part was one problem Moore realized could occur. The B minimum grade on tests and taking a specified number of tests in a semester were added motivations set by the instructor. The students themselves said that having the responsibility of pacing themselves throughout the semester created an ambition to study (Moore, 1968).

The major problem encountered by the CPP experiment was the vast amount of administrative paperwork needed to keep track of the student's progress. It was believed this problem could be reduced by the use of computers and other machines and systems for record-keeping (Moore, 1968).

Moore stated that the continuous progress plan, even with its problems, could be a viable answer to traditional teaching weaknesses. According to Moore (1968, p. 20), CPP "proves that most students, if given the time, materials and help, can master a subject." This benefit makes individualized instruction a teaching method worthy

of consideration.

### Benefits of Individualized Instruction

Independent study and individualized instruction are similar in the benefits they offer to the student. Independent study is believed to help the student develop confidence in his own ability, to create enthusiasm to motivate protracted inquiry and become self-directed learners (Capretta, 1966). Individualized instruction helps students to develop a sense of responsibility for their own learning, increases commitment to continued learning, enhances self-discipline, and develops more confidence in the validity of their ideas (Coombs, 1975). All of these accomplishments direct the student toward the fulfillment of a major objective of education, "to give students the motivation and skill for lifelong learning" (Torrance, 1966, p. 218).

### Related Research

A vast amount of research has been conducted in the area of individualized instruction. The studies place the major emphasis on different factors making it difficult to draw conclusions. Some of the more important factors considered were the student, the effectiveness of the method, student predictions of academic success, and personality factors which influence performance in individualized instruction.

### The Student

The capability of students to perform in independent study was one area of research emphasis. Early studies at Antioch College, the University of Colorado and Vanderbilt University indicated that

students were initially dissatisfied with independent study (Baskin, 1962; Dearing, 1965). When first introduced to this method, students felt they were being deprived of the instructional function provided by the traditional lecture classes. After experience with the method, students indicated that they would like to take more of their classes by independent study.

The earliest independent study programs were offered only to the superior students. A study conducted by Bonthuis, Davis and Drushal (1954) during 1952-1953 indicated that of 1,086 four-year colleges and universities, 286 or 26.3 percent had some type of independent study plan. Students were allowed to participate in the program if they desired to do so but 54 percent of the programs were limited to those students with superior marks in other classes. During 1963, Felder (1964) conducted a similar survey in which 520 institutions were investigated. Figures showed that 68 percent of the institutions offered independent study programs. Also, more courses were offered to all students and not only to students with superior marks.

The increased number of programs including the average student may have been a result of studies which indicated that all students benefitted from independent study. Bonthuis, Davis and Drushal (1954) expressed the opinion that independent study could play a vital role in the education of all students. In the study at Vanderbilt (Baskin, 1960), the students reported that independent study had a beneficial effect on their study habits. Baskin and Keeton (1962, p. 104) stated, "our opinion is that the use of independent study in teaching is applicable to the needs of both honors and non-honors students." Capretta (1966) reviewed several of the studies conducted with

independent study and stated that independent study encouraged critical thinking and favorable attitudes toward intellectual work in all students.

Research also indicated that independent study should begin in the freshman year of college and not be postponed until the junior or senior year. Students who enter college expect college to be more demanding than high school, and they expect to be able to assume more responsibility for their education (Halio, 1966). With these expectations, the freshman year would seem the likely time to start the independent study programs. Research on the student and independent study has pointed out two concepts: (1) that independent study should be open to most students and (2) that the freshman year was the time to begin the programs.

#### The Effectiveness

The effectiveness of individualized instruction may determine its place in the college curriculum, but the effectiveness of any program is often difficult to determine. "Despite a number of carefully executed studies on the comparative effectiveness of various teaching methods, there is little evidence to support the view that one teaching method is more effective than any other" (Koenig and McKeachie, 1959, p. 132).

In studies at Antioch College and Oberlin College, few differences were found between achievement of students working independently and those taught in conventional classes (Dearing, 1965). Delk (1965) found that students who did better than average work did so in both traditionally taught classes and individualized instruction, and that



students who did poor work in traditionally taught classes did not improve in individualized courses.

Some studies have found that individualized instruction improves student achievement. Hartnett and Stewart (1966) compared final examination grades of students taught by the traditional method and individualized instruction. Courses using both methods of instruction were used and students enrolled in the one they preferred. Based on the Florida Twelfth Grade Test battery, students in the independent study sections were matched in ability to students in the regularly taught classes. In each case, the mean performance on the final examination was higher for those taking the course on an independent study basis. The researchers stated that their findings suggested independent study to be superior as a method of instruction. The study at Bucknell University found that success was the rule in their continuous progress plan and failures were few. Students earned 20 percent more A's and B's than did students in the same courses the previous year (Moore, 1968). Similar results were obtained in a study at Dixie College during 1972-1974. The percentage of A students rose from 23.1 percent in the traditionally taught class to 90 percent in the individualized instruction course (Coombs, 1975). One possible explanation for the diverse differences in research findings on the effectiveness of individualized instruction may be that each student is different and therefore, the teaching method that worked for one may not work for the next. Torrance (1966, p. 218) stated "There seems to be no method of teaching that is successful with all children."

### Student Academic Predictions

The accurate prediction of academic achievement has been a concern of educators in recent years. These predictions are believed to be needed for decision making about college entrance and retention (Keefer, 1969). Until recently, the major part of achievement prediction has been based on intellectual factors, mainly prior grades and test scores. A non-intellectual variable, self-prediction, has entered into the search for accurate predictor variables and is proving to be of significant value.

In the early 60's Doleys and Renzaglia (1963) conducted an investigation to determine the relationship between self-prediction and actual college grades. A sample of 183 first semester freshmen in a basic English class were asked to estimate their grade-point average for their first two quarters of college. Scores on the School and College Ability Test (SCAT) and actual grades at the end of the second quarter were obtained for each student. The self-estimates were found to be significantly correlated with actual performance but not as accurate a predictor as the SCAT scores. The more intellectually able students tended to under-estimate or accurately estimate their college performance while the less able students tended to over-estimate their future grades (Doleys and Renzaglia, 1963).

Another study dealing with the accuracy of self-prediction of academic achievement as compared with prediction based on the score of standardized college entrance test, high school grade point average (GPA) and the most recent college GPA was conducted in the same decade (Keefer, 1969). A sample of 154 liberal arts students predicted their

course grade for each course they were attending at the beginning of the semester and at the mid-point when some indication of grades on previous exams had been received. Scores on the American College Test (ACT), the high school grade-point average and the most recent college grade-point average were obtained from school records on each student. The results showed the self-predicted grade as a better predictor of academic achievement than the ACT score or the high school GPA. The self-estimate was a significantly better predictor at the mid-semester when some clues to achievement had been received. When the students were grouped according to college classification, the results showed that the ACT scores and high school GPA tended to decrease in accuracy as a student progressed through college (Keefer, 1969).

In reviewing studies which used self-made predictions, Baird (1976) stated,

Self-estimates of ability seem to be relatively efficient predictors of academic performance. . . . Most students should be able to do this quite well after twelve years of comparisons with their peers, feedback on test scores, and the daily evidence of their performance in classwork and tests. Such experiences should provide students with a conception of their own capacities that incorporates ability, past achievement, and motivation. In any case, estimates of this type seem valid, and students appear able to estimate their own ability correctly (p. 11).

Bair also stated that students generally provided accurate information about themselves and their abilities. Therefore, student made evaluations of their ability can be useful to educators in the prediction of academic performance.

#### Personality Factors

Over the past few years, several research studies have been

conducted in an effort to determine student characteristics that contribute to their academic success in individualized instruction. One of the first studies was conducted during 1959 by Koenig and McKeachie (1959). Students involved in an elementary psychology course were the experimental subjects. Three hypotheses were developed and tested: (1) that the highly independent students would prefer learning, perform better, and be more involved in the independent situation, (2) that students with a high need for affiliation would prefer, perform better, and be more involved in small group discussions than would other students, and (3) that students with a high need for achievement would do well in independent study.

During the study, each student participated in small group discussions, independent study and traditional lecture-discussion sessions. Under each method, personality data, the student's performance and preferences were collected. An analysis of the data showed that neither of the first two hypotheses was supported. Koenig and McKeachie (1959) found that students with a high need for achievement performed better and preferred the small discussion groups and students with a middle need for achievement preferred the lecture method. A fear of failure was determined to be a reason for well structured lecture sessions preference. However, Koenig and McKeachie (1959) recommended the following:

As we see it, our goal should be for all students to learn to work independently and to participate responsibly in small groups. Rather than excluding students who dislike independence or work in small groups from these classes, we may want to give them special training and attention in order to help them learn how to learn in these situations. Increased knowledge about student personalities should give us increased ability to achieve these goals (p. 134).

In order to identify student characteristics necessary to achievement, researchers turned to the teachers for an answer. Chickering (1964) used a test established by the faculty of Goddard College to determine independent characteristics of students. Questionnaires were sent to the faculty asking them to list the five students they felt best represented the independence the college was trying to foster and describe the character traits which guided their selection. Using these descriptions, a list of the common independent characteristics was made. The five characteristics considered most important were:

1. Interdependent - The ability to recognize responsibility and to relate to others but not depend on them.
2. Venturesome - A willingness to confront questions and problems and a desire to discover new possibilities.
3. Resourceful - The ability to recognize when help is needed, to find information and organize this information.
4. Persistent - The ability to stick to a position and exhibit self-confidence.
5. Reflective - The student knows his own strengths and weaknesses and has a sense of what is important (Chickering, 1964).

Next, the students who were listed by the faculty as independent were compared with the Goddard College norms on a comprehensive battery of tests and inventories. The results showed independent students scored higher than the norms on measures of social maturity, self-confidence, originality, study habits, and positive attitudes toward learning and teachers. The comparisons also showed the independent students ranked lower than the norms with respect to impulse

expressions, emotional disturbance and deviate thinking. According to Chickering (1964), the distinguishing characteristics of successful independent students are not intellectual or academic ones but rather variables of personality and attitudes.

A study conducted during 1965 by Bigelow and Egbert (1968) at Brigham Young University dealt with a comparison of independent study and traditional lecture. The purpose of the study was to ascertain whether or not personality differences existed between (1) successful independent study students and successful traditional study students, (2) successful and non-successful independent study students, (3) satisfied independent study and unsatisfied independent study students, and (4) interactive combinations of success and satisfaction within the independent study group.

Each group was responsible for the same body of subject matter and both were required to take the same tests. Personality factors were determined by the California Psychological Inventory (CPI). The data indicated that the students who did well in traditional study also succeeded in independent study. The authors believed this would be true of all students who did well in college. In the independent group, those students with higher degrees of responsibility and intellectual efficiency, as measured by the CPI, performed better in independent study. According to Bigelow and Egbert (1968) this implied that the better adjusted, more secure student would perform better independent study than others. Personality factors of sociability, well being and socialization were found to be characteristics of dissatisfied independent study students. The autonomy of the study did not allow for the social interaction these students enjoyed or needed.

Students who were successful and satisfied scored significantly higher on the responsibility and good impression indices than did the unsuccessful and unsatisfied students. Those students who were successful and dissatisfied scored significantly higher than unsuccessful and dissatisfied students on socialization, well being, sociability, and intellectual efficiency factors. According to the authors

the personality traits of general adjustment level, ego strength, conscientiousness, and responsibility seem to influence independent study success while sociability needs being unfulfilled by autonomous study seem to influence satisfaction with independent study (Bigelow and Egbert, 1968, p. 39).

Another attempt to determine whether certain personality characteristics were evident in students who succeeded in individualized instruction was made at Oklahoma State University by Sisler (1971). The Edwards Personal Preference Schedule (EPPS) was selected to measure the personality variables because it was a test specifically designed as "an instrument for research and counseling purposes, to provide quick and convenient measures of fifteen relatively independent personality variables" (Sisler, 1971, p. 32).

Student performance in the course was analyzed based on the final grade and whether the grade was equal to or above the student's cumulative grade point average. During the semester, the American College Test (ACT) scores, Nelson-Denny Reading Test scores, cumulative grade point average (GPA), and Edwards Personal Preference Schedule (EPPS) scores were obtained from each student. When student performance was analyzed according to final course grades, students making A or B in the individualized instruction course had higher ACT scores, reading scores and cumulative GPA than those making C, D or F. Students who

made grades equal to or higher than their GPA had higher ACT scores, reading scores and GPA's than those who made grades lower than their cumulative GPA (Sisler, 1971).

These same groupings were used in an attempt to determine whether certain personality characteristics were evident in students who succeeded in individualized instruction. When the students were compared in groups selected on the basis of achieving a course grade equal to or higher than their cumulative GPA, there were no significant differences among students on any of the personality variables as determined by the EPPS. However, when the groups were composed according to course grade, the group making A or B rated higher in the "Achievement" variable. According to the description in the EPPS, this variable is interpreted as a high need for success and a willingness to confront difficult problems until they are mastered. The group making C, D or F had a higher rating on the "Abasement" variable, indicating a fear of difficult problems and an inferiority felt by the student. Findings indicated that personality variables should be investigated further as a factor contributing to success in individualized instruction (Sisler, 1971).

Self-directedness and motivation are considered to be important personality factors contributing to success. A direct effort to determine the self-directedness of students was made by Wood and McCurdy (1975). Students in a course of chemistry and physics were asked to rate themselves at the end of the semester on a Self-Directed Rating Scale (SDRS) developed by the researchers. The students were grouped as top achievers, those in the top 15 percent of the class, and bottom achievers, those in the bottom 15 percent of the class. When comparing



these groups, the data indicated that the top achievers had ranked themselves higher than the bottom achievers in six of the eight points on the SDRS. These six points which showed a high ability rating were:

- (1) operate independently of teacher direction,
- (2) use class time effectively,
- (3) plan a work schedule,
- (4) use study skills,
- (5) use curriculum materials without assistance, and
- (6) work at a pace commensurate with ability (Wood and McCurdy, 1975, p. 384).

The researchers suggested that their findings lent strong support to the assumption that student success in individualized instruction required skills of self-direction. Wood and McCurdy suggested that such a test could be used as a pre-test to help the teacher know which students were less self-directed and therefore, could possibly use more guidance and assistance.

#### Summary

Individualized instruction has become increasingly important in American higher education. "Advocates believe that independent study helps the student to develop both confidence in his own ability and enthusiasm to motivate protracted inquiry" (Capretta, 1966, p. 252). Since this world is ever changing and society is unstable, a learning experience that encourages the student to continue his learning experience throughout the active life should be a primary concern of educators. Independent study has been found to stimulate an interest in learning and prolong this interest over an extended period of time (Shaver, 1973). Success in independent study could be another stimulus to encourage the student to continue the pursuit of knowledge.

To help insure this success, educators believe that some knowledge of the characteristics which contribute to this success is important in

helping the teacher assist the student. Research has shown that such characteristics as self-motivation, self-confidence, self-directedness, need for achievement, resourcefulness, the ability to use study skills, and effective use of time lead to success in individualized instruction. By determining such factors, those students who are known to be less self-directed could be encouraged to attend extra study sessions and thus help avoid a frustrating situation. Success with the individualized instruction method could lead the student to continue learning to meet the demands of a changing society.

## CHAPTER III

### METHOD AND PROCEDURES

The purpose of the study was to determine the relationship between self-directedness scores and final course grades of students in courses utilizing individualized instruction.

#### Participants

Participants in the study were 248 students enrolled in three clothing, textiles and merchandising courses during the fall semester, 1977. The courses included in the study were CTM 1103, Basic Clothing Construction; CTM 2213, Clothing in the Environment; and CTM 2573, Textiles for Consumers. These courses were the only ones in the department utilizing individualized instruction, and since they were taught in the Clothing, Textiles and Merchandising Department the final course grades needed for the analysis were easily obtainable. The self-directedness instrument was distributed to 286 students during the first week of classes. Two hundred-forty-eight of the students were included in the study. Thirty-eight were excluded because these students either dropped the course, failed to complete the course or failed to complete the entire instrument.

#### Development and Use of Instrument

The instrument used in the study was designed to determine the

student's previous participation in individualized instruction, course format preference and self-directedness scores (see Appendix). The first question required students to indicate whether they had previously participated in a course utilizing individualized instruction. The second question was used to obtain the student's indication of preference for traditional lecture or individualized instruction. A self-directedness score was determined through having the students rate themselves on eight skills of self-directedness. These eight skills were adapted from a similar instrument developed by Wood and McCurdy (1975). Students were asked to indicate their ability on each skill by ranking themselves on a five point scale. A rating of one or two indicated a low ability, three indicated moderate ability and four or five indicated high ability. The instrument was designed so that students could check or circle their answers. This method required a minimum of time for completion of the instrument and aided in the analysis.

The instrument was distributed by the researcher to the students during the first week of classes. The instrument was completed during the class period and returned to the researcher at the end of class. The researcher attended several class meetings to allow students who entered late to complete the instrument.

A total of 286 instruments were distributed. Thirty-three students dropped the course, four students did not complete course work by the end of the semester and one did not complete the self-directedness instrument. This left 248 useable instruments.

### Analysis of Data

The responses from the 248 useable instruments were compiled. A total self-directedness score was obtained by totalling the ratings assigned to each of the eight variables. Students were grouped according to whether they had previously participated in courses utilizing individualized instruction. A t-test was then used to determine whether there was a significant difference in ratings of students who had previously participated in courses utilizing individualized instruction and those who had not on any of the eight skills or on the total score. The t-score, standard deviation and mean were obtained for each variable and for the total score.

Next, student responses were grouped according to class format preference. A second t-test was calculated to determine whether a difference existed between students who indicated they preferred individualized instruction and those who indicated they preferred traditional lecture.

At the end of the semester, final grades were obtained for each student in each of the three courses. The total group of students was then ranked from the highest grade obtained to the lowest grade obtained based on percentage of total points. The top 15 percent and bottom 15 percent of the students according to final course grade were determined. A third t-test was calculated to determine whether a significant difference existed between the top and bottom 15 percent of students in the total group and in each of the three courses.

A Pearson product moment coefficient of correlation was also calculated to determine the relationship between self-directedness scores and final course grade.

## CHAPTER IV

### FINDINGS AND ANALYSIS

The purpose of the study was to determine the relationship between self-directedness scores and final course grades of students in courses utilizing individualized instruction. The sample consisted of 248 students enrolled in CTM 1103, CTM 2213 and CTM 2573 during the fall semester, 1977. The findings were grouped according to previous participation in courses utilizing individualized instruction, class format preference and final course grades.

#### Previous Participation

One objective was to determine whether a significant difference in self-directedness scores existed between students who had previously had a course utilizing individualized instruction and those who had no previous experience with individualized instruction. Responses on the instrument indicated that 121 students had previously participated in an individualized instruction course while 127 students had no previous experience. A t-test was calculated to determine whether a significant difference in self-directedness scores was evident between the group of students who had had previous experience and those who had not. Results are shown in Table I. A significant difference was found in the first skill operate independent of teacher direction. The group of students who had previously participated in individualized instruction

TABLE I  
DIFFERENCES IN RATINGS OF SELF-DIRECTEDNESS SCORES  
OF STUDENTS WITH AND WITHOUT PREVIOUS EXPERIENCE  
IN INDIVIDUALIZED INSTRUCTION

Skills of Self-Direction	<u>Previous Experience</u> N=121		<u>No Previous Experience</u> N=127		<u>F- Score</u>	<u>Level of Significance</u>
	Mean	SD	Mean	SD		
1. Operate independent of teacher direction	3.67	.83	3.39	.69	.05	.05
2. Seek answers to questions without assistance	3.50	.76	3.44	.86	.19	.25 (NS)
3. Use class time effectively	3.70	.92	3.96	.84	.28	.50 (NS)
4. Plan a work schedule	3.39	1.04	3.40	.93	.22	.25 (NS)
5. Use study skills	3.66	.99	3.75	.85	.08	.10 (NS)
6. Use curriculum materials without assistance	3.99	.89	3.83	.81	.25	.25 (NS)
7. Skip activities already mastered	3.55	.89	3.40	.76	.08	.10 (NS)
8. Work at a pace commensurate with ability	3.86	.72	3.84	.68	.59	.75 (NS)
9. Total score	29.31	4.56	28.77	3.91	.09	.10 (NS)

had a higher mean on this skill. This might tend to indicate that students who had previous experience with individualized instruction were more confident of their ability to operate independent of teacher direction.

Final course grades were obtained for students in each group. The range of grades was very similar for each group as shown in Table II. The large majority of both groups made final course grades of A or B.

#### Class Format Preference

Participants were asked to state their preference for individualized instruction or traditional lecture. One hundred-twenty students indicated that they preferred individualized instruction while 118 students indicated that they preferred traditional lecture. Since 127 students had had no previous experience with individualized instruction, they may have had no basis for their decision. A t-test was used to determine significant differences on the self-directedness scores between students in these groups. Analysis showed a significant difference in three of the eight skills: operate independent of teacher direction, seek answers to questions without assistance and use class time effectively. The first two skills were significant at the .05 level and the last was significant at the .01 level. In each of the three skills the group preferring individualized instruction had the higher mean (Table III).

As shown in Table IV, a greater percentage of students who indicated they preferred traditional lecture made A or B as a final course grade than students who indicated they preferred individualized instruction. Of the group who preferred individualized instruction,



TABLE II  
FINAL COURSE GRADES OF STUDENTS BASED ON  
EXPERIENCE WITH INDIVIDUALIZED  
INSTRUCTION

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Previous Experience with Individualized Instruction (N=121)

Grade	CTM 1103		CTM 2213		CTM 2573		Total	
	N	%	N	%	N	%	N	%
A	5	16.7	7	17.5	17	33.3	29	24.0
B	18	60.0	25	62.5	25	49.0	68	56.2
C	7	23.3	5	12.5	6	11.8	18	14.9
D	0	0.0	2	5.0	2	3.9	4	3.3
F	<u>0</u>	<u>0.0</u>	<u>1</u>	<u>2.5</u>	<u>1</u>	<u>2.0</u>	<u>2</u>	<u>1.6</u>
Total	30	100.0	40	100.0	51	100.0	121	100.0

No Previous Experience with Individualized Instruction (N=127)

Grade	CTM 1103		CTM 2213		CTM 2573		Total	
	N	%	N	%	N	%	N	%
A	1	4.4	26	28.9	4	28.6	31	24.4
B	14	60.9	49	54.5	9	64.3	72	65.7
C	5	21.7	13	14.4	1	7.1	19	15.0
D	3	13.0	1	1.1	0	0.0	4	3.2
F	<u>0</u>	<u>0.0</u>	<u>1</u>	<u>1.1</u>	<u>0</u>	<u>0.0</u>	<u>1</u>	<u>0.7</u>
Total	23	100.0	90	100.0	14	100.0	127	100.0

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TABLE III  
DIFFERENCES IN RATINGS OF SELF-DIRECTEDNESS SCORES  
BY STUDENTS' CLASS FORMAT PREFERENCE

Skills of Self-Direction	Preferred Individualized Instruction N=120		Preferred Traditional Lecture N=118		F- Score	Level of Significance
	Mean	SD	Mean	SD		
	1. Operate independent of teacher direction	3.76	.81	3.26		
2. Seek answers to questions without assistance	3.48	.72	3.37	.88	.03	.05
3. Use class time effectively	3.91	.77	3.79	.98	.01	.01
4. Plan a work schedule	3.55	.99	3.26	.98	.87	1.00 (NS)
5. Use study skills	3.78	.90	3.64	.94	.67	.75 (NS)
6. Use curriculum materials without assistance	4.05	.77	3.79	.90	.08	.10 (NS)
7. Skip activities already mastered	3.59	.85	3.33	.82	.07	.10 (NS)
8. Work at pace commensurate with ability	4.03	.68	3.66	.66	.84	1.00 (NS)
9. Total Skills of Self-Directedness scores	30.15	3.73	28.10	3.87	.68	.75 (NS)

TABLE IV  
FINAL COURSE GRADES OF STUDENTS  
BY CLASS FORMAT PREFERENCE

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Preferred Individualized Instruction (N=120)

Grade	CTM 1103		CTM 2213		CTM 2573		Total	
	N	%	N	%	N	%	N	%
A	3	9.1	13	25.5	10	27.8	26	21.7
B	20	60.6	27	52.9	16	44.4	63	52.5
C	9	27.3	8	15.7	7	19.4	24	20.0
D	1	3.0	2	3.9	2	5.6	5	4.1
F	<u>0</u>	<u>0.0</u>	<u>1</u>	<u>2.0</u>	<u>1</u>	<u>2.8</u>	<u>2</u>	<u>1.7</u>
Total	33	100.0	51	100.0	36	100.0	120	100.0

Preferred Traditional Lecture (N=118)

Grade	CTM 1103		CTM 2213		CTM 2573		Total	
	N	%	N	%	N	%	N	%
A	3	20.0	20	26.3	9	33.3	32	27.1
B	10	66.6	45	59.2	18	66.7	73	61.9
C	1	6.7	9	11.9	0	0.0	10	8.5
D	1	6.7	1	1.3	0	0.0	2	1.7
F	<u>0</u>	<u>0.0</u>	<u>1</u>	<u>11.3</u>	<u>0</u>	<u>0.0</u>	<u>1</u>	<u>0.8</u>
Total	15	100.0	76	100.0	27	100.0	118	100.0

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74.2 percent made a final course grade of A or B. A final course grade of C or below was made by 25.8 percent of the students preferring individualized instruction. Eighty-nine percent of the students preferring traditional lecture made a final course grade of A or B. Ten percent of the students made a final course grade of C or D. While 1.7 percent of the students preferring individualized instruction failed the course, only .8 percent of students preferring traditional lecture failed the course. Although the students preferred traditional lecture, they evidently performed at a higher level in the individualized instruction courses than the students who preferred individualized instruction.

#### Analysis Based on Final Course Grades

Eighty percent of the total participants made a final course grade of A or B (Table V). Only four percent of the students made a course grade of D or F. Related research indicated that students make high grades in courses utilizing individualized instruction.

The data presented in Table VI shows the distribution of final course grades according to the self-directedness scores. According to Wood and McCurdy (1975) a total score on the scale of 8-21 is considered low ability; 22-26 is considered moderate ability; and 27-40 is considered high ability. One hundred-eighty-eight students ranked themselves as having a high ability, 51 students ranked themselves as having a moderate ability, and nine students ranked themselves as having a low ability. In the high ability group, 80 percent of the students made a final course grade of A or B and 20 percent made a C or below. Eighty percent of the students in the moderate ability

TABLE V  
FINAL COURSE GRADES  
(N=248)

Grade	CTM 1103		CTM 2213		CTM 2573		Total	
	N	%	N	%	N	%	N	%
A	6	11.3	33	25.4	21	32.3	60	24.3
B	32	60.4	74	56.9	34	52.3	140	56.5
C	12	22.6	18	13.9	7	10.8	38	15.3
D	3	5.7	3	2.3	2	3.1	7	2.8
F	<u>0</u>	<u>0.0</u>	<u>2</u>	<u>1.5</u>	<u>1</u>	<u>1.5</u>	<u>3</u>	<u>1.2</u>
Total	53	100.0	130	100.0	65	100.0	248	100.0

TABLE VI  
FINAL COURSE GRADES AS RELATED TO STUDENT  
SELF-DIRECTEDNESS SCORES  
(N=248)

Grade	High Ability		Moderate Ability		Low Ability	
	N	%	N	%	N	%
A	47	25.0	12	23.5	1	11.1
B	104	55.3	29	56.9	7	77.8
C	31	16.5	7	13.7	0	0.0
D	5	2.7	1	2.0	1	11.1
F	<u>1</u>	<u>0.5</u>	<u>2</u>	<u>3.9</u>	<u>0</u>	<u>0.0</u>
Total	188	100.0	51	100.0	9	100.0

group also made a final course grade of A or B. A larger percentage of the moderate ability students failed the course than did the high ability students, 3.9 and .5 respectively. In the low ability group, 89 percent of the final course grades were A's or B's, however only 9 (3%) of the students were in this group.

Students in each class were ranked according to final course grades. From this ranking the top 15 percent and the bottom 15 percent according to final course grades were determined and a t-test was used to determine whether there was a significant difference in the self-directedness scores of these two groups.

The analysis of students' responses in the top and bottom 15 percent of the CTM 1103 course showed no significant differences on any of the eight skills or the total score (Table VII). Analysis of students' responses in the CTM 2573 course also showed no significant differences on any of the eight skills or the total score (Table VIII).

One significant difference was found between the top and bottom 15 percent of students ranked by final course grades in the CTM 2213 course (Table IX). The first skill operate independent of teacher direction was found significant at the .05 level. This skill was also found to be significant in the total group (Table X). Although the skill was found to be significant in both groups, the bottom 15 percent of students in the CTM 2213 course ranked themselves higher in the skill than the top 15 percent. In the total group, the top 15 percent ranked themselves higher in the skill than the bottom 15 percent.

The Pearson product moment coefficient of correlation was utilized in determining whether there was a significant correlation between final course grades and skills of self-directedness scores (Table XI).

TABLE VII  
 DIFFERENCES IN RATINGS OF SELF-DIRECTEDNESS SCORES  
 BY TOP AND BOTTOM 15% OF STUDENTS  
 IN CTM 1103

Skills of Self-Direction	Top 15% N=8		Bottom 15% N=8		F- Score	Level of Significance
	Mean	SD	Mean	SD		
1. Operate independent of teacher direction	3.63	.92	3.75	.71	.51	.75 (NS)
2. Seek answers to questions without assistance	3.50	.76	3.50	.76	1.00	1.00 (NS)
3. Use class time effectively	3.75	.71	4.13	.83	.67	.75 (NS)
4. Plan a work schedule	3.50	1.20	3.75	.89	.45	.50 (NS)
5. Use study skills	3.88	1.25	4.00	.93	.45	.50 (NS)
6. Use curriculum materials without assistance	3.88	.64	3.75	.71	.80	1.00 (NS)
7. Skip activities already mastered	3.00	.76	3.25	1.35	.43	.50 (NS)
8. Work at pace commensurate with ability	4.00	.53	4.00	.76	.38	.50 (NS)
9. Total score	29.13	4.09	28.88	4.88	.65	.75 (NS)

TABLE VIII  
DIFFERENCES IN RATINGS OF SELF-DIRECTEDNESS SCORES  
BY TOP AND BOTTOM 15% OF STUDENTS  
IN CTM 2573

Skills of Self-Direction	Top 15% N=10		Bottom 15% N=10		F- Score	Level of Significance
	Mean	SD	Mean	SD		
1. Operate independent of teacher direction	4.00	.82	3.60	.70	.65	.75 (NS)
2. Seek answers to questions without assistance	3.80	.79	3.10	.57	.34	.50 (NS)
3. Use class time effectively	3.80	.92	3.50	.71	.45	.50 (NS)
4. Plan a work schedule	4.00	.94	3.40	.97	.94	1.00 (NS)
5. Use study skills	4.00	.67	3.10	.88	.43	.50 (NS)
6. Use curriculum materials without assistance	3.90	1.10	4.00	.67	.15	.25 (NS)
7. Skip activities already mastered	3.50	.85	3.80	1.03	.57	.75 (NS)
8. Work at pace commensurate with ability	4.00	.67	3.80	.79	.62	.75 (NS)
9. Total score	31.00	4.71	28.30	3.43	.36	.50 (NS)



TABLE IX  
DIFFERENCES IN RATINGS OF SELF-DIRECTEDNESS SCORES  
BY TOP AND BOTTOM 15% OF STUDENTS  
IN CTM 2213

Skills of Self-Direction	Top 15% N=20		Bottom 15% N=20		F- Score	Level of Significance
	Mean	SD	Mean	SD		
1. Operate independent of teacher direction	3.35	1.09	3.55	.69	.05	.05
2. Seek answers to questions without assistance	3.75	.85	3.15	.75	.57	.75 (NS)
3. Use class time effectively	4.40	.60	3.65	.81	.19	.25 (NS)
4. Plan a work schedule	3.30	1.03	3.05	.76	.19	.25 (NS)
5. Use study skills	3.90	.79	3.55	.83	.84	1.00 (NS)
6. Use curriculum materials without assistance	4.00	.97	3.65	.81	.44	.50 (NS)
7. Skip activities already mastered	3.85	.88	3.15	.59	.09	.10 (NS)
8. Work at pace commensurate with ability	3.80	.77	3.90	.79	.91	1.00 (NS)
9. Total score	30.40	3.83	27.80	2.65	.12	.25 (NS)

TABLE X  
 DIFFERENCES IN RATINGS OF SELF-DIRECTEDNESS SCORES  
 BY TOP AND BOTTOM 15% OF STUDENTS  
 IN TOTAL GROUP<sup>a</sup>

Skills of Self-Direction	Top 15% N=38		Bottom 15% N=38		F- Score	Level of Significance
	Mean	SD	Mean	SD		
1. Operate independent of teacher direction	3.63	1.00	3.47	.65	.01	.01
2. Seek answers to questions without assistance	3.76	.82	3.26	.76	.65	.75 (NS)
3. Use class time effectively	4.02	.88	3.71	.77	.39	.50 (NS)
4. Plan a work schedule	3.50	1.03	3.39	.89	.36	.50 (NS)
5. Use study skills	3.87	.91	3.66	.97	.69	.75 (NS)
6. Use curriculum materials without assistance	4.03	.97	3.87	.84	.39	.50 (NS)
7. Skip activities already mastered	3.71	.84	3.37	.79	.71	.75 (NS)
8. Work at pace commensurate with ability	3.87	.74	3.89	.76	.86	1.00 (NS)
9. Total score	30.39	4.54	28.55	3.48	.11	.25 (NS)

<sup>a</sup>CTM 1103, 2213 and 2573

TABLE XI  
CORRELATION OF FINAL COURSE GRADES WITH  
SKILLS OF SELF-DIRECTEDNESS SCORES

Description	Pearson r Value Final Course Grades	Level of Significance
Skills of self- directedness scores	.17	.01

A Pearson r value of .17 was obtained which indicated a correlation significant at the .01 level. This finding suggested that the skills of self-directedness scores were related to final course grades. According to Baird (1975) students generally provide an accurate estimate of their own ability. The significant correlation between the final course grades and the skills of self-directedness scores would lend support to this suggestion.

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of the study was to determine the relationship between self-directedness scores and final course grades of students in courses utilizing individualized instruction. Students in three courses taught in the Clothing, Textiles and Merchandising Department during the fall semester, 1977, were included in the study. An instrument developed by the researcher was completed by the participants during the first week of class. From the 286 students enrolled, 248 useable instruments were obtained.

After the data were collected, the students were grouped according to (1) previous participation in courses utilizing individualized instruction, (2) class format preference and (3) top 15 percent and bottom 15 percent of students based on final course grades. A t-test was used to determine significant differences between each of the groups on self-directedness scores. The correlation of self-directedness scores with final course grades was also determined.

A significant difference was found in one of the skills of self-directedness between students who had previously participated in courses utilizing individualized instruction and students who had not. The ability to operate independent of teacher direction was ranked higher by students who had previously participated in individualized instruction than students who had not. Eighty percent of the students

who previously participated in individualized instruction made a final course grade of A or B and 81 percent of students who had not had individualized instruction made a final course grade of A or B.

According to class format preference, a significant difference was found in three skills: (1) operate independent of teacher direction, (2) seek answers to questions without assistance and (3) use class time effectively. Students who preferred individualized instruction ranked themselves higher on each skill than students who preferred traditional lecture. Only 74 percent of students who indicated that they preferred individualized instruction made a final course grade of A or B while 89 percent of students who indicated that they preferred traditional lecture made a final course grade of A or B.

When comparing the top 15 percent and the bottom 15 percent for each class, the skill operate independent of teacher direction was found to be significant for the CTM 2213 course. In this course, the bottom 15 percent of the students ranked themselves higher than the top 15 percent. This finding is contradictory to findings in other research. For the total group, the same skill operate independent of teacher direction was found to be significant at the .05 level; however the top 15 percent ranked themselves higher than the bottom 15 percent.

Data based on student rankings indicated that 76 percent of the students ranked themselves as having high ability in skills of self-directedness, 21 percent as having moderate ability and three percent as having low ability. Eighty percent of the high ability group of students made a final course grade of A or B, 80 percent of the moderate ability group made a final course grade of A or B and 89 percent

of students in the low ability group made a final grade of A or B.

A significant correlation between the skills of self-directedness scores and final course grades was found. The correlation was positive indicating that students who scored high on the skills of self-directedness instrument also tended to make high final course grades.

### Conclusions

The following conclusions were drawn from the data.

1. Students in individualized instruction courses make higher grades than students in traditional lecture courses.

2. Students who preferred individualized instruction usually ranked themselves higher in some of the eight skills of self-directedness.

3. Students in the top 15 percent according to final course grade had significantly higher rankings on the skill operate independent of teacher direction than those in the bottom 15 percent for the total group.

4. The majority of students ranked themselves as having high ability in the skills of self-directedness.

5. A positive correlation existed between skills of self-directedness scores and final course grades.

### Recommendations

The following recommendations were made for further research.

1. Replicate the study using courses in a variety of disciplines taught through individualized instruction with larger numbers of students.

2. Use additional variables, such as ACT scores and GPA, along with the skills of self-directedness instrument in a similar study to more accurately determine which students will need help and assistance from the teacher.

3. Analyze other personality characteristics that might enable some students to be self-directed and determine ways to encourage development of these capabilities in other students.

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APPENDIX

SKILLS OF SELF-DIRECTEDNESS

INSTRUMENT

You have been chosen to participate in a research project being conducted in the CTM Department. Please complete the questionnaire as honestly as you can. Because we will be comparing data collected at the beginning and end of the course, please write your ID number or name below. Your name will not be used in the final report and your instructor will never see this form so it can not influence your grade. Your cooperation is greatly appreciated.

ID Number of Name \_\_\_\_\_

1. Have you taken a course utilizing independent study or individualized instruction before?

\_\_\_\_\_ Yes \_\_\_\_\_ No

2. Check the course format you prefer:

\_\_\_\_\_ Independent or Individualized study

\_\_\_\_\_ Traditional lecture

Circle the number which represents your ability to:

	Low Ability	Moderate Ability	High Ability		
1. Operate independently of teacher direction . . . . .	1	2	3	4	5
2. Seek answers to questions without assistance . . . . .	1	2	3	4	5
3. Use class time effectively . . . . .	1	2	3	4	5
4. Plan a study schedule and follow it	1	2	3	4	5
5. Use study skills (e.g. make an outline of notes, review notes regularly, complete assignments) . . . . .	1	2	3	4	5
6. Use curriculum materials, textbooks, syllabus, audio-tutorial materials without assistance . . . . .	1	2	3	4	5
7. Skip activities already mastered . .	1	2	3	4	5
8. Work at a pace consistent with ability . . . . .	1	2	3	4	5

2  
VITA

Thelma Renée Peters

Candidate for the Degree of

Master of Science

**Thesis:** THE RELATIONSHIP BETWEEN SELF-DIRECTEDNESS SCORES AND  
FINAL COURSE GRADES IN INDIVIDUALIZED INSTRUCTION

**Major Field:** Clothing, Textiles and Merchandising

**Biographical:**

**Personal Data:** Born in Cleveland, Texas, October 11, 1954, the daughter of Mr. and Mrs. Roye L. Blackmon, Jr. Married to John W. Peters, Jr., one son, J. W.

**Education:** Graduate from Lamar Consolidated High School, Rosenberg, Texas, May, 1972; attended Central State University, Edmond, Oklahoma, 1972-1973; received Bachelor of Science in Home Economics degree from Oklahoma State University, May, 1976; completed requirements for Master of Science degree at Oklahoma State University, July, 1978.

**Professional Experience:** Salesclerk at McKeown's Showcase, August-December, 1975; office clerk at Ingham's Lumber Co., January-August, 1976; Graduate Research Assistant, Department of Clothing, Textiles and Merchandising, Oklahoma State University, August, 1976-January, 1978.

**Honorary Organization:** Phi Upsilon Omicron.