A DESCRIPTIVE ANALYSIS OF SCULPTURAL AND INSTRUCTIONAL RESULTS FROM A SELF-DIRECTED APPROACH EMPLOYED IN A FIBER SCULPTURE WORKSHOP FOR FIRST YEAR SCULPTURE STUDENTS

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The purpose of the self-directed fiber sculpture workshop was to investigate the creative growth and development present in the fiber sculpture work of first year sculpture students. The artistic success levels of originality, artistic quality, creative growth and development, and overall artistic success would be assessed through a three member panel of experts.

The workshop atmosphere was student oriented. The participants in the workshop were ten first year sculpture students who had no prior experience with fiber as a three-dimensional media.

The self-directed instructional method emphasized a non-traditional approach to the student's role, teacher's role, and classroom environment.
The problem-solving assignment designed for the fiber sculpture workshop was for each student to create their own fiber sculpture piece.

The data collected during the workshop were slides taken of each student's project, which then were evaluated by the three member panel of experts.

The data were statistically analyzed through the use of the Kendall Coefficient of Concordance: W. Analysis showed that the self-directed instructional approach had no significant effect on the creative characteristics of artistic quality, and creative growth and development. The self-directed instructional approach had a significant effect on the creative characteristics of originality and overall artistic success.
ACKNOWLEDGMENTS

The researcher would like to express appreciation to Mrs. Shirley Hurt and Mr. Richard Stauffer for their guidance and assistance. Also the researcher wishes to thank the other members of her graduate committee: Mr. Donald Johnson, Dr. Bill Samuelson, and Mr. Donald Perry, Chairman of the Art Department. The researcher also expresses her appreciation to Dr. Ray Heath for his valuable assistance.
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Chapter 1

INTRODUCTION

Through doing, you will come to understand the problems that other artists face. Through creating works of your own, you will come to know the beauty expressed by others. In every way your life will be enriched and your outlook broadened.¹

This statement by sculptor William Zorach, seemed to epitomize the creative potential inherent in the self-directed approach to learning.

Art educators endorsed the choice of the self-directed instructional approach because of its emphasis on meeting the students needs and abilities; its development within each student of the creative ability to solve problems; and its continual fostering of originality and creativity.²

Edmund Burke Feldman also added, "... it is a style of learning that remains with the individual; and it is a style of learning that facilitates further learning."³

Several interrelated aesthetic experiences inherent in the self-directed approach creatively benefiting the art


student were given by Viktor Lowenfeld. Some of the types of aesthetic experiences were any activities that fostered independent thinking and creativity, such as the self-directed approach. 4 Another activity was that of experiencing a wide variety of media, processes and development of personal techniques. 5 Any individual involved in art also could advance through any artistic experiences that allowed for the freedom to pursue and express their own creative self in a manner that provides satisfaction, self-confidence, and a sense of accomplishment. 6

The success of these types of aesthetic experiences within a self-directed approach must be judged through the observable characteristics of creative growth and development within students work. 7 Examples of these observable characteristics were: divergent use of media(s) and form; independent, original products of the student's exploration within a self-directed assignment; the ability of the students to "answer," the proposed problem with their own "reply" (finished product); and an acquired personal knowledge of process, or self-expression within the particular assignment. 8

4Lowenfeld and Brittain, p. 348.
5Ibid., pp. 362-367.
6Ibid., p. 309.
7Ibid., pp. 348-350.
8Ibid., pp. 360-365.
Theoretical Formulation

This self-directed instructional approach involved a problem-solving assignment with fiber sculpture which would lead each student to:

1. wide-ranging experimentation with all sorts of formal and informal art media,
2. tactile and visual stimulation,
3. accidental, spontaneous, or deliberate discovery of form and meaning,
4. guidance, restimulation, and congratulation by the teacher,
5. personality integration and multidimensional growth because of successful creative expression.\(^9\)

To be able to facilitate these discoveries by the beginning sculpture students, the workshop had to be organized to meet these needs.\(^10\)

These objectives required a student oriented classroom atmosphere. Barbara Blitz described this student oriented classroom atmosphere as one that is more human and involved with each student.\(^11\) Blitz characterized the creative atmosphere of a self-directed classroom as one that can best meet the needs of students by:

1. allowing each student the right to pursue individual interests and activities; (2) keeping them actively engaged with their environment and other people, in order for meaningful learning to occur; (3) the environment remaining of major importance in structuring the learning of the child; (4) the students learning at their own pace and with their own particular learning.

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\(^9\)Feldman, p. 207.

\(^10\)Lowenfeld and Brittain, pp. 350-351.

styles; (5) the learning being exciting and enjoyable; (6) the teacher's role being that of a diagnostician, guide and stimulator.\textsuperscript{12}

This workshop's student oriented classroom atmosphere and its non-traditional sculptural approach to the media, contrasted greatly with the traditional classroom. The traditional emphasis was concerned with rigorous schedules, ... acquisition of prescribed skills, conformity, and submission to authority, leaving little room for the exercise of choice, individuality and creativity.\textsuperscript{13}

Viktor Lowenfeld explained:

The abilities to question, to seek answers, to find form and order, to rethink and restructure, and find new relationships, are qualities that are not generally taught; in fact, they seem to be frowned upon in our present educational system.\textsuperscript{14}

The Problem

Within the self-directed approach, an instructor and the curriculum they create must be sensitive to every student's individual needs and abilities. McFee agreed, stating that, "the art program needs to be flexible, and varied to provide for the differences in readiness in children."\textsuperscript{15} Lowenfeld stated that one goal of an instructor was to guide

\textsuperscript{12}\textit{Ibid.}


\textsuperscript{14}Lowenfeld and Brittain, p. 4.

the students toward independent thinking; the power for effective decision making, and its responsibilities. Hubbard remarked, "The High School Art teacher serves as a guide to his students, although the final objective is development of the student's perceptive self-reliance--his ability to see problems for himself." This self-directed process created perceptually sensitive, independent people, who possess the creative capability to solve problems.

Through the self-directed instructional approach with its emphasis on problem-solving assignments, students not only actively pursued their own answers, but they were also building and selecting a vast range of functional knowledge in sculpture. Neil Postman described this method of learning when he stated, "In this process, the student is not a passive 'recipient', he becomes an active 'producer' of knowledge." The workshop's self-directed instructional approach allowed every individual the freedom to solve the problem in the manner that was correct for them; and to gain a personal basis for understanding artistic expression in fiber sculpture. The more aesthetically related experiences

16Lowenfeld and Brittain, p. 373.


18McFee, p. 165.


20Lowenfeld and Brittain, p. 251.
the art student partakes of, as in the self-directed, problem-solving approach to learning, the stronger the basic understanding of their subject matter and media. According to Zorach,

\[\text{as long as you want to use sculpture as a means of expression, you must handle things, observe living beings, look at what others have done in sculpture and develop within yourself an understanding of the meaning of each relationship and each variation of form.}^{21}\]

A wide variety of these types of aesthetic experiences for art students were an essential tool for learning through the self-directed instructional approach.

**Statement of the Problem**

This descriptive study of a self-directed instructional approach, that emphasized problem-solving, would describe and evaluate the creative growth and development exhibited in the sculpture work of first year sculpture students.

The student's work with fiber as a three-dimensional media, would be evaluated by the three member panel of experts who would decide whether the student's work would be considered as good as, or equal to, fiber sculpture work executed by first year sculpture students within a typical traditional classroom assignment.

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\[^{21}\text{Zorach, p. 54.}\]
Statement of the Null Hypothesis

There will be no significant creative growth and development exhibited in the sculpture work of the first year sculpture students experimenting with fiber as a three-dimensional media, as evaluated by the three member panel of experts.

Assumptions of the Study

There are many basic assumptions related to this study. The researcher assumed:

1. A student can learn through problem-solving aesthetic experiences.

2. The workshop, and its particular self-directed instructional approach would lead to a creative, and flexible understanding of fiber sculpture.

3. The first year sculpture students would learn and develop from their own solutions to the problem with fiber sculpture, through this self-directed approach.

4. Fiber and it's use as a three-dimensional form, and versatile media, would be a new sculptural experience for the first year sculpture students.

5. The ten, first year sculpture students that participated in this study, were a normal, typical group of students.

6. The ten students chosen for the workshop composed a standard size class for first year sculpture.
7. The study group was large enough in number, and typical enough from which the panel of experts could draw conclusions and statistical inferences.

8. The workshop and its self-directed instructional approach would be an applicable situation open for further study.

Significance of the Study

The basic emphasis of this descriptive study was its non-traditional approach to instruction, classroom environment, student's role, and use of media.

The basic premise of the workshop was its particular non-traditional, self-directed instructional approach to fiber sculpture.22

In the self-directed approach, the instructor's role is also non-traditional. The instructor remains a guide and motivator for students rather than in total control of what is learned, when it is learned, and how it is learned.23

The student's active role in this self-directed, problem-solving approach also deviated from the traditional submissive role of the student as a recipient of knowledge.24

The creative environment of the workshop was designed in a non-traditional manner to facilitate the active process of learning by the students.25

22Lowenfeld and Brittain, p. 4.
23Hubbard, p. 79.
24Postman, p. 62.
25Blitz, p. 3.
Finally, this particular study's use of a traditionally two-dimensional media in a three-dimensional form also was significant. This fiber sculpture workshop was a unique learning experience for first year sculpture students because they had never used fiber as a sculptural media.\(^{26}\)

**Definitions of Terms**

The following terms are defined as they are applied to the study in operational form.

**Approach**

An approach is a method of thinking, feeling, perceiving, and acting. It is a series of steps taken toward the solution of a problem.\(^{27}\)

**Creative Environment**

A creative environment is a central meeting place for self-motivated students, who have the responsible will to learn. It is a flexible, sensitive learning place designed to meet the needs and abilities of a wide variety of individuals to foster creativity, originality, and independent thinking.\(^{28}\)


Creative Individual

A creative individual is a person who behaves in a perceptually independent manner and who demonstrates the characteristics of unique behavior.²⁹

Critique

A critique is a meeting of students to discuss and learn from their experiences through art work.³⁰

Fiber Sculpture

A fiber sculpture is a three-dimensional sculpture constructed of synthetic or natural filaments. These sculptures can be constructed through the use of any fiber technique.³¹

Independent Thinking

Independent thinking is the power of the creative will. It is the ability to make choices that may not be consistent with the norm. Independent thinking is a thought process that possesses the character of self-confidence and responsibility.³²

²⁹McFee, pp. 129-130.
³⁰Stein, p. 1015.
³²McFee and Degge, p. 199.
Instructional Approach (Self-Directed)

A self-directed instructional approach is the means of defining a direction or purpose within an assignment. It is creative guidance for students dependent on their needs. 33

Learning (Self-Directed)

Learning is a gradual advancement or evolution of an idea which requires the processes of seeking an answer through experiencing, exploring, inquiring, and questioning resulting in a progressive behavior that involves a series of changes in thought. 34

Non-Traditional Approach

A non-traditional approach is a method of teaching in which the classroom environment, teacher's role, and learning activities are all directed toward the student's needs and abilities. The students are an active responsible participant in their own education. 35

Originality

Originality is unusual, remote ideas expressed in a student's art work and the ability to think or express oneself in an independent manner. 36

33Lowenfeld and Brittain, p. 362.
34Ibid., pp. 289-291.
35Blitz, p. 4.
36McFee, p. 122.
Panel of Experts

A panel of experts is made up of three members selected by the researcher's graduate committee to evaluate the creative growth and development of the student's fiber sculpture work through the workshop.

Process

A process is a learned step-by-step approach to a problem resulting in an advancement of a media or idea. 37

Self-Directed

A self-directed approach is a personally selective, highly motivated method that is adapted to one's own needs, abilities and experiences. 38

Sculpture

A sculpture is a three-dimensional artistic object that stands in space and possesses a definite height, width, and depth. 39

Traditional Approach

The traditional approach is a method of teaching where the classroom environment is highly structured and directed by a governing instructor. Lessons are provided

37 Lowenfeld and Brittain, p. 365.
38 Hubbard, p. 103.
for the students which are similar and consistent in content and scope. Learning is directed. The student's role is that of a passive learner.\textsuperscript{40}

\textbf{Workshop}

A workshop is a collection of art students gathered for a short, predetermined period of time to solve an artistic problem through experimentation with a particular media.

\textsuperscript{40}Blitz, p. 3.
Chapter 2

REVIEW OF RELATED LITERATURE

Self-Directed Instructional Approach

The basic premise of the workshop, designed as a self-directed instructional approach, was its non-traditional emphasis. In this self-directed approach, the role of an instructor was as a motivational and technical guide rather than a provider of artistic ideas for students. Zorach agreed with this when he stated, "an instructor cannot teach art. He can only point a way towards understanding, give a clue to its meaning and help with tools and technical information." 1

Stimulating Artistic Environment

Another component for this instructional approach was the provision of a stimulating artistic environment. June McFee emphasized that "the teacher's role is focused on developing an environment so full of interesting things that the children have to search out information in order to know how to deal with it." 2

Problem Solving

The researcher found that by engrossing the students in a problem-solving situation, with its corresponding visual stimuli, the students would be compelled to seek their own answers. The workshop's instructional emphasis therefore, was to provide this type of problem-solving atmosphere by establishing a question to be solved by the beginning sculpture students. Guy Hubbard emphasized that "an imperative condition for creative thinking . . . is recognition of a problem." This gave instructional direction, yet allowed for creative manipulation within the basic guidelines of the assignment. Each student had the freedom to explore their own approaches to the problem and develop their own answers.

This problem-solving assignment permitted any student, regardless of the inequalities of their artistic skills, the ability to fulfill the assignment with their own right answers. This approach fosters confidence and understanding through each consecutive task.

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4 Ibid., pp. 103-104.

There are many art educators and artists that believed that there were positive aspects of developing independent thinking through problem-solving assignments. Ron Coleman emphasized that "as the artist creates, new problems --and sometimes a variety of solutions become obvious." Hubbard stated:

Among the richest devices which the art teacher may employ most naturally will be the 'open-ended' problem. Open-ended problems are those that have no single right answer. They leave to the student the possibility for innumerable alternatives where the student is called upon to develop his own ideas and to choose for himself those ideas that are superior.

These problem-solving, self-directed, aesthetic experiences can develop creativity, originality, perceptual sensitivity, and fluency within a student. Creative ability can be developed through aesthetic experiences.

Developing Creativity

Zorach expressed:

We feel such things instinctively. But to be born with this quality is not enough. What is even more important, is to have the capacity and strength of

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8Hubbard, p. 103.

Exercise through aesthetic experiences advances the ability to perceive and act artistically. McFee explained "perceptual growth is the increase in ability to use the visual information that is available to organize and synthesize it so that we can respond."\(^{11}\) Creativity can be improved in students through a conscious effort by expanding their capacity to observe, appreciate, and experience. As Hubbard stated, "creativity is open to improvement as any other human quality."\(^{12}\) Creativity can be encouraged in students through self-directed approaches that

1. ask them to find many workable answers to problems rather than single, most right ones;
2. encourage them to explore more complex visual things as they are ready;
3. explore the effects of symmetry and asymmetry;
4. help them to learn to be playful and open to experience sometimes and rigorous and specific other times; help them to learn that both experiences are valuable and useful in problem solving;
5. look at things in many ways—at different angles, distances, and lights, touching and feeling.\(^{13}\)

### Creative Abilities

The other creative abilities that can be developed through self-directed aesthetic experiences are fluency and perceptual sensitivity, originality.\(^{14}\)

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\(^{10}\)Zorach, p. 54.  
\(^{11}\)McFee, p. 78.  
\(^{12}\)Hubbard, p. 100.  
\(^{13}\)McFee and Degge, p. 355.  
\(^{14}\)Ibid.
Fluency

Fluency is the ability to come forward quickly and easily with ideas for the solutions to problems. 15 Fluency is an important aspect of creative decision making that can be improved through practice in problem-solving learning tasks. 16

Perceptual Sensitivity

Another characteristic that leads to creative improvement is perceptual sensitivity. 17 Lowenfeld stated, "The greater the opportunity to develop an increased sensitivity and the greater the awareness of all the senses, the greater will be the opportunity for learning." 18 Hubbard added, "Perception implies meaning and understanding." 19 Perceptual sensitivity can be defined as the understanding of a thing, object, or experience through the senses. 20 One of the main objectives of a self-directed approach was to involve a student in a process or media in such a way as to keep them involved in interaction with their senses.

Originality

The final, observable creative characteristic is originality. Originality "is the ability to come up with

15Hubbard, p. 83. 16McFee and Degge, p. 357.
17Lowenfeld and Brittain, pp. 5-6.
18Ibid., p. 6. 19Hubbard, p. 53.
20Lowenfeld and Brittain, p. 6.
unusual and remote ideas."\textsuperscript{21} It refers to a measurable quality that emerges from fluent flexible thinking.\textsuperscript{22} It is the creative ability to think, and redefine through learning experiences such as a problem-solving assignment.\textsuperscript{23}

It was found by the researcher, that the creative abilities of fluency, perceptual sensitivity, and originality can be fostered through aesthetic experiences. Creativity and its characteristics could be improved and nurtured to avoid perceiving only one use for a media, or just a single solution for solving a problem.\textsuperscript{24}

A creative, self-directed individual who strengthens these creative abilities seems to find no end to learning. "A person's total relationship to his environment is changed through the continued act of creating art."\textsuperscript{25} A self-directed individual can always change, alter, and redefine their concepts in dealing with an object, media, or problem to fit the particular challenge at that time.\textsuperscript{26}

A student can develop these creative abilities through the use of the self-directed problem-solving approach. McFee explained:

Originality can develop in a classroom where children have opportunities to come to their own conclusions and

\begin{itemize}
  \item \textsuperscript{21} Ibid., p. 69.
  \item \textsuperscript{22} Hubbard, p. 85.
  \item \textsuperscript{23} Ibid., p. 86.
  \item \textsuperscript{24} McFee and Degge, p. 352.
  \item \textsuperscript{25} Frank Eliscu, \textit{Sculptural Techniques in Clay, Wax, Slate} (Radnor, Pa.: Chilton Book Company, 1973), p. 11.
  \item \textsuperscript{26} Hubbard, p. 84.
\end{itemize}
solutions to problems. The self-directed activities are avenues for each child to carry out his ideas within his own stage of development and interest.27

Art educators have stated that students can foster these abilities within themselves by remaining actively involved in aesthetic experiences. Many of the authors have endorsed art experimentation with alternative, divergent, uses of processes, media, and sculptural form through the self-directed instructional approach.

27McFee, p. 310.
Chapter 3

PROCEDURE

Design of the Workshop

The fiber sculpture workshop was designed by the researcher in cooperation with the Art Department of Emporia State University, to provide the opportunity to observe students solving a self-directed learning problem through creating fiber sculpture.

The participants in the workshop chosen for the researcher, were ten, first year sculpture students, who had no prior experience with creating a three-dimensional form with fiber. The department believed that all students should be first year sculpture students under the instruction of Richard Stauffer. Even though the class size seemed small for the study, it was a standard required limit for enrollment in first year sculpture.

The workshop was organized for the researcher to last one week. The student group was charted to meet three separate class periods lasting three hours each. This would provide nine complete hours for the workshop.

Prior to the actual workshop, the researcher studied the procedures that art educators had followed for instructing a self-directed, problem-solving assignment.
The general sequence of the self-directed approach conducted in the workshop by the researcher, was described by William Alexander. The steps were:

1. The learner identifies a problem to be solved.
2. The learner clarifies the problem, stating it in terms he can handle.
3. The learner analyzes the problem, and begins to collect resources relative to the problem.
4. The learner organizes the information into a plan of action.
5. The learner tries out his solution and evaluates the process and the results.¹

The researcher with the supervision of her instructor, developed the problem to be solved by the first year sculpture students. The problem would be to create a fiber sculpture by whatever means and materials the students chose to select. Through this method, they fostered personal aesthetic understanding of the media in a three-dimensional form which was the objective of this self-directed approach.

The workshop classroom was chosen to provide the open, free, unrestricted learning environment necessary for the student's self-directed approach. The workshop was held in the Art Annex at Emporia State University.

The media chosen for the workshop was fiber for its relatively unexplored potential as a sculptural media for beginning students at that time.² Fiber also was of interest


to the researcher because of her sculptural involvement through her graduate work. The selection of a non-traditional sculptural material and its application seemed to be an appropriate complement to the non-traditional approach to instruction and classroom environment. The use of fiber in a sculptural form was a divergent experience and an unaccustomed application of a traditionally two-dimensional material as prescribed in a self-directed approach.

**Introductory Phase--The Workshop**

During the first class period, the researcher was directed to introduce the students to the problem of creating a fiber piece; the variety of materials that were available for their use; and the many possible forms that professional fiber sculptors had used for their self-expression. At this point in the workshop, each student was given the workshop handout. The handout stated the purposes and the guidelines of the workshop.

**Purposes**

The purposes were as follows:

1. The sculpture students should be aware of the variety of media available for legitimate sculpture.

2. Sculpture students should experience the versatility of fiber as a three-dimensional form and as a media.
3. This week of experimentation will serve as a learning experience for both the instructor and the students.

4. The objective for this workshop is for the instructor to evaluate a specific instructional approach and to learn from the students work, ideas, and observations toward the assignment; and the students should gain a working knowledge of fiber as a sculptural media.

Guidelines

The guidelines of the workshop were as follows:

1. This workshop will last one week. There will be three full class periods in which you will work. Working at home is permitted. The projects will be handed in on Friday after class.

2. You are encouraged to use any material that you wish, however, the only restriction that I ask is that you at least use one fiber. There are a variety of fibers available, both synthetic and organic. Other materials that you can use are the traditional metal, plastic, wood, etc. The more imaginative the better.

3. You will be given no prior instruction in the methods that you can employ. Be sensitive and aware of the abundance of approaches to every media and technique.
4. There are as few restrictions as possible to insure artistic and creative freedom.

5. This need not be a finished product. If your idea can be projected in such a way that makes it easy to understand, the finished project can be either a visual projection, such as a series of sketches, or a verbal projection, such as written material. These alternatives must show concern, involvement, and thought.

6. You will be graded on your work.

7. These class sessions will be taped and recorded.

Designing Phase--The Workshop

To retain the objectives of a self-directed approach restrictions on the students approaches were intentionally kept to a minimum. The choice of direction, use of materials, and selection of forms had to be left to the students.

Within a self-directed, problem-solving approach, after the introductory phase of the problem was completed; the students were released to freely gather any materials they wished to use; and begin assembling their fiber designs. The students in the workshop were allowed two class periods, or six hours, to accomplish their work.

The Researcher's Role

The researcher's role, as prescribed by the self-directed approach during the designing phases of the workshop,
remained a guiding observer. The researcher also was
directed to gather visual data of each student's progress
and product through slides during the entire designing phase.

The Final Phase of the
Workshop--The Critique

The final phase of the workshop was the critique or
discussion of what the students had learned through their
experiences with fiber as a sculptural media. This was used
as an additional learning experience for the researcher and
all of the students. Each fiber piece was then photographed
for use as reference material for the descriptive study's
results.

Evaluation of Student's Work--
Panel of Experts

After the workshop was completed, the researcher's
graduate committee selected a panel of experts to evaluate
the creative and developmental growth inherent in the stu-
dents work. The members chosen for the panel were: Shirley
Hurt, Emporia State University art education instructor;
Jerry Troxell, head of Emporia High School Art Department;
and Vickie Rubottom, fiber artist.

The questions directed to the panel of experts
regarding the students work were:

In your expert opinion, using a scale of 1 (highest
degree of artistic success) to 6 (lowest degree of artistic
success), compare and evaluate these artistic characteristics
evident in the student's fiber sculpture work, in regard to their total artistic success compared to the results within a typical, traditional instructional approach to the same assignment.

1. Originality

2. Artistic Quality

3. Creative growth and development evident in the student's fiber sculpture work.
4. Overall artistic success in all three categories

The researcher's supervising instructor, Richard Stauffer, also was requested by the graduate committee to answer specific questions related to the workshop procedures to add credence to the descriptions given in the study. The questions directed to the researcher's supervising instructor were:

Name:
Date:
Professional Position:

1. When was the workshop held?
   How long did the workshop last?

2. Where was the workshop held?

3. What was the purpose(s) of the workshop in your opinion?

4. What was your influence and position in this exercise?

5. Did the researcher have any influence on the planning of this exercise? What role did the researcher take during the workshop?
6. What class was chosen for this exercise? and why? In your opinion were the students involved, first year sculpture students? What was the reason for choosing first year students, if any?

7. How many students were involved in the workshop?

8. What media were selected for the students to explore? and why?

9. In your own words, describe the type of classroom-instructional atmosphere used for the workshop.

10. To the best of your ability, can you recall whether any of the students in the workshop had any prior instruction with fiber sculpture?

11. Was the workshop recorded? What other evidence was gathered by the researcher?

12. Was a critique held at the end of the study? Who was it conducted by?

The three member panel of experts evaluated six finished examples of the student's creative approaches to fiber sculpture. Each was asked to answer the questions concerning each work and evaluate the creative growth and development apparent in each example. The final phase of the study was the collection of these opinions.
Chapter 4

ANALYSIS OF DATA

Once the workshop was completed and the opinions of the three member panel of experts collected; it was necessary to analyze the findings for the purpose of accepting or rejecting the following null hypothesis: There will be no significant creative growth and development exhibited in the sculpture work of first year sculpture students experimenting with fiber as a three-dimensional media, as evaluated by the three member panel of experts.

The data included the three member panel of experts opinions. The panel ranked the artistic success of the students work within a self-directed approach. The artistic characteristics of originality, artistic quality, creative growth and development, and overall artistic success were evaluated.

These four artistic characteristics within the self-directed instructional approach were compared to the artistic results found in a typical, traditional classroom assignment. The panel of experts evaluated the four artistic characteristics as equal to, if not greater than, the results found in a traditional classroom assignment.

The instrument used to find the significance or similarity within the judges opinions, toward the students
work, was the Kendall Coefficient of Concordance: $W$.\textsuperscript{1} This is a system that can be used to measure the relationship among several rankings of $N$ objects or individuals.\textsuperscript{2} The formula used to compute $W$ was:

$$W = \frac{s}{\frac{1}{12} k^2 (N^3 - N)}$$

where $s =$ sum of squares of the observed deviations from the mean of $R_j$, that is, $s = \sum_{j=1}^{N} R_j - \frac{R_j}{N}$

$k =$ number of sets of rankings, e.g., the number of judges

$N =$ number of entities (objects or individuals) ranked, the students work

$\frac{1}{12} k^2 (N^3 - N) =$ maximum possible sum of the squared deviations, i.e., the sum $s$ which would occur with perfect agreement among $k$ rankings.\textsuperscript{3}

The alpha level of .05 was chosen to determine the significance of the results.

The panel of experts were asked to rate the level of creative success present through the artistic characteristics that they observed in the students work. The students six projects, that were selected by the panel as the strongest representatives of the workshop's results, were judged on a


\textsuperscript{2}Ibid.

\textsuperscript{3}Ibid., p. 231.
scale of 1 (highest level of artistic success) to 6 (lowest level of artistic success).

The questions given to the panel that dealt with originality, artistic quality, creative growth and development, and overall artistic success were:

In your expert opinion, using a scale of 1 (highest degree of artistic success) to 6 (lowest degree of artistic success), compare and evaluate these artistic characteristics evident in the student's fiber sculpture work, in regard to their total artistic success compared to the results within a typical traditional instructional approach to the same assignment.

The first artistic characteristic rated by the panel was originality. The attained value of W revealed that there was a significant degree of agreement at .05 level (W = 0.71). The judges agreed that there was a definite observable level of originality present in the beginning students' work that was equal to, if not greater than, the level of originality present in a typical classroom assignment.

The second artistic characteristic rated by the panel of experts was the success level of the artistic quality present in the student's work. This observable artistic quality was found to be non-significant by the panel. The level of W was 0.27. There was no significant degree of agreement between the judges opinions on the level of artistic quality present in the beginning student's fiber sculpture. The judges did not think that the level of observable artistic quality present in the student's work was
equal to, if not greater than, the results in artistic quality present in a typical, traditional assignment.

The third artistic characteristic judged by the panel was the creative growth and development evident in the student's work. The findings demonstrated no significance in the judges ranking of the six examples. The level of $W$ was found to be 0.62.

The last artistic characteristic evaluated by the panel was the overall artistic success evident in each student's fiber sculpture. The panel was in agreement toward this characteristic. There was a significant level of agreement between the judges opinions, $W = 0.73$.

The statistical results demonstrated the inability of the three member panel to agree that the student's fiber sculpture work, executed in the self-directed fiber workshop, illustrated an observable level of artistic quality and creative growth and development that was equal to, if not greater than, those found in typical assignments. Therefore, on the basis of these results, the null hypothesis was accepted in regard to the artistic characteristics of artistic quality and creative growth and development.

The significant agreement found in the data was the panel's evaluation of the level of originality and overall artistic success found in the student's fiber sculpture work. In relation to these findings the null hypothesis was rejected. The accepted hypothesis was: this descriptive study of a self-directed instructional approach that
emphasized problem-solving would describe and evaluate the creative growth and development exhibited in the sculpture work of first year sculpture students.

The student's work with fiber as a three-dimensional media would be evaluated by the three member panel of experts who would decide whether the student's work could be considered as good as, if not equal to, fiber sculpture work executed by first year sculpture students within a typical, traditional classroom assignment.
Chapter 5

CONCLUSIONS, RECOMMENDATIONS, SUMMARY

Conclusions

The following conclusions were based on the results of the statistical analysis of the data obtained during the study:

1. The null hypothesis was accepted in regard to the success level of the artistic characteristics of artistic quality and creative growth and development present in the student's fiber sculpture work. Therefore, the self-directed, problem-solving instructional approach had no significant affect on the artistic quality and creative growth and development evident in the student's work.

2. The null hypothesis was rejected in regard to the success level of the artistic characteristics of originality and overall artistic success present in the student's fiber sculpture work. The self-directed, problem-solving instructional approach definitely had a significant influence on the student's fiber work in regard to originality and overall artistic success.

Other conclusive opinions were made by the researcher during the observation period in the fiber sculpture workshop. Even though the participants were first year sculpture students, they seemed to have no difficulty dealing with the
challenge of the self-directed, problem-solving assignment. All students involved in the workshop succeeded in completing their assignment, through a sketch, spontaneous response, or a finished fiber piece. It was observed by the researcher that most students preferred to experiment and explore through the use of the media in a three-dimensional form rather than concentrate on artistic quality. As Coleman explained, "In the beginning a variety of experiences will be more valuable than ownership of a belabored student sculpture. Students works are primarily exercises."

During the workshop, each student sought out their own answers to the self-directed learning experience. Most preferred to begin with a material or method that they were most confident in and knowledgeable of prior to the study such as, wood, metal, found object, or sketching. With these materials constructed as a basic framework, the students' enhanced and decorated this framework with fibers. Only one student (see Appendix A, Illustration VI) created their answer to the assignment entirely with fiber. The researcher assumed that this lack of artistic quality and complexity was due to the lack of experience and time to experiment with the media within the workshop. The resulting fiber sculptures basically were creative and original through each individual's approach to the problem. The final products,

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however, could not be considered aesthetic, or sophisticated works of art.

At the end of the workshop, it was observed through the student's finished answers to the problem that they had learned about fiber sculpture through this self-directed, self-motivated, self-evaluated approach to instruction.

Factors that Seemed to Affect the Study

There were variables that may have affected the findings of this study. The following factors were as follows:

1. The ten students had a limited amount of time to execute their task. If the workshop had lasted more than nine hours the artistic quality and creative growth and development evident in the student's work may have been more complex and sophisticated. It seemed to definitely have an observable affect on the student's work.

2. The students involved were all first year students in sculpture. It seemed probable that if the students had more experience and confidence with sculpture, that the results in their fiber sculpture would have been more artistically refined.

3. The ten first year sculpture students were not given any specific instruction in fiber techniques. The artistic, sculptural quality, and the overall total effect of the student's work may have been affected by this lack of technical knowledge.
4. The statistical method chosen for the study, the Kendall Coefficient of Concordance: \( W \), is used to rank a collection of opinions. The significant value of \( W \) does not mean that the orderings observed are correct.\(^2\)

**Recommendations for Further Study**

Even though this study produced some interesting findings, further study is necessary. Suggested approaches for further study are listed below:

1. Compare the self-directed, problem-solving instructional approach as an experimental group, to a typical traditional instructional approach, by trying to solve a sculptural problem.

2. It would be advantageous to conduct this study with a larger group of students that have prior experience in sculpture and the fiber media. The study should also be run over a longer period of time.

3. The influence of the self-directed instructional approach should be studied further for its influence on each one of these creative characteristics: independent thinking, divergent use of materials and techniques, originality, artistic quality, creative growth and development, and overall artistic success in sculpture.

Summary

The purpose of this self-directed fiber sculpture workshop was to investigate the creative growth and development evident in the first year sculpture students work through the self-directed instructional approach. The artistic success levels of originality, artistic quality, creative growth and development, and overall artistic success were evaluated by a three member panel of experts.

The self-directed instructional approach was studied through a workshop classroom atmosphere. The participants in the study were ten, first year sculpture students who had no prior experience with fiber as a sculptural media. The instructional emphasis was on the non-traditional approach to the student as an active participant in their own learning. The instructor's role was as a technical guide; using the free, open classroom atmosphere to facilitate this creative learning.

The self-directed, problem solving instructional approach was centered around the needs and abilities of the students. Each student was allowed to answer the assignment in a manner that was meaningful to them.

The workshop had an introductory, designing, and evaluation stage. The workshop lasted a total of nine hours for the students to design and complete their fiber sculptures. The problem proposed to the students to solve was to
construct a fiber sculpture in any artistic manner or form they wished.

The data were collected through a three member panel of experts who evaluated the success level of the four artistic characteristics in the student's work. The statistical analysis of the data were collected and ranked through the Kendall Coefficient of Concordance: \( W \). The null hypothesis was excepted for the artistic characteristics of artistic quality, and creative growth and development. The null hypothesis was rejected by the panel of experts for the artistic characteristics of originality and overall artistic success within the student's work.
BIBLIOGRAPHY
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APPENDIXES
APPENDIX A

Illustrations of Student's Work
ILLUSTRATION II
ILLUSTRATION IV
ILLUSTRATION V
ILLUSTRATION VI
APPENDIX B

Panel of Experts Vita
VITA

Judge A

Mrs. Shirley Hurt--Associate Professor
Emporia State University
Emporia, Kansas

Education

Bachelor of Art Education - Kansas University, Lawrence, Kansas, 1955
Graduate Work - San Diego State University, San Diego, California, 1956-1957
University of Michigan, Ann Arbor, Michigan, 1958
Master of Art - Emporia State University, Emporia, Kansas, 1968

Occupation

Associate Professor, Emporia State University - Art Education, Art Therapy, Elementary Art Education, Exploring Art Media (Elementary/Secondary), Weaving and Fibers, 1965-1980

Teaching Experience

Public School - Shawnee Mission, Kansas, 1955-1956
San Diego, California, 1956-1957
Waukegan, Illinois, 1957-1958
Lab Schools - Eastern Michigan University, Ypsilanti, Michigan, 1958-1960
Roosevelt and Butcher, Emporia State University, Emporia, Kansas, 1960-1963
University - Art Department, Emporia State University, Emporia, Kansas, 1965-1980

Recent Art Exhibitions

Kansas One Show, Hutchinson, Kansas, 1977-1980
Topeka Library Crafts Show, Topeka, Kansas, 1976-1980
Kansas Artist Craftsman Show, Wichita, Kansas, 1979
Mid-America Metals Show, Kansas City, Missouri, 1978
VITA

Judge B

Mr. Jerry Troxell--Head of the Art Department
Emporia Senior High School
Emporia, Kansas

Education

Bachelor of Science in Education - Kansas State Teachers College, Emporia, Kansas, 1970
Other undergraduate work at Highland Junior College, Highland, Kansas, 1965-1967
Graduate Work - Art and Counseling, Emporia State University, Emporia, Kansas, 1970-1980

Occupation

Head of the Art Department, Emporia Senior High School, Emporia, Kansas, 1970-1980

Teaching Experience

High School Art teacher, Emporia Senior High School, Emporia, Kansas, 1970-1980
Adult Art Classes, Emporia Senior High School, Emporia, Kansas, 1970-1979
Commercial graphic design artist
Practising artist
VITA

Judge C

Victoria Rubottom--Fiber artist since 1975
Substitute Teacher
Denton Public Schools
Denton, Kansas

Education

Bachelor of Fine Arts - (Concentration in Ceramics),
Emporia State University, Emporia, Kansas, 1977
Bachelor of Science in Education - Art Education - Dual,
Emporia State University, Emporia, Kansas, 1977

Occupation

Art Instructor, USD #433 Midway K-12, Denton, Kansas, 1980

Teaching Experience

USD #433 Midway K-12, Art, Denton, Kansas, 1977-1980

Art Exhibits

Manhattan Art Show, Manhattan, Kansas, 1977-1979
1st Place, Textiles, 1979
Ottawa Art Show, Ottawa, Kansas 1977
1st Place in Fibers
McPherson, McPherson, Kansas, 1977
Purchase Award, Fibers
VITA

(Researcher)
VITA

Deborah Lee Fitzgerald was born in Evanston, Illinois on November 4, 1951. Before settling in Kansas in 1967, she had lived in Illinois, Florida, Missouri, and Michigan. She graduated from Salina High School, Salina, Kansas in 1970. In 1973, she graduated with honors from Kansas State Teachers College with a Bachelor of Science in Education degree. From January 1974 to May 1975, she was awarded a graduate assistantship with the Art Department at Emporia State University. Mrs. Maxwell has taught art at Emporia Senior High School from 1975.

Education

Bachelor of Science in Education - Kansas State Teachers College, Emporia, Kansas, 1970-1973
Graduate Work - Emporia Kansas State College, Emporia, Kansas, 1973-1975
Master of Art - Emporia State University, Emporia, Kansas, 1980

Occupation

Art Instructor, Emporia Senior High School (Grades 9-12), Emporia, Kansas, 1975-1980

Work Experience

Taught Elementary level classes for Salina YWCA, Art Department, Salina, Kansas, 1970
Taught Adult Education Classes in Ceramics, Emporia Senior High School, Emporia, Kansas, October-November 1973
Micro-Lab Instructor for Emporia State University, Education Department, Emporia, Kansas, December 1973
Art Exhibit reviewer for Emporia Gazette, Emporia, Kansas, 1973
Graduate Assistantship, Emporia State University, Emporia, Kansas, January 12, 1974 to May 17, 1975
Taught Arts Lab Classes, Shirley Hurt, Emporia State University, Emporia, Kansas, Spring Semester 1974
Substituted for Richard Stauffer, Arts Lab Class, Emporia State University, Emporia, Kansas, Spring Semester 1974
Taught Macrame Class at William Allen White Elementary School, Emporia, Kansas, March 1974
Taught Fiber Workshop (Sculpture) for Art Department, Emporia State University, Emporia, Kansas, Fall 1974
Taught Weaving and Fiber Workshop, Emporia State University, Emporia, Kansas, Spring 1975
Taught a filmed, one-hour presentation--Fiber Sculpture, for Rex Hall, graduate committee, Emporia State University, Emporia, Kansas, Spring 1975
Taught drawing seminar (10 weeks) for Lowther Junior High School, Emporia, Kansas, Fall 1974
Awarded temporary teaching position for Art Department, Emporia State University, Emporia, Kansas, teaching Elementary Art Education, Spring and Summer Sessions 1975
Lecture on Fiber Sculpture for Art Exploration Class, Emporia State University, Emporia, Kansas, March 1975
Lecture on Fiber Sculpture, Art Classes at Eureka Junior High School and Eureka Arts and Crafts Build, Eureka, Kansas, March 1975
Teaching Position, Art Department, Emporia Senior High School, Emporia, Kansas, August 1975
Executive Manager of Terry Maxwell's art career. Conducting numerous one-man shows, gallery exhibits, capital exhibits, museum exhibits, art show exhibits, throughout Kansas and the United States, 1975-Date
Member of Emporia Teachers Council, Emporia, Kansas, December 1978-August 1980
Conducted and presented four action labs for student teachers, Emporia Senior High School, Emporia, Kansas, 1977-1980
Member of advisory board attendance policy, Emporia Senior High School, Emporia, Kansas, Spring 1980
Member of advisory board for Reading Programs in the secondary classrooms, Emporia Senior High School, Emporia, Kansas, 1980

Exhibits Participated In

Student Art Exhibit, Emporia State University, Emporia, Kansas, 1973, 1974, 1975
Kansas-Artist-Craftsman Exhibit, Mulvane Art Gallery, Topeka, Kansas, 1974
Kansas-Artist-Craftsman Exhibit, One + One Show, Mulvane Art Gallery, Topeka, Kansas, 1975
All-Women Exhibit, Celadon Gallery, Emporia, Kansas, 1975
Wichita Art and Book Fair, Wichita, Kansas, 1973-1974
Arkansas City Art Festival, Arkansas City, Kansas, 1973
One-Woman Shows

Frameworks Gallery, Emporia, Kansas, 1974
Framemaster Gallery, Wichita, Kansas, 1974

Organizations

Member, National Education Association, Kansas National Education Association, and Kansas Art Education Association, 1975-1977

Honors - Emporia State University

Graduated, Bachelor of Science in Education, with honors, 1973
Deans Honor Roll, 1973
President's Honor Roll, 1972-1975
Alpha Theta Rho, honorary Art Fraternity, President, 1972-1973; Vice-President, 1973-1975
Alpha Theta Rho, Art Scholarship Awards, Spring 1974-Fall 1975
Awarded graduate assistantship, January 1974-May 1975