Chapter I

Introduction

Overview

One person weaves a song, another weaves a tapestry...Is it magic? Creativity appears to be utilized in varying degrees by different people. Historically Barron (1955) stated it was "historical fact" that women were not intellectually creative. Today's thought is that creativity exists in every healthy human being--if they envision it. Many books are written with ideas on how to tap into the creative processes of our minds. Examples are A Whack on the Side of the Head by Roger von Oech (1983) and Creativity in Business by Michael Ray and Rochelle Myers (1986).

What is creativity? It has been defined in many ways...from behaviors possessing an element of newness, novelty, and difference (Herrmann, 1996)...solving a perplexing problem...helping resolve conflict...as well as painting, music, and other artwork..to Csikszentmihalyi (1996) recently defining it as "a process by which a symbolic domain in the culture is changed" (p.10). This he called creativity with a capital C, cultural creativity. It is dependent on talent, training, good luck, access to a domain, and support of a field for a person to be recognized. In this study the personal experiences of two designers and their work were explored. Their design process was examined as well as the creativity used by them to achieve their design goals.

Who is a designer? A creator, or designer, is the individual "who conceives, develops, and often physically carries out the production of the aesthetic object" (Fiore, Kimle, & Moreno, 1996, p.32). They found that studies of the designer (creator) usually focused on an individual's psychological characteristics and the social and cultural influences affecting that person. An example of this individual related to the textile field was found in the work of Bryant and Hoffman (1994). They explored the aesthetic dimensions of wearable art of the 1960s. During this time apparel textile designers studied traditional arts, practiced techniques of embellishment and fabric manipulation, and produced many pieces of creative clothing. This wearable art had a designer who conceived, developed, and produced an aesthetic object, reflecting cultural messages and the individual's self-expression.

What is the design process that designer's utilize to achieve their creative goals? Betty Edwards (1986) described the process designers would use this way:
The creative individual, whose mind is stored with impressions, is caught up with an idea or a problem that defies solution despite prolonged study. A period of uneasiness or distress often ensues. Suddenly, without conscious volition, the mind is focused and a moment of insight occurs, often reported to be a profoundly moving experience. The individual is subsequently thrown into a period of concentrated thought (or work) during which the insight is _fixed_ into some tangible form, unfolding, as it were, into the form it was intended to possess from the moment of conception. (p. 3)

This process has been examined for many years, but as Carl Jung (1966) stated, the study of the subject would remain problematic because "the creative urge which finds its clearest expression in art is irrational and will in the end make a mock of all our rationalistic undertakings" (p. 87).

As the design process has been studied, several models have been written about in the clothing and textiles field. (Jones, 1970, 1992; Koberg & Bagnall, 1981; Lamb & Kallal, 1992) An early model of "thinking" was developed by Wallas in 1926 that included four steps: preparation, incubation, illumination, and verification. The Wallas (1926) model was systematic in approach, but he stated the steps were not rigid and could be revisited any time in the process. In 1995, Dianne Ealy proposed a perspective using a "holistic", indirect approach. The whole was seen first and then the details would be separated out. Ray and Myers (1986) made a case for using a combination of linear and holistic approaches in order to open up to less limited outcomes in business and other areas of life. Criticism had arisen that American business had become too narrow and uncreative. In response Ray and Myers, teachers at Stanford University developed a course "that would awaken students to their inner creative source, and that would show them how such creativity applied to their daily business lives." (p.xii)

There are many questions about what really happens during the making of a creation that have not been answered. Specifically, in the field of clothing and textiles the study of designers, their design process, and creativity has been limited. Fiore, et. al (1996) stated, that the clothing and textiles field " would benefit greatly from further study of those who are involved with textiles and apparel as a creative endeavor" (p.34). The knowledge of this process has been borrowed from other fields of study, including art education, psychology, sociology, and anthropology. It is important for research to be conducted within the discipline of clothing and textiles to confirm and expand the knowledge of the design process related directly to the textile arts and to aid in the development of methods in design education.
Conceptual Framework

The origin for this research was developed from an article by Fiore, et.al (1996). Their study of aesthetics has been an important contribution to the field of clothing and textiles. In reviewing the literature of this broad concept, they organized the literature into five categories that were called creator, creative process, object, appreciation process, and appreciator. The Fiore, et. al (1996) work served as a beginning point for formulating this research. Fiore, et. al (1996) was stated that "qualitative techniques used to capture the underlying nature of the creative process include interpretation of verbal data provided by the creator in personal or public communication, artist's letters, journals, and manifestos or analysis of the creative product including sketch books, works in progress, and finished works" (p.35). Similar qualitative techniques were used in this study of the design process of a weaver and a costume designer.

Two theoretical models were used to frame this study of apparel textile designers. First, Koberg and Bagnall's (1981) model of design process, was used. This model of the design process included seven steps: 1) acceptance, 2) analysis, 3) definition, 4) ideation, 5) idea selection, 6) implementation, and 7) evaluation (Koberg & Bagnall, 1981).

The step of acceptance was finding reasons that motivated the designer to work on a problem or task. Internal motivation was preferred in problem-solving over external (intrinsic vs. extrinsic). The next step, analysis, was researching to find information pertaining to a design problem or project. Watkins (1988) described collecting information by observations, interviews, laboratory simulations, and literature review related to the design project. The step of definition was sorting through the collected information and to determine the most essential elements of the problem" (Watkins, 1988, p. 341). The next step, ideation, was the generation of ideas. The origin of these ideas came from the designer's experiences and also the individual processing of information. For increased creativity, the designer needed fluency (the ability to think of many ideas) and flexibility (the ability to think of many approaches). Divergent and convergent types of thinking were particularly useful in this step. The next step, idea selection, occurred when a designer narrowed the ideas down to the few that best addressed the problem or project. Sometimes it was necessary to recombine ideas or search for additional ones. Implementation was the step where a designer tried out an idea that evolved from the design process. The step of evaluation was needed to look critically at the work in progress and assess its success in achieving the desired results. This could be done often and during any other step of the design process. The design process consisted of alternating use of divergent and convergent types of thinking. Divergent thinking was spreading out to generate many ideas, while convergent thinking sorted through many
ideas to narrow in on a few ideas that served to achieve the desired results (Watkins, 1988).

As the apparel textile designers engaged in the design process, creativity was continually used to enhance the design activity. Creativity and the extent that it was used by the weaver and costume designer during their design process was explored in this study. The second theoretical model used in this study was Amabile's (1996) model of creative performance components, which allowed discussion of the creativity of the weaver and the costume designer. This model consists of three main components: 1) domain-relevant skills, 2) creativity-relevant skills, and 3) task motivation. These components were used to identify and discuss creativity in this study.

The creative performance component of domain-relevant skills included a knowledge of the subject or field, technical skills, and special talent for the field. These skills depend on cognitive abilities, perceptual and motor skill, and informal and formal education in the area. Creativity-relevant skills included an appropriate cognitive style, the ability to generate novel ideas, and work style conducive to creative activity. These skills depended on training, experience in generating ideas, and personality characteristics. The last component, task motivation, included attitudes toward the task and the perception of one's own motivation for accepting the task. These skills depended on initial level of intrinsic motivation, the level and type of extrinsic constraints, and the individual's ability to minimize extrinsic constraints (Amabile, 1996).

**Purpose of Study and Research Question**

The purpose of this study was to explore the design process of designers and to discover how creativity is related to their process. Joelle Renzi (1996), a weaver, described her design process as unconscious, intuitive, and constantly changing. Her work included diverse methods and influences such as sketch development, computer weave drafting, and intuitive decision making. Fiore, et al. (1996) stated "Aesthetic experience of intentionally produced aesthetic objects and events begins with the creator of the aesthetic product" (p. 32). Therefore, this study of designers asked this research question: How is creativity integrated into the design process of apparel textile designers? During the design steps of acceptance, analysis, definition, ideation, idea selection, implementation, and evaluation, what are the influences and inspirations required to bring a design to life? In music, a pianist can play all the correct notes, keep a steady rhythm, and observe all the musical notation, but the technically accurate performance may not reach the level of artistry. In design, as well as in music, one who begins with technique must add creativity to achieve a creative result.
Framework of Definitions

The following concepts are found in this study: creativity, designer, apparel textile designer, design process, and steps of design. These words are operationally defined.

Creativity is operationally defined in two parts: Something is creative to the extent 1) it is new, different, and helpful, and 2) it is a heuristic approach is used; an indefinite path is followed that can lead to learning or discovery (Amabile, 1989; Ray & Myers, 1986). This creativity includes the process of creating (the act of producing), as well as a created product. A designer is one who conceives, develops, and produces an aesthetic object (Fiore, et. al, 1996). As operationally defined in this study, apparel textile designers include weavers, costume designers, and quilters.

Design process is the step by step problem-solving method used to develop a design (Koberg & Bagnall, 1981). The stages or means used by designers to accomplish their goals is defined as the steps of design (Watkins, 1988).