Chapter II
Research Design

Assumptions and Rationale

A qualitative approach was used for this study on the design process of designers in the clothing and textiles field, since the paradigm of qualitative research includes a focus on process versus product or outcomes (Merriam, 1988). The qualitative paradigm also focuses on an individual's experience and description of life situations. Since this study explored the nature of a designer's, design process, and creativity the qualitative approach was suited to this goal (Merriam, 1988). Case studies of a weaver and a costume designer were conducted using in-depth interviews and observations to explore their personal experiences as designers, and to have a description of those experiences in their own words.

Type of Design

A phenomenological type of method was used in this study. This research method originated in the field of psychology and seeks to understand the life experiences of the individual. A small number of participants are usually selected. The researcher engages in direct observation and the experience of the individuals in their natural setting to find patterns and meaning (Creswell, 1994; Ely, Anzul, Friedman, and Garner, 1991). Atkinson and Hammersley (1994) in a discussion of ethnographic studies using participant observation observed this form of social research has some of the following features: an emphasis on exploring the social setting, instead of testing hypothesis about them; working primarily with unstructured data with no precoding of categories prior to data collection; studying a small number of cases; and analysis of data using interpretation of the meanings in the form of verbal explanations with little or no quantification and statistical analysis.

Researcher's Role

The researcher's role in this study was as a participant observer, interviewer, and analyzer. The two individuals invited to participate in this study were in areas of textiles, including costume designing and weaving.

Data Collection

The following criteria were used to select the participants. 1) The person would be a designer, actively engaging in creative work in the clothing and textile field. 2) The person would be open to sharing with others skills and ideas about their area of work. 3) The person would be verbal about the process or activity in which they engage. And 4) The person would be a member of a guild or other group supportive of their work. The two participants chosen had been met by the researcher prior to study. The
weaver had hosted a weaver's guild workshop at her studio and shared information about dyeing yarn and weaving. The costume designer was a guest speaker in a university class on creativity. In addition, other people identified the participants as designers in the textile area.

One participant selected for this study was a weaver with a studio in her home. She carded and spun fiber into yarn, which she then wove into fabric on an eight-harness loom or knitted. With the woven fabric she made apparel, rugs, and other articles, and she knitted socks, sweaters, and vests. She was a member of a local weaver's guild and a spinner's group. Her creations were made as gifts, on commission, and to sell at an annual arts festival.

The other participant was a costume designer and professor for a theatrical department in a university. She envisioned, designed, and constructed costumes to portray characters for theatre productions scheduled throughout the year. She was also involved in teaching courses in design in a theatre department.

Questionnaires were developed by the researcher for the interview and participant observation through a preliminary interview of an art professor and a participant observation of an art class. A pretest of the research design including interviews, participant observations, participant log, and review of documents and visuals, was conducted with an apparel design student.

The researcher conducted participant observation of the designer's design activity, as well as observed the meetings of art affiliated groups with which the weaver and costume designer were involved, namely a weaver's guild and a theatrical production group. Observation notes were made by the researcher using a printed form designed to record information. (Appendix A)

The weaver was observed in her studio weaving yarn on her eight-harness loom. She also was sewing a woven jacket during the interview. The fit was checked and the piece was photographed. Meetings of a weaver's guild and a spinner's guild were attended. At the spinner's group meeting, the weaver was observed as she carded and spun fiber into yarn at the spinning wheel. Six observations were made on the occasions described. The observations were of varying lengths, from thirty minutes to two hours, depending on the activity.

The costume designer was observed during the designing and construction of costumes for a theatrical production that was in progress when the study began. During work sessions of the theatrical costume shop, the making of several products of this creative endeavor was observed. Observation was made for an afternoon, during the final fittings of three main male characters for the play and the following day participant
observation was conducted by the researcher helping with the final construction details on many costumes. Dress rehearsal was attended to view the first on-stage appearance of the costumes and the play was attended the following week. A production meeting of the next scheduled production was attended. Five observations were made of varying lengths, from one to eight hours.

An initial interview was conducted, using a list of twelve questions that encouraged dialogue about the designer's practices during creative activity and the influences to their work. Each initial interview was approximately two hours long. The interviews were taped and transcribed. A printed form was also used to record additional thoughts and observations of the researcher. This form also listed the twelve interview questions used to solicit initial responses. As the participant being interviewed spoke additional questions were asked based on their dialogue to encourage further information. (Appendix B) The interviews allowed the participants to discuss their work in their own words and gave a view of their individual experience. Informal interviews were conducted in other meetings with the participants. Also, a short follow-up interview of approximately twenty minutes was scheduled after the data collection period had ended and analysis had begun. Additional questions were asked and clarifications were made at this time.

Documents and visuals were solicited in the form of sketches, journal entries, logs, photographs, and creations from the participants. These documents gave data reflecting the ideas of the participants and their processes in their original language. The findings were recorded on a printed form and served to verify the findings of the interviews, observations, and logs. (Appendix C)

Each participant was asked to keep a log of activities, thoughts, and ideas pertaining to their creative work for the period of the study, (October to December). The logs allowed participants to record additional information. Each designer wrote a few entries when they found the time, but the logs collected were not extensive.

Participants were given transcripts of the interviews and findings from the observations and logs. They were asked to review the findings of the observation and interview, as well as the themes analyzed in the data, to verify accuracy. This collaboration for participants served to strengthen the validity of the study.

**Data Analysis**

Using the qualitative method of coding and categorizing, the data was analyzed during and after data collection. A peer-checker, a colleague experienced in qualitative research methods, was used to confirm the categories found in the data to ensure both validity and reliability. Participant-checking was also used to verify the findings and
themes of the study. The participants were given transcripts of the initial interview and the findings and theme analysis of the data. Comparative analysis was done on the studies of the weaver and the costume designer. An additional comparative analysis was conducted between the findings of the two designers and the review of the research literature.

Data collection was conducted for a seven week period of time. The start of analysis came early, at the beginning of data collection. While collecting and transcribing data, ideas, and themes were noted by the researcher as they emerged. Ely, et. al, (1991) stated, "analysis is part and parcel of the ongoing, intertwined process that powers data collection." Therefore, my first step was to organize the raw data--the transcriptions of the interviews, the fieldnotes taken during observations, the log pages of the participants, and the review of documentation and visuals. The data collected about the weaver and of the costume designer were kept separate during the collection process.

**Methods for Verification**

The internal validity of this study was ensured in the following ways:

1. Triangulation of data--Multimethods of data collection were used, including participant observation, interview, document and visual analysis, and participant journaling. The findings of all of these methods were used in analysis of the research.
2. Triangulation of analysis of data--The data from each creator was analyzed. The results from the two studies were compared and contrasted. This data was then compared to the review of literature and the similarities and differences noted.
3. Participant-checking--The participants reviewed the transcriptions and findings from the participant observations, interviews, documents and visual analysis, and journal analysis to ensure correct interpretations of meaning.
4. Peer-checking--A colleague, with experience in qualitative research methods reviewed all coding of data to confirm the categories and themes that emerged from the data.

The main purpose of qualitative research is not to generalize the findings, but to explore "a unique interpretation of events." (Merriam, 1988) The external validity was ensured by a detailed description of the steps of this study. The categories found in the data analysis may be used in future studies of this type.

Working first with the weaver's data then the costume designer's, the written data was read and reread, freely writing in the margins thoughts, ideas, and subjects found pertaining to the design process, including their approach and the origins of their ideas.
As this was done the themes that emerged from the data were listed and analyzed. Examples of themes that emerged from the data were experimenting, improvising, incubation of ideas, depending on the materials to determine the end product, planning, "flow", books and patterns as guides only, and the weaver's process-carding, spinning, weaving, and producing. In the final analysis the themes were applied to the steps of the design process model by Koberg and Bagnall (1981). The steps of design found in the design process of the weaver and the costume designer is shown. (Table 1).

Table 1
Deconstruction of Objective

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<thead>
<tr>
<th>Steps of Design</th>
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<td>I--Acceptance</td>
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<td>II--Analysis</td>
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<tr>
<td>III--Definition</td>
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<td>IV--Ideation</td>
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<td>V--Idea Selection</td>
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<td>VI--Implementation</td>
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<td>VII--Evaluation</td>
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The step of **acceptance** included themes of having a goal that determined the product of the design process. The step of **analysis** included themes related to researching the design problem. Next, **definition** was the step related to planning the work. **Ideation** was a step of design with the themes of the designer's sensual and "felt" experiences. **Idea selection** included the themes of forming and revising ideas. **Implementation** was the actual production of the design work. Last, the themes found pertaining to critiquing one's design activity was in the step of **evaluation**. The discussion focused on these steps of the design process found in the data of this study of designers. The objective to explore the design process used by the apparel textile designers and how their creativity was used.

Peer-checking was done by a colleague, a graduate student in the clothing and textiles field, trained in qualitative research methods, by reviewing the raw data and confirming the findings and the themes found by the researcher.

Participant-checking was done of the findings and themes of the study, as well as verification of the interview transcripts given to them by the researcher. Both the weaver and the costume designer reviewed and verified the findings related to their own work.
Follow-up interviews were conducted after data collection and during final analysis to clarify facts and gather additional information, such as an explanation from the costume designer of the meaning of a designer's internal motivation to create that she'd mentioned in the initial interview.

An analysis of the designers was written. This analysis was then used to compare and contrast the findings of this study with the review of research literature. By this procedure, the design process of designer's and creativity in the clothing and textile field was explored and discovered.

Creativity and the extent that it was used by the weaver and costume designer during their design process was explored in this study. To examine and discuss the creativity found in this study of apparel textile designers, this study's findings were analyzed using the Amabile (1988) model of creative performance components. The three components were 1) domain-relevant skills, 2) creativity-relevant skills, and 3) task motivation. As the findings were read in final analysis, it was noted the components that were found to be present in the design activity of the apparel textile designers.