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Facilitating retention and recall of content material in an undergraduate social work class

Stafford, Judith Ann, Ph.D.
The Ohio State University, 1989

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Facilitating Retention and Recall of Content Material in an Undergraduate Social Work Class

DISSEMINATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

by

Judith A. Stafford, B.S., M.S.W.

* * * * *

The Ohio State University
1989

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DEDICATION

To My Students
I would like to express my appreciation to my parents who taught me never to quit, and to my brother, whose financial and emotional support made it possible to complete this dissertation. Two other persons were instrumental in assisting me, with data entry (Liz Eyges) and data analysis (Deb Ataya). Sharon Schweitzer and Laurie Hiett turned my handwritten draft into this document. Then there is my committee: Nolan Rindfleisch, who was the first professor at Ohio State to praise my work and made me realize I had the ability needed; Roberta Sands, who asked me to help with some research she was working on and taught me research could be fun while still being a lot of work; and Beverly Toomey, who has been so much more than an advisor. She's become a mentor, a person who truly fostered and encouraged my learning and growth. Then there are my female friends, Joan Turner, Bonnie Hackel, Judi Rose and Lisa Pion-Berlin. If it were not for their belief in me and encouragement, I would have concluded that this task was not worth the effort. I have had a lot of help with this project and I appreciate it all and hope to return the favor. In assisting each other, we all grow.
VITA

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1972 ........................... B. S., Indiana State University

1974 ........................... MSW, Indiana University

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  Theories .......................... Salvatore Imbrogno
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Social Functioning - Micro Focus ........ William Eldridge
Social Work Practice - Framework ....... James Billups
Social Work Practice - Theory .......... Roberta Sands
Social Work Research - Methods ........ Beverly Toomey
Social Work Research - Statistics ...... Rocco D'Angelo
TABLE OF CONTENTS

DEDICATION ........................................ ii
ACKNOWLEDGMENTS ................................... iii
VITA .............................................. iv
LIST OF TABLES ..................................... vii
LIST OF FIGURES .................................... ix

CHAPTER PAGE

I. INTRODUCTION .................................. 1
   Problem Statement .......................... 4
   Definition of Terms ........................ 7
   Conclusion ................................. 10

II. LITERATURE REVIEW ............................. 11
   Facilitating Learning ...................... 13
   Recent Research ............................ 22
   Bridge Between Content and Learner ......... 24
   Conceptual Framework ....................... 29
   Intervention ............................... 36

III. METHODOLOGY ................................... 37
   Research Questions and Hypothesis .......... 41
   Sampling Section ........................... 42
   Research Setting ........................... 43
   Variables .................................. 44
      Independent ................................ 46
      Manipulated - Treatment .................. 46
      Ascribed - Student Effort ............... 52
   Dependent .................................. 53
      Knowledge Exam .......................... 54
      Establishment of Face and Content Validity. 57
   Final Grade .............................. 61
   Controlling Variables ....................... 62
   Howard Value Scales ........................ 63
   Embedded Hidden Figure Test ............... 65
### Statistical Analysis
- Instructor Difference
- Covariates
- Correlation
- Two-Way Analysis with Covariate

### Journal Responses
- Exit Questions
- Limitations of Study

### IV. FINDINGS
- Description of Sample
- Data Analysis
- Instructor Effect
- Identifying Relevant Control Variables
- Two-Way Analysis With Covariates
- Summary Results of Journal Responses
- Exit Questions
- Conclusions

### V. DISCUSSION
- Population
- Major Findings
- Main Effect
- Control Variables
- Student Evaluation
- Strengths
- Conclusions

### VI. CONCLUSIONS AND RECOMMENDATIONS
- Implications for Social Work Education
- Implications for Social Work Practice
- Recommendations for Further Research
- Summary

### APPENDICES
- A. Intervention Script
- B. Demographic Sheet
- C. Howard Value Survey
- D. Post Exam
- E. Content Validity Instrument
- F. Content Validity Charts
- G. Item Discrimination and Difficulty
- H. Course Syllabus
- I. Embedded Figure Exam
- J. Correlation Chart

### REFERENCES
# LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLES</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Characteristics of Sample</td>
<td>78</td>
</tr>
<tr>
<td>2. GPA</td>
<td>80</td>
</tr>
<tr>
<td>3. Howard Value Scale - Pre</td>
<td>81</td>
</tr>
<tr>
<td>4. Howard Value Scale - Post</td>
<td>82</td>
</tr>
<tr>
<td>5. Previous Social Work Experience</td>
<td>83</td>
</tr>
<tr>
<td>6. Study Skills</td>
<td>84</td>
</tr>
<tr>
<td>7. Learning Style Preferance</td>
<td>85</td>
</tr>
<tr>
<td>8. Student Effort</td>
<td>87</td>
</tr>
<tr>
<td>9. Basic Knowledge Exam - Pre/Post</td>
<td>88</td>
</tr>
<tr>
<td>10. Grade</td>
<td>88</td>
</tr>
<tr>
<td>11. Instructor Effect</td>
<td>90</td>
</tr>
<tr>
<td>12. Person Product: GPA</td>
<td>90</td>
</tr>
<tr>
<td>13. Person Product: Student Effort - Test</td>
<td>92</td>
</tr>
<tr>
<td>14. Person Product: Student Effort - Grade</td>
<td>93</td>
</tr>
<tr>
<td>15. Quality Assignment - Group Comparison</td>
<td>94</td>
</tr>
<tr>
<td>16. Two-Way Analysis With Covariate - Posttest</td>
<td>96</td>
</tr>
<tr>
<td>17. Directional Difference - Posttest</td>
<td>97</td>
</tr>
<tr>
<td>18. Two-Way Analysis With Covariate - Grade</td>
<td>99</td>
</tr>
<tr>
<td>19. Directional Difference - Grade</td>
<td>99</td>
</tr>
<tr>
<td>20. Journal Responses</td>
<td>101</td>
</tr>
</tbody>
</table>
21. Comparison Data .................................. 106
22. Content Validity Chart ............................ 252
23. Item Analysis Chart ............................... 256
24. Correlation Chart ................................ 272
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURES</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Field Independent/Field Dependent</td>
<td>20</td>
</tr>
<tr>
<td>Characteristics</td>
<td></td>
</tr>
<tr>
<td>2. Sequential Learning</td>
<td>32</td>
</tr>
<tr>
<td>3. Directional Intervention Plan</td>
<td>36</td>
</tr>
<tr>
<td>4. Research Design</td>
<td>39</td>
</tr>
<tr>
<td>5. Variables</td>
<td>45</td>
</tr>
<tr>
<td>6. PQ4R</td>
<td>49</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

Social Work and Education

In 1954 Charlotte Towle, in *The Learner in Education for the Professions*, acknowledged that in training social workers, educators need to have some understanding of how learning takes place and how to facilitate that process. Rather than just teach technical skills or a collection of facts and terms, educators of professionals need to encourage students to learn how to facilitate their own learning process so students can take responsibility for their learning and become life-long learners. This is even more relevant today in a world in which it is difficult to prepare undergraduate students for specific jobs because the social work field changes so rapidly.

There is no evidence that one's innate capacity to learn changes; instead it seems that a person can learn to make better use of his or her capacity (Kuethe, 1968). According to Lowy, Bloksberg and Walberg (1971), teachers can provide educational experiences or activities that structure the learning environment and stimulate responses. Thus, learning takes place through the active participation of the learner in structured learning activities.
Another renowned social work educator, Bertha Reynolds (1942), commented on the vast differences among learners and emphasized that educators have a task of finding the point of integration between learner and subject matter. She cautioned teachers never to lose sight of the learners. Wessell and Faith (1953), in Professional Education Based in Practice, challenged social workers to develop an understanding of teaching.

The purpose of this research study was to examine one piece of the learning process in social work education, namely retention of material in human cognition (memory) rather than types of learning, such as conceptual learning or problem solving. An attempt was made during the intervention to help students not only recall content material, but also learn about how they learn, thus, facilitating student self-awareness about the learning process (Wittrock, 1986).

Gagne (1970) writes that there are differences of opinions in schools of social work regarding whether the study and improvement of teaching should be attempted. Some question whether empirical study of social work education is appropriate for the profession. Those who say it is not appropriate point to educational research that shows little causal relationship between teacher behavior and learner outcome. Somers (1970) counters such challenges as follows:
I believe that as social work educators we must prepare ourselves as carefully to be teachers as to be practitioners or researchers. Scholarship in the knowledge and skills of social work and social welfare are certainly essential components of our professional equipment, but they are not sufficient if we are teachers. It is naive to think that because we know we can ipso-facto teach. We are required as well to develop our scholarship in substantive knowledge and skills of teaching and learning and to relate these integrally in our knowing, feeling and doing as teachers (p. 74).

In 1984 the Council on Social Work Education adopted changes in the accreditation standards and procedures for baccalaureate social work education programs which called for increased emphasis on evaluating learning outcomes (Hull, 1987). Thus, the accreditation body has recognized the need to find out whether what social work educators are doing is adequately preparing students for the profession.

Helping students learn about their own learning process is increasingly recognized as a goal of education. All human beings have a basic right to develop to their full intellectual capacity. Education should emphasize developing the life-long learning and thinking skills necessary to acquire and process information within an ever-expanding field of knowledge. Despite this goal, numerous sources consistently indicate that the percentage of students achieving higher order (thinking) skill is declining. Often the focus in education is on teaching our students what to think and learn rather than how to learn (Costa, 1985).
Problem Statement

Social work is an applied field, with a focus on the practical application of theory to solve problems. This focus was evident in the framing of the problem to be studied within this research project and the development of the design for intervention. Can learning be facilitated by encouraging students to learn about the learning process itself? More specifically, can learning be facilitated by teaching students study skills that will provide a schema for their recall and retention of material?

Some students in an introductory class in social work taught at The Ohio State University (SW 220) have difficulty (as evidenced by low examination scores) in retaining and recalling material covered either in their textbook or lectures. Because that was an area of difficulty for them and one of frustration for those who taught the course, an attempt was made to discover an intervention that would facilitate retention and recall of materials in the assigned textbook.

The researcher was specifically interested in gaining empirical evidence about an instructional aid that could be utilized to facilitate competency learning for all students in the class (Arkava and Brennen, 1976). Social Work 220 deals with the social welfare system in America and explores values and ideologies that guide past and present approaches of dealing with social problems in the United States.
All voting citizens are asked to make decisions about social welfare issues (i.e. welfare payments, homelessness, discrimination, AIDS research, etc.). The researcher wanted to increase comprehension retention and recall of the basic concepts underlying the social welfare system in the U.S. Students could utilize this information to make more informed political decisions.

A number of factors can affect retention and recall, but for the purpose of this study the researcher was interested in identifying factors that could be used to empower students. Thus, an intervention was needed that could be taught to students so that they could utilize it in future situations. Students have limited control over many of the factors that have an impact on their learning in a college setting, but one thing they can control, if they choose to, and have the skills to, are their study habits.

Efficient work (study) skills are as necessary in college as in any occupation, so that students may make effective use of their time and be able to select and understand the important ideas in any lesson. Although not every individual can be made into an outstanding student, according to Francis Robinson (1941), a training program can be developed that shows each student how to study to his/her full potential. Many studies have shown that how-to-study programs are worthwhile (Robinson, 1945).
The approach developed by Robinson (1941), referred to as SQ3R, and adapted by Thomas and Robinson, was used as the planned intervention. SQ3R, which is an acronym for survey, question, read, recite, and review, was designed to teach students how to develop more effective study habits in order to facilitate their learning. Robinson's model was adapted by Thomas and Robinson (1972) for use in the regular classroom rather than as a separate course on study skills. The acronym for Thomas and Robinson's approach is PQ4R (preview, question, read, reflect, recite and review). The purpose of the intervention was to increase retention and recall of text content material as measured in the final exam.

PQ4R starts with diagnostic testing so each individual can assess his or her own skills, and then can individualize the program accordingly. The method goes beyond assessment and provides training and practice in methods to enhance strengths and correct weak areas. This approach is similar to one taken by clinical social workers: assessment of the problem, identification of strengths and weaknesses, suggested plan of intervention, feedback, and eventually, client empowerment to proceed without the help of the worker to solve similar life problems.

This approach takes seriously the challenge to social work educators to facilitate learning, not just present content material. The stimulus for the research was an
observed problem in an actual classroom and the planned intervention has been utilized and tested at The Ohio State University (Robinson, 1941). However, this method has not been utilized in social work education with social work students.

Definition of Terms

A major purpose of the Bachelor of Social Work (BSW) program is the teaching of knowledge, attitudes and skills needed by social workers (Kruse, 1973). This research project will focus on knowledge acquisition, sometimes referred to as learning. Learning represents acquisition of patterns or kinds of behavior new to the learner (Building the Social Work Curriculum, 1960). Woolfolk (1987) defines learning and metacognition as follows:

learning: A relatively permanent change in an individual's capabilities as a result of experience or practice. These internal changes cannot be directly observed, so they must be inferred from changes in the individual's directly observable behaviors (p. 583).

metacognition: Knowledge about and monitoring of our own cognitive processes such as thinking, learning and remembering (p. 584).

The intervention practiced facilitated learning by helping students learn study skills which facilitated their metacognition, by providing a schemata or model of how to organize and fit together text content so it could be remembered for further use. Woolfolk defines schemata as follows:
Large basic units for organizing information. Schemata serve as guides describing what to expect in a given situation, and how elements should fit together (p. 557).

This study was concerned with student recognition and recall of instructional material rather than analysis. It was also concerned with retention of material (memory). According to Kuethe (1968), one of the most important skills acquired by a learner is study habits. This research study explored how the introduction of PQ4R study skills affected the recognition and retention of materials in the assigned text as tested by a pre and posttest of such material. The independent variable was nine half-hour planned classroom learning experiences along with homework assignments which were designed to assist students in understanding their learning habits and how these activities and behaviors do or do not facilitate learning.

Bloom's (1987) taxonomy of educational objectives was used to guide the level of learning expected. Only the cognitive domain was focused on, not the affective or psychomotor (skill development). Using this taxonomy, only the first two levels (knowledge and comprehension) were measured because the students in the research project were just entering the field. Previous tests of similar students have found that many do not possess even the basic language or elementary concepts necessary to comprehend the knowledge base for the field. This study focused on enhancing the beginning-level skills.
According to Bloom (1987), the cognitive domain includes objectives for learning which deal with the recall and recognition of knowledge and the development of intellectual abilities and skills. The first level in Bloom's taxonomy is knowledge. The behavior expected at this stage is storage of information and remembering it. The second stage, comprehension, requires the student to recall stored information and make some use of it (e.g. when taking an exam).

The cognitive perspective on learning is not a unified theory, but rather a group of shared basic notions about learning and memory, which was used to guide the research intervention. Cognitive theorists believe learning is a result of our attempt to make sense of the world. One construct dealing with how people make meaning is schemata. A schema is the structure that organizes vast amounts of information into a meaningful system (Anderson, 1975). The schema, thus, becomes a pattern or guide for remembering. Many cognitive psychologists believe schemata are key units of the comprehension process (Woolfolk, 1987). The schema becomes the framework by which to decide what details are important, what information to seek and what to remember. The intervention that was implemented is a schema that students were encouraged to adapt to meet their own needs. This should result in metacognition (knowledge about and control over thinking and learning activities).
Researchers such as Grasha (1987) suggest social work as a profession attracts persons who have a particular learning style preference (field dependence), which other researchers, Ward and Clark (1987), have indicated has significant implication for performance on objective exams. Field dependent persons find it more difficult to perform well on objective exams which call for memorizing and recalling factual material. This underlines the need for social work educators to conduct research which compares teaching methods in order to plan the most effective teaching strategies.

Conclusion

One very specific notion about learning and how comprehension can be facilitated was applied in an actual class not only to teach social work content, but also to facilitate or enhance students' understanding of their own metacognition. In order to access the effectiveness of the intervention, which was a pedagogical approach (teacher directed learning - Parker, 1937) an experimental group was compared with a control group that utilized normal student learning behaviors (Rogers, 1986). The research described within incorporates Charlotte Towle's (1954) challenge to social work educators to learn more about the learning process and in the process fosters student retention and recall of content material.
CHAPTER II

LITERATURE REVIEW

What is Learning

According to Woolfolk (1987), learning is a "relatively permanent change in an individual's capabilities as a result of experience or practice" (p. 583). Learning is one part of the human development processes. Development in the most general psychological sense refers to certain changes that occur within human beings. Not all changes are classified as development; only those changes that appear in an orderly manner and remain for a reasonably long period of time. As development progresses, some changes are seen as more adaptive, more organized, more complex and of a higher-level (Woolfolk and Nicholich, 1984). This interpretation of the developmental process is linear and hierarchial in nature and is not shared by all theorists.

Human development (student development) can be broken down into a number of aspects. Physical development deals with changes in the body, whereas personal development refers to changes in personality or in the expression of one's personality. Social development refers to change in the way an individual relates to other humans. Cognitive development refers to the changes in the way a person
thinks, processes, organizes and makes decisions about information. Moral development refers to how people make ethical decisions about right and wrong. Maturation is the natural and normal biological (or genetically programmed) process that triggers much human development. Maturational changes emerge over time relatively unaffected by the environment. Other developmental changes come about or emerge when individuals interact with their environment. The manner in which the environment shapes such development is open to debate. Most theorists, though, agree on a few general principles: (1) people develop at different rates, (2) development is relatively orderly, and (3) development takes place gradually (Woolfolk and Nicholich, 1987). The cognitive developmental changes that are triggered, encouraged or inhibited by environmental stimulus are the ones focused on in this study.

One theorist who has studied development of undergraduate students is William L. Perry, Jr. (1968). He developed a schema that traces the sequential structures through which students in a liberal arts college appear to construct their perception of the world. Perry's model divides student development into nine states or positions. The behaviors of students in the nine positions progress from a need for very concrete, clear information with little tolerance for ambiguous material to an ability to do very abstract thinking and understand and tolerate ambiguous
viewpoints. Perry's model has been criticized for being too linear, and having a very limited sample population (undergraduate males at Harvard). Some developmental theorists, like Gilligan (1982), charge that most research in development theory is based on studies of male subjects, and thus are biased. Developmental theory may suffer from some bias, but most cognitive researchers agree entry level students benefit from concrete, clear input.

Facilitating Learning

What can be done to facilitate learning? Fuhrman and Grasha (1983) suggest looking at education from three major perspectives: cognitive, behaviorist and humanistic. Each perspective makes certain assumptions about learning and offers suggestions about motivating students and facilitating acquisition of information (recall) and retention of material.

Behaviorists believe the process of facilitating learning depends on controlling the stimulus response sequence. Students are seen as passive recipients of teacher-directed learning activities. The humanistic approach advocates for the development of the whole person. This requires bringing together the cognitive and affective aspects of learning. Those who advocate use of the cognitive or information processing do not see students as passive learners. They believe people are basically active learners and respond to challenges and problems they face.
Therefore, the task of the teacher would be to present challenging material. Also, cognitive theorists assume persons have stable, preferred ways of processing information. Behaviorists suggest the use of frequent and immediate positive reinforcements to encourage learning. Those utilizing the humanistic approach would allow students to make choices and assume responsibility for their own learning. Cognitive theorists would involve students in the overall learning process and structure learning activities that facilitate the information processing activities.

Another explanation for some of the difference in learning observed in students was offered by Carl Jung. Jung described psychological types and suggested individuals have innate ways of perceiving and processing information (Campbell, 1983). Kolb (1981) also has developed a schema of different learning preferences and Kruzich, Friesen, and Van Soest (1986) applied Kolb's Learning Style Preferences to social work students in an attempt to facilitate learning.

A review of the literature on learning styles shows there are a range of definitions that have been used to explain this construct. The definitions range from concerns about preferred sensory modalities (visual, auditory, tactile, etc.) to descriptions of personality characteristics that have implications for behavior patterns in learning situations (e.g. the use of external or internal
cues to structure material). Others have focused attention on cognitive information processing patterns. Despite these differences in definition, it is now widely accepted that differences in student learning styles do exist, and research shows matching learning style, teaching style, and teaching environment does have an impact (Dean and Carbo, 1984). There are a variety of instruments available to measure different aspects of learning style (Drunn, 1984 and Rossman, 1986). But even with all this research and information, a definitive teaching approach has not been devised.

Most of the research on learning styles has dealt with teaching teachers to diagnose student learning styles and match teaching styles accordingly. Robinson (1945) pointed out that students have difficulty diagnosing their own difficulties. But Hyman and Rosoff (1984) suggested this approach is not realistic. No teacher could change his or her style enough to accommodate each and every student's style. Rather, Hyman and Rosoff suggested utilizing individual awareness of learning style to foster student growth. Thus, the teacher would share leadership and encourage students to take responsibility for their own learning. This model seems especially applicable to college education (Levin, 1988).

Several researchers (Robyak, Patton and Downy, 1977 and 1978; Shade, 1983; and Doyle and Rutherford, 1984), have
demonstrated that sharing learning style information by itself is not always sufficient to improve students' grade-point averages. Some type of training must accompany the information, so that new strategies can be learned, practiced, adopted, and internalized. Utilizing PQ4R principles in the classroom for construction of homework assignments allowed such training.

Early in the twentieth century, E. L. Thorndike (1928) used empirical studies to investigate the process of learning. Around the same time, Francis Parker (1937) demonstrated student-centered teaching methods. Thus, the idea that learning style effects learning and that students need to take responsibility for their own education and become self-directed are not new ideas. What is new and unique is applying educational principles effectively in social work classes to see if such application and integration can facilitate learning of social work content. As early as 1954, Charlotte Towle called for an attempt to analyze learning responses. She wrote:

> It is evident that to understand the learning process of adult learners in a profession, we must study their response to the professional education situation. Professional education must do its own research. p. 32.

The purpose of this study was to do such research.

Grasha (1987) and Townsend (1985) have suggested that persons with different learning styles are naturally attracted to different professions. One type of learning
style preference with career implications is field independence or field dependence. Social work is one profession that is more likely to attract field dependent persons.

Witkin, Ottman and Raskin (1947) developed the concept of field independence and field dependence. They also developed an instrument widely utilized to measure this construct, the Group Embedded Figures Test (1971). According to Witkin, the construct field independence and field dependence (FI/FD) are cognitive styles, consistent modes of functioning which individuals use in their perceptual and intellectual activities. Witkin further suggests that these cognitive styles are broad and have implication for total personal functioning. The Group Embedded Figures Test (1971) measures one's ability to break up and organize a visual field in order to keep a part of it separate from the field. Thus, the test measures one's ability to overcome an embedding context and represents contrasting ways of approaching a field (context). Witkin believed that scores indicated a dimension of cognitive function he called global versus analytical. The person with a field dependent (FD) score processes content in a global fashion seeing things in context and having difficulty separating a part from the whole, while field independent (FI) persons find it easier to place their own structure on material and see a part as separate from
context. Witkin implied FI was a more developed method of processing information which resulted in analytical problem-solving skills. But if examined from a different perspective, say that of Gilligan's (1983), a more accurate, less biased way of evaluating the variance is to see them as different ways of viewing the world - one view from within context (an approach advocated by the social work profession, not differentiating person from the context) and another view more detached and analytical, separating parts from context. Seen in extreme, each point of view could be pathological from total enmeshment with no separate self to total differentiation and detachment from the external world. It is interesting to note at the time Witkin initially conducted his research, men were more likely to obtain FI scores. Some, like Rubin (1975), challenge Witkin's conclusions as gender bias.

In Witkin and Goodenough's recent (1982) writing, field dependent and field independent behavior is described as being bipolar and value neutral. The preference indicates the extent of external or internal references used to restructure and make meaning of a situation. Each style has advantages, depending on the task called for. For example, field dependent persons develop more competencies in interpersonal skills and field independent persons develop skills in cognitive restructuring.
Researchers do agree there are different ways of perceiving and processing information, and these constructs can be a useful tools for understanding how students prefer to learn. According to Witkin, Ottman, Raskin and Karp (1971):

Cognitive styles tend to reflect personalistic consistencies. Field-dependent persons, for example, exhibit a high reliance on the surrounding field in order to make meaning of a situation and they prefer to be with people. Field independent individuals are more autonomous, socially detached, analytic-oriented, and rely on internal cues to structure and make meaning of a given situation. (p. 22)

Cognitive learning style such as FI/FD embrace both intellectual and personality functioning. These stylistic dimensions of personality influence how students learn, how teachers teach and how teachers and students interact. Understanding stylistic preferences can help when trying to structure learning activities (Thomas, 1986). Some FI/FD characteristics are presented in chart form for clarification (Grasha, 1987 and Woolfolk, 1987).
### Field-Independent and Field-Dependent Characteristics

#### Cognitive Characteristics

<table>
<thead>
<tr>
<th>Field-Independent</th>
<th>Field-Dependent</th>
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<tr>
<td>Able to analyze concepts &amp; stimuli into their parts rather easily</td>
<td>Sees things in context may need explicit instruction on how to analyze</td>
</tr>
<tr>
<td>Enjoy working with abstract ideas</td>
<td>Have more difficulty learning abstract ideas</td>
</tr>
<tr>
<td>Able to analyze and structure problems</td>
<td>Accepts structure given</td>
</tr>
<tr>
<td>Uses internal cues to structure and organize material</td>
<td>Use external cues to structure and organize material</td>
</tr>
<tr>
<td>Needs help focusing on the broader social context</td>
<td>Better at learning material focusing on social content</td>
</tr>
</tbody>
</table>

#### Interpersonal Characteristics

<table>
<thead>
<tr>
<th>Field-Independent</th>
<th>Field-Dependent</th>
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<tbody>
<tr>
<td>Somewhat distant</td>
<td>Rather warm</td>
</tr>
<tr>
<td>Able to function well in ambiguous situation</td>
<td>Not able to function well in ambiguous situation</td>
</tr>
<tr>
<td>Prefer to work alone, less likely to ask for help</td>
<td>Prefer to work with others</td>
</tr>
<tr>
<td>Not as sensitive to non-verbal messages</td>
<td>More sensitive to others non-verbal messages</td>
</tr>
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**Figure 1:** Field-Independent, Field Dependent Characteristics

According to Hale (1982), FI/FD learning styles refer to differences in methods of selecting and classifying...
information. Generally, school systems require and reward one specific approach, analytical. Most objective exams call for field independent behavior. Thus, another factor to be considered when analyzing results of exam is whether the difference observed in students' performance is due to measurement (created because exams favor one type of learning style over another) or truly due to difference in students' comprehension. Hale suggests that learning styles are developed through socialization. She found that black children were more likely to be field dependent and suggested this was one reason they, as a group, did not do as well in school as their white counterparts who are more likely to be socialized in field independent thinking. Other recent research (Witkin, 1982) supports Hale's contention that socialization has an impact upon learning style performance. Because of social works' interest in facilitating and encouraging minority students, this reinforces the need to do research in the area of facilitating learning for all learning styles.

Higher education has tended to reward FI behavior. If it is accurate that FD persons are attracted to social work and their preferred style of learning is less likely to be rewarded in higher education, then training in skills that would facilitate students learning field independent techniques could be highly beneficial (Gordon, 1986). PQ4R is designed in such a way it can be used to help students
learn how to place structure on their learning of content material and increase retention, and thus, facilitate learning FI skills.

Much research examining the relationship between field independence and dependence learning styles and cognitive outcomes (or achievement as measured by objective exams) has been conducted. Davis and Frank (1979) and Marx, Howard and Winen (1987) found no difference in effectiveness of learning between the two different styles as far as completing tasks goes, but they did observe a difference in how that process was accomplished. In other words, this research suggests there are different ways of reaching the same outcome (doing well on evaluation measures).

Recent Research

In 1971 (Pohek), a report on curriculum content and issues concerning undergraduate social work education was published. Pohek reviewed the relevance of different learning theories in relation to teaching procedures. After examining learning theories (Gagne', Wallin, Travers and Miller), Pohek concluded that Hilgard had developed the most useful framework for the formulation of learning principles potentially useful in social work practice that integrated these different theories on learning. Hilgard developed a framework by identifying the concepts which varying theories had in common and utilizing them rather than focusing on how theories differ. The intervention utilized similarly
incorporates principles of varying learning theories. For example, behaviorist use of positive reinforcement to encourage learning, the humanistic approach of empowering students by sharing meta-cognition information and the cognitive approach of presenting activities that encourage students to manipulate and interact with information in their text. Although this integration was possible, the major principles utilized for structuring PQ4R were cognitive principles.

Krathwohl (in Glick's report, 1971) contained a list of psychological principles that help teachers facilitate students' achievement of integration in his/her learning: (1) students' background needs to be acknowledged and strengthened so new concepts can be integrated, (2) students' attention should be guided to similarities between new material and old, (3) the material needs to be on the conceptual level appropriate to the students ability and maturity, (4) if the exercise is likely to be threatening, efforts should be made to minimize the threat by establishing a permissive atmosphere, (5) students are more likely to do what is required if they know what is expected, (6) individual cultural backgrounds should be taken into consideration, (7) new material should be presented in such a way students can accept, but not be bound by it, and (8) the teacher should model integrative behavior. The intervention was designed with these principles in mind.
This research utilized the cognitive perspective on learning. The rationale for this focus was the extensive, empirical studies on retention and recall of material utilizing the cognitive approach (Robinson, 1947; Anderson, 1975; and Gagne', 1965). The intervention is pedagogical in nature. This method was chosen because it seems to fit more successfully with the developmental needs of freshmen and sophomores (according to Perry, 1968). What was unique was that students were encouraged to learn about their own learning. This type of focus has been used by Epstein (1987) and Crider (1964). Crider suggests educational objectives for a social welfare course using Bloom's taxonomy. This framework can be summarized using four major constructs: comprehension, translation, interpretation and synthesis. Students would move through these stages when involved in a successful, real, creative learning process. Because of the entry-level status of the course used in this study, students were only expected to develop competency in the beginning levels of Crider's model.

Bransford and Stein (1984) see as a major part of the educational process teaching problem-solving strategies. This approach offers another justification for teaching students how they learn and how to solve future learning problems so they can use these skills after they leave the classroom. A need for such training is apparent when growing evidence indicates high school students do not have
the reading or study skills needed to comprehend content material in textbooks (Jones, 1988).

Bridge Between Content and Learner

Some authors (Block, 1980; Griskey, 1980) have charged that teachers must approach their teaching more systematically in the sense that instruction should bridge what is to be taught and to whom it is to be taught. One way to bridge this gap is to facilitate student learning of content material by teaching specific study skills which encourage organizing and processing material in a way that fosters comprehension and retention. A recent study by Karjala (1988) testing the results of sharing instructional objectives, pre-questions and post-questions with students in order to facilitate learning in social work classes and discovered the use of pre-questions significantly improved recognition and recall of content. These questions acted as advance organizers. Such studies build the knowledge base to bridge the gap between student and course content. The pretest served as an advance organizer in the present study.

Dolon, Blakely and Hendricks (1988) compared three different teaching methods in an introductory social work class. The three methods were: (1) Personalized System of Instruction, a self-paced mastery orientation instructional method; (2) using undergraduate teaching assistants; and (3) Infracom, which utilizes students in the class to help diagnose problems and develop intervention strategies as the
class progressed. All three methods produced a significant change in learning but, students indicated they were not motivated to put much effort into the duties associated with Infracom because credit was not given for their efforts. This issue of motivation was addressed in this study by attaching five percent of student grade to the completion of intervention assignments.

Main (1980) wrote that those who teach realize effective study methods when utilized by students contribute to more learning and to success in university or college courses. In his research with college students, Main discovered undergraduates know a great deal about effective study methods but seldom apply them. After reviewing much of the research on college success, Main and Beard, Bligh, Harding (1979) concluded: (1) good study methods alone are not likely to lead to academic success; teachers have to play an extensive role in encouraging the use of study methods, (2) the individuality of students needs to be recognized when suggesting study guides and methods and (3) teachers should not teach to the exam but teach the students how to take exams. With the present research study skills were built into the overall structure of the class in order to encourage students to use good study procedures.

One of the most enduring systems for fostering understanding and remembering content material is SQ3R (survey, question, read, recite, review), developed by F. P.
Robinson and adapted by Thomas and Robinson (PQ4R). Different studies reported by Woolfolk (1987) support the effectiveness of PQ4R. PQ4R (SQ3R) is a systematic instructional program that fosters recall and retention of information. This approach goes beyond merely providing educational offerings and teaches students how to take full advantage of their opportunities to learn. Thomas and Robinson's method, explained in the treatment section, was the intervention method used in this research study.

From the review of literature, one can see much has been written about learning. A number of perspectives (behaviorist, cognitive, humanistic), human behavior theory and learning styles can be utilized to explain how to motivate students to learn more effectively. The difficulty in reviewing such material is deciding what perspective, theory or model seems to explain the most phenomenon in order to guide teaching strategies. Each explains only a portion of the overall picture of the educational process. The dilemma is to design a practical way to integrate these perspectives, theories and models and plan effective strategies (content, assignments and class experiences) that can actually be easily applied in existing undergraduate social work classes (Laird, 1985; Lowry, Bloksberg, Walberg, 1971).
Alan Rogers (1986) writes that the learning process itself can be taught. Learning is an activity in which we all engage and which we can improve if we pay attention to the strategies involved. Rogers has developed a list of factors that effect learning: (1) motivation, (2) awareness of student's difference, (3) awareness of student's existing knowledge and attitudes, (4) reinforcement, (5) practice opportunities, (6) activity centered learning, (7) division of material into learnable units, (8) guidance as to appropriate responses, (9) spelled out generalities in specific terms and (10) presentation skills. Factor 3, 4, 5, 6, 7 and 8 were incorporated into the research treatment plan.

A number of specific strategies have been analyzed to determine their effectiveness in facilitating retention and recall. Mudd (1987) found the use of advance organizers was helpful. Woolf (1987) explains advance organizer as follows:

An initial statement about subject matter that provides a structure for information that follows, thereby making it easier to learn and remember. An organizer both introduces and sums up the material to be learned. (p. 577).

Utilizing this principle, the Basic Knowledge Exam developed to measure student achievement was used twice (first day of lecture and eighth lab period) as an advance organizer; thus, providing students with cues as to the material they were being held accountable for on the final exam.
Recent research by Pais, Newman and McVey (1982) on teaching students memory strategies, and Monsaas and Englehard (1989), which focused on the sociological factors (classroom climate), have helped draw attention to how complex the issue of facilitating learning in classroom is. However, according to the Handbook of Accreditation and Standards and Procedures from the Commission on Accreditation for the Council on Social Work Education, which sets the policy standards for social work education, the first goal for the "structure of social work education" is:

...for students to integrate the values, knowledge, and skills of the profession into competent practice. The achievement of this goal demands institutional clarity about what students should learn, flexibility in programming and teaching to adapt to the varied learning patterns and backgrounds of diverse students, and commitments of time and resources to the educational enterprise. (p. 4)

This research will contribute to the implementation of these policies.

Conceptual Framework

An interest in learning strategies is a natural outgrowth of a change in orientation from behaviorist theories to cognitive theories of learning. The behaviorist approach focused on how presentation of material influences behavior. In contrast, the cognitive approach to learning seeks to understand how incoming information is processed

The cognitive approach has changed our conception of the teaching-learning process in several ways. Instead of viewing learners as passively recording the stimuli that the teacher presents, learning is viewed as an active process that occurs within the learner and which can be influenced by the learner. Instead of viewing the outcome of learning as depending mainly on what the teacher presents, the outcome of learning is supposed to depend jointly on what information is presented and how the learner processes that information (p. 316).

This research focused on the PQ4R strategies (how learning was presented) and student effort (what they did with the material presented) in order to address the interaction between material and student.

The term meta-cognition has been used to refer to students' knowledge about their own cognitive process and their ability to control these processes for organizing, monitoring and modifying them as functions of learning outcomes. The purpose of this research was to teach students a scheme (or blueprint) of how to process information in an attempt to facilitate their understanding of their own meta-cognition process. Robinson's techniques conform to the principles of the information processing model of cognitive psychology. Information processing model assumes cognition can be analyzed into a series of stages through which one attends to stimuli, transforms the stimuli into meaningful symbols (pattern recognition), stores those
symbols (memory) and then retains it for use in other situations (Solso, 1988).

The following is a chart of the sequentially organizing processes leading to a response suggested by Bourne, Dominowski, Loftus and Healy (1986): the right hand column outlines how the intervention in SW 220 meets this sequential process.
<table>
<thead>
<tr>
<th>Sequential Learning Process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td>Environment</td>
</tr>
<tr>
<td>Attention</td>
</tr>
<tr>
<td>Perception</td>
</tr>
<tr>
<td>Pattern Recognition</td>
</tr>
<tr>
<td>Maintenance and storage rehearsal</td>
</tr>
<tr>
<td>Retrieval of details</td>
</tr>
<tr>
<td>Construct of a coherent memory</td>
</tr>
<tr>
<td>Decision-making</td>
</tr>
<tr>
<td>Response</td>
</tr>
</tbody>
</table>

Figure 2: Sequential Learning
Woolfolk (1987) suggests guidelines for teachers that have been developed by theorists using the information processing model:

1. Make sure you have students' attention.
2. Help students separate essential from non-essential details.
3. Help students make connections between new information and what they already know.
5. Present material in a clear, organized way.
6. Focus on meaning, not memorization (pp. 248-249).

Cognitive development is primarily concerned with the nature, outcomes and evaluation of learning. Educational psychology, a subset of cognitive development, focuses on learning in the classroom. Two assumptions of cognitive (educational) psychology are: (1) that the nature and functions of learning can be identified and (2) knowledge can be systematically transmitted to persons (Sprinthall, 1974). According to Ausebel, Novak and Hansean (1968), persons of normal intelligence can profit from systematic instruction in logically and empirically validated propositions about the nature and facilitation of the learning process.

One mid-range construct within the field of cognitive perspective is scheme. The scheme construct attempts to explain comprehension of new information by suggesting that various mental images (schemata) assist people to select,
organize and store the mass undifferentiated stimuli (Buhler and Snowman, 1986). Kazola explains:

The depth of processing model is another theoretical attempt to explain human cognitive processes. It is based on an information processing theory of learning and memory. According to this model, people process information at different depths, depending on the way in which they pay attention to the material at hand; the greater the attention, the deeper the processing of information and the stronger the resulting memory trace (1988, p. 21).

Using this theory, such instructional aids as PQ4R should encourage students to analyze the material more deeply and produce more retention when utilized. Strategies outlined in PQ4R provide a way of representing and manipulating information thus providing structure to material (Bransford, 1984). A central feature of the PQ4R technique is the question generation and question-answering characteristics. There is reason to suspect this aspect of the method encourages deeper or more elaborative processing of text material. The questions developed can act as advance organizers, the use of which research has indicated facilitates memory.

Cognition involves the ability to take in information, process it, retain it and retrieve it for use later. In other words, cognition involves the ability to learn and to think. One of the earliest cognitive theorists was Jean Piaget. Piaget developed the construct schema to explain how persons think and organize ideas and concepts (Anderson, 1980; Brainerd, 1978; Zastrow & Kirst-Ashman, 1987).
Piaget (1969 and 1980) called memory part of the operative action of a scheme. It is related to the assimilation incorporation and generalizing activity that transforms reality into the object knowledge. Every scheme is the result of assimilative activity which functions to incorporate the new to the familiar, to reproduce and generalize what has been discovered. In other words, in order for learning to take place, all new information assimilated must be integrated (accommodated) with what is already known. Piaget felt schema were innate (from within the organism) and modified by environmental forces. Other cognitive theorists (Anderson, 1980) use schema in a different way. For example, Gagne', 1985, uses the construct of schema to explain how persons organize information.

Schemata are generic ideas underlying objects, events, and action that the learner brings to a text whose contents has to be learned. Schemata typically provide a basis for problem-solving. To solve a problem, a learner must first possess a schema that represents the problem in terms that make possible the application of relevant rules that will lead to solution. Thus, schema can come from within the person or be provided by the environment. In the case of this research, the study habits provided an external schema that students could use to organize and store information in long-term memory.
Intervention

The following visual diagram indicates the plan of intervention, which is explained in detail in the next chapter:

---

**Intervention Plan**

**Start**

lab & study skill assignment (PQ4R)

↓

experimental group

students bring to class

pretest (advance organizer)

outcome measures—posttest and final grade

demographic characteristics

control group

lab & learning journals

---

**Figure 3:** Directional Intervention Plan
CHAPTER III
METHODOLOGY

Research Design

A quasi-experimental design was employed. The statistical test which was used to compare the mean scores of the control and experimental groups was a two way analysis of covariance. This analysis can be used to compare the group means on dependent variables after the group means have been adjusted for differences between the nonequivalent groups on relevant covariates. This design controls for the main threats of history, maturation, testing and instrumentation as rival explanations of the research hypothesis by utilizing a control group.

Quantitative research methodology was utilized in order to examine if the manipulation of the independent variable would significantly influence the dependent variables. A true experimental design as explained by Campbell and Stanley (1963) could not be conducted. There was no random selection of subjects. Intact groups of students comprised the study population. No random assignment to group or treatment was attempted either due to scheduling requirements.
According to Huck, Cormier and Bounds (1974), quasi-experimental designs with intact groups decreases subjective reactivity, due to the fact that the subjects do not know which groups received which intervention prior to selection. In order to control even further for the problem of selection, demographic, and pretest data were collected for use in statistical control.

In the absence of complete knowledge of the selection process (by students), there is no single correct way of dealing with the problem of nonequivalence due to the use of intact groups. Trochim (1986) advocates the use of statistical adjustment (analysis of covariance) and quasi-experimental design features to improve inference when dealing with intact groups.

The actual quasi experiment was conducted in winter quarter 1989. All students attended a lecture presented by a faculty member on Mondays. The lectures covered social work policy content material. Then students attended one of the four labs. Students self-selected lab sections, dependent on personal preference for time slot unless an overload occurred, and then the master computer randomly assigned students. Two Graduate Teaching Assistants were responsible for conducting the labs. Each GTA was assigned a treatment group and a control group. This facilitated controlling for instructor bias and variability of instructor teaching style. Both GTAs received training the
previous fall quarter in specific skills and techniques that were used with the experimental groups. The intervention was detailed in a script (see Appendix A). The outcome measures consisted of a posttest covering the material in the text and the final grade in the course. The research design utilized is illustrated in the table that follows:

<table>
<thead>
<tr>
<th>Control Group GTA 1</th>
<th>0</th>
<th>0</th>
<th>n = 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group GTA 2</td>
<td>0</td>
<td>0</td>
<td>n = 16</td>
</tr>
<tr>
<td>Experiment Group GTA 1</td>
<td>0</td>
<td>X</td>
<td>0</td>
</tr>
<tr>
<td>Experiment Group GTA 2</td>
<td>0</td>
<td>X</td>
<td>0</td>
</tr>
</tbody>
</table>

Figure 4
Research Design: Nonequivalent Control Group

As diagramed in Figure 4, the first observation took place the first week of class when demographic data, value survey information and pre exam information were collected. Then the PQ4R intervention or journal assignments (control group) began. The second observation occurred when posttest data, student effort information, post value survey data and student evaluation information were collected.

One control group had 14 students in it and the other had 16. The one experiment group had 21 students and the other had 18. The total sample was 69 undergraduate students.
Babbie (1989) defines a control group as a group in experimental design method in which the independent stimulus has not been presented. In this study the control groups did have a placebo stimulus, however, they did not receive the PQ4R stimuli. Thus, it seemed more appropriate to call the two labs control rather than comparison groups.

When comparing teaching methods, using groups with different teaching methods sometimes is utilized. If the androgogical method-journal (asking students to tell researchers what facilitated their learning) had been more developed, allowing students not only control over how they studied but also what was to be studied and how it would be evaluated, this could have been considered a comparison of methods, rather than experimental-control comparison. The rationale for having any kind of intervention at all in the control groups was to control for the Hawthorne effect and to deal with an ethical issue. Because the entire class met in one large group on Mondays, it was logical to assume that they would discover the labs were performing different tasks and assignments. If the control groups had no task to complete, students would have known which group was experimental and that may have biased their performance. Therefore, the control group was given the journal exercise. In order to encourage motivation to complete assignments, credit was given for assignments turned in. It would not have been ethical to require one group to do assignments and the other
not, so a task had to be designed (the journals) so all students had an opportunity to earn the same number of points.

The purpose of this research was to document the impact of the educational process and, more specifically, to assist in the sharing of information about learning which should facilitate retention and understanding of knowledge content. With this study an empirical test of the application of specific content relevant to study skills was examined to see if it facilitated learning of text material.

Research Questions and Hypothesis

The researcher was interested in knowing if the use of study skill techniques could facilitate retention and recall of material more than students' regular studying methods. It was hypothesized that by the end of the quarter the experimental group which received training in study skills would retain and recall more content from the assigned text (as measured by the posttest), than the control group did. Since the posttest made up 60% of the final grade, it was also hypothesized that those in the experimental group would receive statistically significant (alpha .05) higher grades than those in the control group. These hypotheses were tested by using the following statistical hypothesis.
Hypothesis

Statistical or Null Hypothesis:

The adjusted means of the populations represented by the control and experimental groups are identical following the intervention.

Alternative Hypothesis:

The adjusted means of the populations represented by the control and experimental groups are not identical following the intervention. The experimental group mean will be statistically higher than the control group mean.

Sampling

Seventy-four undergraduates enrolled in Winter Quarter Social Work 220. Of the seventy-four, sixty-nine were subjects in this research project. Five students were excluded (three males and two females). One male dropped out of the course half way through and thus, could not be a subject. The other male was a senior and did not take the posttest, so no pre and post comparison could be made. The third male started two weeks late in the quarter and never turned in demographic data so no comparison could be made. Two female individuals were taking the course as part of the licensing requirement. They both had undergraduate degrees (one also had a master's), were older, married and worked full time (thus, not being representative of the sample this intervention was designed for) and so the decision was made
to exclude them as subjects. Thirty of the 69 were in control groups and 39 were in experimental groups.

Human Subject and Confidentiality

This research project comes under Human Subject Exemption #1, b, as discussed in *A Digest of Human Subject Program Guidelines* (1984).

Activities exempted from review by OSU Human Subject Review Committee are:

1. Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as:
   b. research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods (no page number).

Students' identities were known to the researcher only. After all the test scores and demographic material were collated, code numbers were provided. All data were then examined using code numbers only.

Research Setting

The intervention took place in an introductory social work course at a large public midwestern university. The course was required for social work majors, but open to students with undeclared or other majors. The entire class met on Mondays for a large group lecture and broke out into four smaller group lab sessions (meeting either on Tuesday, Wednesday, Thursday or Friday). Students self-selected
their lab sections. Students knew they were involved in a research project dealing with learning and that different activities were assigned to different labs. They discovered this when questions were asked in lecture referring to lab assignments. Such questions were answered honestly, but briefly. Students showed little or no curiosity or concern about what other labs were doing.

The labs were scheduled to last one and one half hours and consisted of experiential exercises designed to facilitate discussion and value exploration. In the experimental groups, the treatment occurred during the first half hour of each lab. In the control groups, students were asked to keep a journal and hand in for credit a description of what facilitated their learning. During the beginning of each lab session in the control group, questions were asked to encourage students to focus on their learning. In the treatment groups material using PQ4R/SQ3R principles was presented along with practice and feedback exercises on learning problems. The remaining portion of the lab periods were identical for all four groups.

Variables

The variables of interest in this study were the independent, dependent and control variables. There were two kinds of independent variables: manipulated (treatment) and ascribed (student effort). The dependent variables were the score on the posttest and the final grade points.
Control variables were the demographic data, pretest scores on the Basic Knowledge Exam and the Howard Value Scale and information gained on student learning style preference (both self reported and results of a Group Embedded Figure test). Figure 6 illustrates the variables examined. Control variables were utilized to see if statistical control was necessary due to the use of nonequivalent groups.

<table>
<thead>
<tr>
<th>Significant Variables Examined</th>
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<tbody>
<tr>
<td>Independent Variables</td>
</tr>
<tr>
<td>Manipulated Variable</td>
</tr>
<tr>
<td>EQ4R Study Skills</td>
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<tr>
<td>No Treatment (journals)</td>
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<tr>
<td>Ascribed Variable</td>
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<tr>
<td>Student Effort</td>
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<tr>
<td>Attendance</td>
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<td>Assignment</td>
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<td>Quality of Assignment</td>
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Figure 5: Independent, Dependent and Control Variables
Independent Manipulated - Treatment

The manipulated independent variable was the implementation of the PQ4R treatment which was prepared with detailed description necessary to insure consistent and equitable implementation of treatment by two different Graduate Teaching Assistants (see Appendix A). SQ3R was developed by F. P. Robinson (1961) and adapted by Thomas and Robinson in 1972. The later version PQ4R, is an acronym which means Preview, Question, Read, Reflect, Recite and Review. This approach was presented to students who were asked to do homework assignments which require them to utilize specific techniques. The assignments related to the material they were assigned in their text. Feedback was given to correct any misinformation that became apparent when assignments were turned in. Students were given half a point for each assignment turned in, but no letter grade was assigned.

According to Robinson (1961), hundreds of colleges and universities have how-to-study programs and one of the oldest and most successful is at The Ohio State University. The research on how-to-study work began in the early 1920's. Psychologists discovered self-taught skills in every field are inefficient.
A special need during World War II gave particular impetus to the discovery of higher-level study skills. Some soldiers had to be trained quickly for specialized positions, and although the soldiers selected were very bright and had excellent student records, they were found to be extremely inefficient in work methods. As a result of these findings, educators designed and taught them various new higher-level study skills. The initial presentation of some of these new skills, e.g. the SQ3R method of study, was made in 1946. This study method, or some variation of it, has been included in most how-to-study books since that time and is one indicator of the importance of higher-level study skill instruction...(Robinson, p. iv.)

The higher-level skill instruction refers to teaching students about how they can improve their own learning. Advice about how to study in and of itself is not effective. Robinson suggests four factors that need to be present in order for this method to facilitate effective studying.

1. The learning must be individualized in order to meet the unique students needs.
2. Actual practice of skills is necessary.
3. The practice should be relevant to actual classes students are enrolled in.
4. Student must realize the importance of the training and believe it is worthwhile and will lead to improvement.

Robinson developed his SQ3R method at OSU and implemented and revised it over a 40 year period. Gagne' (1985) suggested the instructional sequence that facilitates learning is as follows: (1) gain attention of student, (2) inform learner of the objective, (3) stimulate recall of prior knowledge, (4) present stimulus material, (5) provide learning guidance, (6) elicit performance, (7) provide
feedback, (8) assess performance and (9) enhance retention and recall. When applied appropriately, Robinson's method incorporates the above mentioned eight steps. An attempt was made to implement the intervention in such a way as to meet Gagne's criteria with this research.

A number of educators, including Gleason, (1988) and Heinrichs and Lehnert, (1986), have suggested the need to teach the less successful student some strategies that will allow them to cope more effectively with content material. Some have developed Study Guides similar to Robinson's (Phipps, 1983; Wilf, 1986; Pauk, 1984). A number of texts, for example Woolfolk (1987), used to train teachers introduce PQ4R, which is an adaptation of SQ3R, as a suggested tool to facilitate learning with their students. SQ3R was developed to be used as a course on Learning Study Skills. PQ4R is an adaptation of the method for utilization in regular classroom situations. PQ4R is explained in the figure that follows:
Preview: Introduce yourself to the text. Read the overview, objectives, section headings and summary, chapter headings. Formulate a general idea of what the text is trying to tell you.

Question: Break the text down by chapters. Use the subheadings to form questions you'll be reading to answer.

Read: Read the text. Did you answer your questions? How does the material connect with what you already know? Does any of it challenge what you believe?

Reflect: Now that you have read the material, answer the questions you created without looking at the book. Did you understand what the authors were trying to say? If not, go back over the sections that were unclear.

Recite: (To be done in class.) Share, compare, contrast the results of your reflections with someone else and correct any misconceptions.

Review: This is a cumulative step when one connects and reviews previous chapters. The mid-term quiz used as in class review.

Figure 6: PQ4R: Explanation

Some suggestions and reasons have been offered as to why PQ4R is effective. First of all, it helps students become aware of the organization of a chapter. It forces students to study chapters in sections and forces students to process information more deeply and elaborately. It encourages students to form connections between old and new material thus, facilitating memory storage. This method can encourage a student to study in a more systematic way with feedback to correct misinformation (Woolfolk, 1987).
Robinson (1961) indicated that it takes more than knowledge to improve study skills; practice must be a part of the training, but it has to be practice geared to each student's particular weaknesses.

Studies, for example, Main's, (1980), have indicated that social work students are more likely to be field-dependent and thus, less likely to develop their own structure for learning. PQ4R provides such structure and should facilitate their recall and retention of text content material. This method appears to be especially relevant for social work students because it teaches students to learn how to organize and make meaning of the material. It gives them a schema which can be used in other classes to break down and analyze material. It gives them the tools to solve their own learning problems and it exemplifies how social workers help clients to help themselves.

The second level of the manipulated independent variable, known as the control condition, was introduced to students as follows:

You are involved in research focusing on facilitating learning. Two different approaches could be utilized: (1) would be teacher guided and students would be told how to study, or the other is (2) student driven; students will decide themselves how they learn. In the second approach, students would tell researchers what facilitates their learning and what they do to develop their own learning processes.

With that in mind, students were asked to keep weekly journals about their learning process. On a weekly basis,
the GTA posed questions related to student learning process (e.g. "How are you studying for the final?") to help focus their writings.

The independent variable was the teacher directed intervention (PQ4R). This was compared with normal student learning (journals). The experimental groups were given assignments, practice and a rationale for use of PQ4R skills (this is explained in detail in Appendix A). The control groups were encouraged to keep journals in which they monitored and shared how and what facilitated their learning. The control intervention focused responsibility on students for directing their own learning. The journal intervention was utilized in order to control for the Hawthorne effect. It avoided the danger of allowing one group of students to feel special and, therefore perform better due to the attention given them rather than the specific intervention. Another rationale for the journal method was to discover if emphasizing student responsibility for learning in and of itself was sufficient enough to cause significant change.

A slight modification was made in the experimental intervention when a few students expressed resistance to doing the assignments. Less time was spent on "teaching" or telling students the reasons for a procedure than originally planned, and rationales were elicited from students in order
to incorporate more active participation of students in the learning process.

Ascribed - Student Effort

It is difficult for an intervention to be effective if a student is not available (in attendance at class) to receive the practice, instructions, encouragement or feedback. Even if students are present, it does not mean that they actually cooperate with the intervention planned. For example, some students did not hand in assignments or journals. Others handed something in, but it was obvious that they had not put much effort into it (for example, with the journal, one student handed in blank journal sheets every week, and others wrote things like, "I was sick so I really did not do anything this week."). With the PQ4R assignment, one student reported she read only what she had to read to do the assignment and another reported that she did her assignment ten minutes before class and she observed others doing likewise. On the other hand, some students handed in homework assignments that went beyond the bare minimum. They did something extra, while others put little effort into the task. As reported earlier, PQ4R must be practiced in order to be effective.

Thus, some factors that influenced or interacted with the intervention were (1) whether students actually attended lab, (2) whether they handed in the assignments and (3) the quality of assignments handed in. After the class was over,
the researcher evaluated assignments and journal entries. One point was given for handing in the assignments and a second point if students' written response showed more than minimum effort. For example, students were to talk to each other about a chapter; one student made an appointment with someone working in the field that the chapter covered and interviewed her in order to get questions answered. This was an example of more than minimum student effort.

Labs were compared across the three motivational or student effort variables listed and only the quality of assignments varied significantly between control and experimental groups. This variable (Quality Assign.) was used as the second independent variable. It was an ascribed independent variable with two levels: high effort and low effort.

Dependent

There were two dependent variables or outcome measures, posttest scores on Knowledge Exam and final grade points. The intervention was designed to directly affect the posttest scores. The posttest consisted of an objective exam of content in the textbook. Final grade was also used as a dependent measure because 60% of the final grade consisted of the score on posttest.
Knowledge Exam

There are several types of data one might use to assess students' achievement in a classroom situation. In the SW 220 class, one final exam and three lab exercises were utilized to assess students' learning. Historically, students have done well on the lab assignments, but the results on the exam have been below the instructor's expectations. Rather than lower expectations for the recall and retention of textbook material measured with the final exam, the intervention described above was designed to facilitate learning of textbook content material. In order to measure such retention and recall of textbook content, an achievement examination which measured the learning of content of the required text was developed. The quality of a classroom test depends on the relevance of the tasks included in it, the representations of its sampling of aspects to be learned and the reliability of scores (Payne, 1967).

Fuhrmann and Grasha (1983) suggest four criteria for improving the construction of exams: (1) determine what is to be measured, (2) decide what aspects of the content are to be measured, (3) develop a blueprint for exams based on learning outcomes and (4) let students know learning outcomes.

Schwartz and Johnson's (1988) text was chosen as the text for the course because it covered the basic content at
a level opportune for the students who usually took the course. Schwartz and Johnson discuss basic concepts in a manner appropriate for introductory, undergraduate student learning.

An exam covering the main ideas in the Schwartz and Johnson text was selected as one outcome measure for student learning. Because students in the class were entry-level, measurement of content material was done at the knowledge and comprehension level as outlined by Bloom (1987). At this level, students would be required to know common terms, specific facts, methods, procedures, basic concepts and principles. Recall and recognition of material is all that was required at this initial step of learning. Successful completion of this step is necessary for movement onto other more complex learning stages. The text authors Charles Schwartz and Louise Johnson divided their book, Social Welfare: A Response to Human Need (1988), into four main areas:

1. Societal welfare as a response to societal concern
2. Conditions that give rise to human need
3. Fields of practice
4. The contemporary social welfare system

They did not spend equal time on each area. Fields of practice actually covered half the text pages. The text table of contents was used as the blueprint for inclusion of content questions in the achievement exam. The initial pool of questions developed proportionately covered each chapter. After the exam was developed, critiqued by a panel of five
experts, field tested and critiqued by students in an actual SW 220 class, students were given the exam on the first day of lecture so they could use it as an advance organizer to facilitate their learning while reading the text. Also the scores were used as the pretest measure of student knowledge prior to intervention. With these procedures, Fuhrmann and Grasha's criteria for exam creation were satisfied.

An initial pool of one hundred and thirty-nine questions was compiled to test retention of content material. The multiple-choice items were taken from the Instructor's Manual that accompanied the Schwartz and Johnson (1988) text in order to more closely conform to what the authors thought were main ideas of this text. Some modifications were made to the questions using guidelines outlined by Fuhrmann and Grasha for writing multiple-choice items. For example, when writing multiple-choice items, the following guidelines for development of the stem of questions was utilized: (1) stems should be grammatically correct and (2) as short and clear as possible without lengthy qualifiers. Guidelines for the writing of alternative answers that were utilized were: (1) write alternatives in parallel form, (2) make sure they are grammatically correct, (3) have all alternatives similar in length, (4) use sparingly alternatives with absolute terms like all, none and never, (5) make sure alternatives are
unequivocally wrong, (6) divide answers evenly over a, b, c, and d, and (7) make sure the distractors are plausible.

Then forty-eight true and false questions were developed to test retention of content material using the text and Fuhrmann and Grasha's guidelines that follow:

Writing true-false items. (a) Be sure statements are related to important objectives. (b) Write the statements clearly and precisely. (c) Write items that require more than recall to get the right answer. (d) Be sure items require more than common sense or logic. (e) Watch for words such as never and all or often and some. These are cue words for the correct response. (f) Do not make false statements by just inserting no or not into true statements. (p. 171)

Establishment of Face and Content Validity

Five experts rated the appropriateness of the items used in the Basic Knowledge Exam. According to Gable (1986), establishing validity is an ongoing process, which continually addresses the appropriateness of the inferences to be made from scores obtained from the instruments. The panel of experts were asked to rate to what extent items on the test adequately sampled the textbook content. The panel was made up of two university professors and three Ph.D. candidates; three had taught a class using the text in question and the other two had taught similar courses and had the text to refer to when evaluating questions. A rating form was developed (see Appendix E) which asked each panelist to assign each item to the category it best fit and indicate how confident they were about their assignment. Frequency tables and percentage of assignment were developed
(see Charts in Appendix F). Thirty-nine questions received 100% agreement. Forty-six received 80% agreement. The most significant question for establishing content validity was: "In your professional opinion, does the enclosed exam appear to adequately cover the main concepts covered in the text Social Welfare?" Four persons (80%) strongly agreed; one person (20%) agreed; no one disagreed and no one strongly disagreed.

Nunnally (1978) indicates establishing validity for achievement test depends primarily on the adequacy with which the specified domain of content is sampled. The test must stand alone as an adequate measure of what it is supposed to measure. Validity cannot be determined by correlating this test with a criterion, because the test itself is the criterion of performance. Thus, validity is a measure of how carefully the exam was constructed. In the summer of 1989, the exam was administered to five persons ranging in age from 19 to 65, with educational backgrounds ranging from 8th grade to Ph.D. student, none of whom had any connection with the field of social work in a pilot test. The purpose of this was to eliminate questions that would be common knowledge, to find out if the questions were understandable to a range of persons and to find out how long it took to take the exam. The exam was too long. It had to take no longer than 45 minutes (because that was the allotted time available during the first class period
and it took between 45 and 60 minutes to complete in its original form). Therefore, some questions had to be eliminated. Seventeen of the questions were eliminated because the material they covered turned out to be general knowledge (all five persons answered them correctly).

**Establish test reliability**

A field test administration of the exam was completed in Fall Quarter prior to the experimental trial. The exam was administered to an actual SW 220 class and students reviewed each question and were asked to give critical feedback as to clarity of questions and changes were made incorporating student comments, including the exclusion of three questions. The Basic Knowledge Exam was the end result of this process and consisted of 93 questions.

The exam then was administered as a pretest in Winter Quarter before the research intervention took place. The test was analyzed for item difficulty and discrimination (Appendix F), utilizing procedures outlined by Payne, McMorris, DiLeonardi and Curtis (1988).

A Split Half Test analysis was completed on the posttest to establish reliability. Then estimates of item internal consistency and reliability were established using Spearman-Brown as suggested by Nunnally (1978). The alpha coefficient was .81.
The Split Half method was chosen for establishing reliability because the instrument was being utilized in an actual classroom and, although the test was given more than once, a test-retest approach was not appropriate because too much time elapsed between the different administration times and learning should have taken place. Due to the construction of the instrument and order of questions (all questions from each chapter were grouped together and all were designed to test recall and retention), it seemed appropriate to use the odd-even approach to evaluate the instrument’s internal consistency (Lindquist, 1951).

Achievement tests can be utilized for different purposes. The most frequent purpose is to discriminate among students and to test students using questions varying in level of difficulty. In order to measure these two factors, two indexes can be computed: (1) item discrimination and (2) item level of difficulty (see Appendix F). Another purpose of an achievement exam is to operate as a competency measure. Rather than discriminate among students, the purpose of the exam is to function as a tool to facilitate mastery learning of necessary material (Thorndike, 1971). The results of these indexes confirms that the posttest was not designed to discriminate among students nor to have the typical range of difficulty. The exam was designed to be a mastery exam. The purpose was to facilitate learning of material rather than discriminate
among students. All of the questions were written to test the lowest levels of knowledge (retention and recall). Thus, 82% of the questions had the same level of difficulty indicating consistency of design and most questions had low discrimination power. One reason for this low discriminant variation was because a review of the actual test questions, took place in the ninth lab, in order to give students a clear idea of what material they would be held responsible for. The results from the discriminant and difficulty analysis confirms the exam operated as a competency indicator of test material rather than as a discriminator among students.

**Final Grade**

**Description**

The second dependent variable was the actual final grade for the course. The grade was assigned according to the following criteria:

- 10% - Attendance in lab and handing in learning homework (either journals or PQ4R assignments). Credit was given for handing in material - no evaluation was made for grading purposes.
- 10% - Minority Paper (see Appendix G)
- 10% - Family Tree Paper (see Appendix G)
- 10% - Social Problem Quiz (see Appendix G) - done in class
- 60% - Final Exam (see Appendix D)
Reliability and Validity

The intervention was designed to affect directly the posttest scores. As indicated, the posttest (final exam) made up 60% of the final grade. Validity and reliability measures for the posttest portion of the grade has already been provided. The other assignments were graded by the two GTAs and although assignments were identical, no inter-rater reliability was established. There were a variety of measures for grading and expectations were given orally and in writing (see Appendix). These two factors should increase validity. The final grade determination was made by all three persons involved in teaching the course, the two GTAs and faculty person.

Control Variables

Because random assignment was not possible, some statistical control had to be exercised to equalize the groups. The following demographic data was collected on each subject: age, sex, race, class rank, father's level of education, mother's level of education, father's occupation, mother's occupation, years of social work experience, years of volunteer experience, undergraduate major, number of previous social work classes taken, application to the social work program, marital status, number of children, religious identification, grade-point average, why students had signed up for the class, had they taken a study skills
course, had they heard of PQ4R or SQ3R, and what was their preferred learning style.

Educational achievement is highly correlated with social class, according to Ballantine (1983). One's position in the class stratification system implies lifestyle, membership in certain groups, childrearing patterns, etc. Social class background can aid or hinder students. Schools generally have a middle class bias and students coming from that background come to college better prepared with skills to succeed. For this reason, data were collected on factors associated with class and status (i.e., parent's education and occupation, race, etc.).

Howard Value Scales

It has been suggested by some (Miller, 1987; Johnson, 1987; Moran, 1989) that one's values or attitudes may effect one's motivation to retain or recall material (Ausubel, Novak and Hanesian, 1978). Because SW 220 looks at a controversial subject, the social welfare system in America, it was possible that having values similar to those held by the profession of social work or divergent from it might have had an impact on learning. This was particularly true in SW 220 because it was open to students of other majors, for example, criminology.

The instrument used to measure values was the Social Humanistic Ideology Scale, developed by Howard and Flaitz (1982) (Appendix C). This particular instrument was chosen
because it was specifically designed for social work students and it deals with values discussed in SW 220 classes. Permission was granted by the authors for use of the scale.

The Social Humanistic Ideology Scale provides an objective measure of students' high and low identification with value positions associated with professional social work. The scale is a Likert-type attitude scale with theoretical foundation for the construction of a test consisting of a matrix which delineated several groups of professional value concerns drawn from social work literature. The major sub-scales were (1) human nature, (2) social justice, and (3) individual freedom. Howard (1985) defines the subsets as follows:

Social Justice - items in this factor addresses fairness and equality in the distribution of socializing and sustaining resources in areas of income, employment, housing and education, both for populations at large and those groups traditionally served by social workers, including racial/ethnic minority members of society.

Individual Freedom - attitudes toward women's issues, including expanded gender roles, variant life styles, such as same sex preference, and non-traditional family forms are the content areas represented in this subscale.

Human Nature - expectations regarding clients' motivations in seeking assistance from social welfare agencies and structural versus individualistic interpretations of clients' difficulties are the themes of this subscale.

This scale has been used with either undergraduate or graduate level college students enrolled in social work
classes (usually in large universities in the south). In 1988, Howard and Wilk had refined the instrument, eliminating a number of the original questions. This improved the reliability coefficient for the three subscales utilized to Social Justice, $r = .76$; Individual Freedom, $r = .73$; Human Nature, $r = .64$. The reliability coefficient for the present research sample was as follows: Social Justice, $r = .57$, Human Nature, $r = .71$ and Freedom, $r = .76$.

**Embedded Hidden Figure Test**

A major construct of the social work profession is the person in the environment. The profession encourages people to see problems in context. Furthermore, it is believed that without understanding the contextual nature of a problem, appropriate interventions cannot be discovered. Possibly because of this global rather than differentiated focus, psychologists like Grasha (1987) have reported research indicated persons who have a preference for field dependence learning are attracted to the profession of social work. Witkin, the developer of Group Embedded Figure Exam (1971) which is frequently used to measure field independence or field dependence learning preference, indicated one characteristic of field dependent persons is their difficulty separating parts from the whole. They see things globally or in context rather than putting their own structure on a complex situation and differentiating parts from the whole. The objective final exam, which was one of
the dependent outcome measures, was a field independent task. In order to do well on it, a student would have to break the total context (the book) down into main ideas and be able to recall them for an exam. Supposedly, persons preferring field dependence learning style have difficulty providing their own structure to any given material. This provided the rationale for hypothesizing they would accept the teacher given structure (PQ4R) and use it to study for the exam. Two measures of field independence preference were utilized. One was a self-report of preference and another was a Group Embedded Figure Test reported in Grasha's book *Practical Applications of Psychology* (Appendix C). Grasha does not indicate where he got the measurement, nor does he report reliability, but he does reference it to Witkin's Group Embedded Figure Test. The Group Embedded Figure Test (1971) has been utilized with a number of ethnic, racial and age groups but most frequently it has been used with both elementary and college age students. The original Embedded Figure Test, developed by Witkin, Oltman and Raskin, had a reported reliability of .82. It then was adopted for group administrations (1971), resulting in a reliability coefficient of .92 for young males and .97 for young females. The test in Grasha's book appears to be a shortened version of the Group Embedded Figure Test. The original took five minutes to complete and the version used in class only took one minute. Grasha granted permission
for the use of his instrument. The reliability coefficient for the instrument used with the present sample using Kuder Richardson test was .77. Because Grasha reported no reliability and validity information, a split half test for reliability was also performed and that resulted in a reliability coefficient of .74.

One problem with the latter alpha was that the split half is not recommended for timed test and this is a speed test. But a repeated measure would not have been appropriate either because the test is so short it would be too easy to remember the correct answers if it were given to students twice. If this instrument is used in the future research, two equivalent but different forms should be developed and given at two different times or the actual Group Embedded Instrument, which it is modeled after, should be utilized.

A number of researchers have shown a link between cognitive style (Field Independence/Field Dependence) and performance in school, but recent research indicates that the Group Embedded Test measures ability, not preference (Goodenough, 1976; Rubin, 1975; Maxim, 1987; Ward, 1987). It seems with younger students this instrument measures learning preference but with older students it measures ability (the field independent skills can be learned even though not preferred as a learning style).
Statistical Analysis

Instructor Difference

Each GTA taught a control group and an experimental group in order to control for instructor bias. Each GTAs groups were compared both by lab and pooled together to see if there was any instructor bias. The group means on the dependent measure of grade, posttest score and gain score (developed by subtracting pre and posttest results for each individual) were compared using a t-test. After no statistically significant difference was found, labs were collapsed into control and experimental groups for further analysis.

Covariates

The second step of analysis was to determine if the control and experimental groups varied on characteristics present before intervention. Tests of significant difference (ANOVA for interval data, Mann Whitney U or Kruskal Walls H for ordinal data and chi-square for nominal data) were run on demographic data, pretest scores, Howard value scores, and Field Independence/Field Dependence measures to see if the two groups varied significantly. If statistically significant difference at alpha .05 would have been discovered, those variables would have become covariates in the analysis.
Correlation

The relationship between all variables and the two outcome measures, posttest and final grade, was analyzed to see if any significant correlation existed.

Two-Way Analysis of Variance With Covariate

After the previous analysis, one covariate and one ascribed independent variable were added creating a two-way analysis of variance with covariate. Analysis of Covariance (ANOVA) is frequently used when randomization of experiment is not possible. The primary motivation is to adjust the intact groups for difference between groups.

Linn (1986) lists seven assumptions of ANOVA.

1) Random assignment of treatment. This was violated but controlled for by the use of covariate, pre-exam.

2) Covariates independent of treatment. This assumption is best controlled for using only characteristics present before intervention as covariates. This was done.

3) Covariates are measured without error. Randomization would control for this but without it one cannot rule out the possibility that groups are different on a factor not measured. Wildt and Ahtola (1988) suggest the robustness of this design holds in quasi-experimental settings in which groups vary and covariates are used.

4) Linearity (the scatter plot and R squared statistic coefficient of determination was use to analysis).

5) Homogeneity of the within group regressions. When ANOVA's were used (interval data) the additional statistical test (Bartlet F) was computed to examine this issue.
6) Normally distributed errors (use of scatter plots and standard error of estimate statistics to analysis).

7) Homogeneity of error variances (no control for this but due to the robustness of ANOVA this is not considered a major problem).

According to Wildt and Ahtola (1988), violations of normality and homogeneity of variance are of relatively minor concern because ANOVA is a robust test. The use of intact actual classes offers a more practical approach to comparing teaching methods than trying to create true experimental conditions, which would have their own limitations due to the artificial nature of the situation.

Journal Responses

The control group kept journals. They were asked to keep a record of what activities, both ones they initiated and ones designed by faculty, facilitated learning. A descriptive discussion of the results will be provided.

Exit Questions

There are a number of ways to collect information about learning. Planning a research project like the one implemented and described within is one method. Another is to ask students about their own learning. In the last lab, all students were asked to respond anonymously to the following three questions:
1. What facilitated your learning?
2. What did not facilitate your learning?
3. What would you suggest changing?

A descriptive discussion of the results will be provided.

Limitations of Study

This study used the Nonequivalent Control Group Design with intact groups because a true experimental design was not feasible. This design is a better approximation of the true experimental design than if students would have self selected treatment. A pretest was administered in order to determine if the groups varied significantly on basic knowledge prior to intervention (Huck, Cromier and Bounds, 1974).

According to Stanley and Campbell (1963), the more similar the experimental and control groups are on recruitment and pretest scores, the stronger the controls are for internal validity factors for the nonequivalent control group design. Recruitment for the different groups was exactly the same. A limit was established prior to the beginning of class on the number of students that would be accepted in each lab. Then students chose their lab placement without prior knowledge of the research project. As a further control for prior differences between groups, a test for significant difference between groups was conducted on all control variable data and the two groups varied statistically significantly on only one variable. That
variable was controlled for in the final statistical analysis. Thus, this design controlled for the major threats of history, maturation, testing, regression and instrumentation. Mortality also was not a problem because only one student dropped out.

Another limitation of this study was the fact that research and education were going on simultaneously. Sometimes that complicated the evaluation of research because the two processes do not necessarily have the same goals. For example, when developing achievement tests one way of evaluating reliability is to determine each item's discrimination ability and difficulty level. Because the exam in this study was also used as an advance organizer in order to facilitate competency learning of material the tests ability to discriminate was purposefully reduced by its repeated presentation to students.

The use of the FI\FD exercise rather than the actual Group Embedded Figure was easier to incorporate into a learning activity for students but it was a less rigorous research tool than if the actual Group Embedded Figure test would have been used. Both of these examples point out the weakness of combining research with another task. But this weakness is one of the strengths of the research. Much has been written about the difficulty of getting social workers in the field to do research. One reason suggested is because research interferes with the worker's primary goal
of helping their client. This research exemplifies combining the goals of research and, in this case, education of students.

A number of factors limit the confidence with which the results of this study can be applied to other populations. The respondents were participants in an intact class, winter quarter, at one large midwestern university. All respondents self-selected the class. The results of the study are not necessarily representative of a larger population. But in Chapter IV and V the research population was compared to social work undergraduate students at the same university and other baccalaureate programs. Because the procedures were implemented in an actual classroom situation, this increases external generalizability, particularly because students are similar quarter after quarter, and comparable to other OSU students in social work.

The participation of the researcher in the actual teaching of two of the labs might have resulted in experimental bias but utilizing two different GTAs was a method of controlling for this factor.

In summary, there are both advantages and disadvantages to the method utilized. True experiments have advantages but also disadvantages. Because of their very nature, they are not "reality." Randomization may increase the likelihood of equivalent samples but it does not guarantee
them (Simon, 1969). Experiments can be very costly and in the case of education research, could be unethical (if the control condition was significantly different and resulted in students not learning material necessary for them to proceed to the next class). The quasi-experiment was utilized because it was structured in such a way it could be used in a regular class within the normal university structure and avoid the above-mentioned disadvantages.

Weaknesses in the research design should not be ignored but neither should such research not be implemented and utilized in actual situations. What is lost due to threats to internal control can be compensated for by gains to generalizability to actual classroom situations.
CHAPTER IV
FINDINGS

The purpose of this research was to ascertain whether student retention and recall of content material could be significantly improved by teaching and using study skill techniques within the classroom situation. It was further hoped the intervention implemented would facilitate student comprehension of meta-cognition processes so students could generalize their learning to other settings.

Null Hypothesis:
The adjusted mean scores on the post exam and final grades (dependent variables) for the experimental group will not differ statistically significantly at the .05 alpha level from the adjusted mean scores for the control group.

Alternative Hypothesis:
The adjusted mean scores on the posttest and final grades for the experimental group will differ statistically significantly at the .05 alpha level from the adjusted mean scores for the control group in a positive direction.
This chapter includes a description of the sample, using demographic data, scores on Howard Value Scale, pretest information and learning style preference results. Then the results of the data analysis examining instructor effect, pre and post group equivalence and two-way analysis of covariance will be reported. Finally the information gained when students evaluated their own learning process in SW 220 will be reported.

Description of Sample

Sixty-nine undergraduate students, who enrolled in and completed the Social Work 220 class and provided appropriate demographic and value scale data, were subjects (see Table 1). The students ranged in age from eighteen to forty-one, but 83% of the students were 21 years or under. The control group had a mean age of 22 and the experimental group had a mean age of 21. Females made up 81% of the class, with 83% of the students being white. The largest proportion of students were sophomores (40%).

Sixty-five percent of the students' fathers and 56% of the students' mothers had at least some college education or more. The largest number of students classified their parents' occupations as professional (father, professional = 41%; mother, professional = 43%). Most of the students (86%) had no paid social work job experience. Similarly (68%) had no human service volunteer experience. A little less than half (48%) planned to make social work their
undergraduate major while 23% were undecided. Sixty-five percent had never taken a previous social work class and 25% had only taken one other course. Most (94%) had not applied to the social work program. The majority of students declared a religious preference of Catholic or Protestant (75%) while 94% of the students were single and had no children (94%).

The total group mean for grade point average was 2.56 and the median was 2.50. Most (71%) had never had a study skill class and almost none (91%) had heard of the psychologist who developed the study skill method that was utilized in the experimental labs. So students had limited training in study skills prior to intervention. Over half (64%) of the students were taking SW 220 because it was required for either a social work or criminology major.

Thirty seven percent (37%) said their learning style preference was field dependent, and 25% saw their learning style preference somewhere in between extreme field dependence and field independence. Using the Howard Humanistic Value Scale with a range of scores from 21-105, with the higher scores showing a preference for values identified with the social work profession, 74% of students scored in the 60 to 79 range the first week of class. On the pretest (basic knowledge) which had a range of 0 to 93, 76% of the students scored in the 40-59 range on the first day of class.
Tables have been provided to give a visual display of demographic data. Table 1 exhibits demographic data by Control, Experimental and Total Groups. These data were collected because previous research indicated such factors as age, sex, race and social status might influence classroom performance.

Table 1
Characteristics of Sample by Control, Experimental and Total Groups

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</tr>
<tr>
<td>Junior</td>
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<td>23</td>
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<tr>
<td>Senior</td>
<td>4</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Father's Ed</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Less 12</td>
<td>3</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>HS Grad</td>
<td>5</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>Some Coll.</td>
<td>9</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>UG degree</td>
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<td>23</td>
<td>9</td>
</tr>
<tr>
<td>Grad/Prof</td>
<td>5</td>
<td>17</td>
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</tr>
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<td>Missing</td>
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Table 1 continued

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<td>41</td>
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<td>18</td>
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<td>UG degree</td>
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<td>Grad/Prof</td>
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<td>10</td>
<td>11</td>
<td>28</td>
</tr>
<tr>
<td>White Collar</td>
<td>7</td>
<td>23</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Self Employ</td>
<td>5</td>
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<td>4</td>
<td>10</td>
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<tr>
<td>Professional</td>
<td>11</td>
<td>38</td>
<td>17</td>
<td>44</td>
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</tr>
<tr>
<td>Missing</td>
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<td>6</td>
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<td>15</td>
</tr>
<tr>
<td>White Collar</td>
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<td>7</td>
<td>18</td>
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<td>Professional</td>
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<td>Retired</td>
<td>2</td>
<td>7</td>
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<table>
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<tr>
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<tbody>
<tr>
<td>Social Work</td>
<td>14</td>
<td>47</td>
<td>19</td>
<td>49</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>37</td>
<td>9</td>
<td>23</td>
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<tr>
<td>Undecided</td>
<td>5</td>
<td>16</td>
<td>11</td>
<td>28</td>
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<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Single</td>
<td>27</td>
<td>90</td>
<td>38</td>
<td>97</td>
</tr>
<tr>
<td>Married</td>
<td>3</td>
<td>10</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th># of Children</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>29</td>
<td>97</td>
<td>35</td>
<td>90</td>
</tr>
<tr>
<td>One or more</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic</td>
<td>9</td>
<td>30</td>
<td>16</td>
<td>41</td>
</tr>
<tr>
<td>Protestant</td>
<td>14</td>
<td>48</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td>Jewish</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>None</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>10</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

The demographic data indicate that control and experimental groups were rather homogeneous. The majority of students in both groups were young (under 21), female,
white, single and without children. They were most likely to be sophomores, majoring in social work.

Previous performance as measured by Grade Point Average (GPA) often is used as an indicator to projected performance in future class achievement so GPA data was also collected (Table 2). The total group mean score was 2.56. Fifteen percent of the students had a G.P.A. above 3.0.

<table>
<thead>
<tr>
<th>Trait</th>
<th>Control N=30</th>
<th>Experiment N=39</th>
<th>Total N=69</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA - Mean</td>
<td>2.45</td>
<td>2.63</td>
<td>2.56</td>
</tr>
<tr>
<td>Median</td>
<td>2.45</td>
<td>2.57</td>
<td>2.50</td>
</tr>
</tbody>
</table>

A positive identification with values associated with the social work profession might have increased student motivation to learn the content material. For this reason the scores on the Howard Value Survey were collected (see Table 3) and analyzed.
Table 3
Howard Value Scale: PreTest Mean Scores by Control, Experimental and Total Groups

<table>
<thead>
<tr>
<th>Scales</th>
<th>Control N=30</th>
<th>Experiment N=39</th>
<th>Total N=69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Justice</td>
<td>22.67</td>
<td>22.21</td>
<td>22.41</td>
</tr>
<tr>
<td>Individual Freedom</td>
<td>27.33</td>
<td>27.10</td>
<td>27.20</td>
</tr>
<tr>
<td>Human Nature</td>
<td>23.97</td>
<td>22.33</td>
<td>23.04</td>
</tr>
<tr>
<td>Total Score</td>
<td>73.87</td>
<td>71.64</td>
<td>72.61</td>
</tr>
</tbody>
</table>

Any student value change during the quarter toward the direction of identification with the values of the social work profession might correlate positively with motivation and, thus influence achievement so the Howard scale was given again in the last lab and the posttest results follow in Table 4.
Table 4
Howard Value Scale: PostTest Mean Scores by Control, Experimental and Total Groups

<table>
<thead>
<tr>
<th>Scales</th>
<th>Control N=30</th>
<th>Experiment N=39</th>
<th>Total N=69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Justice</td>
<td>22.65</td>
<td>22.42</td>
<td>22.52</td>
</tr>
<tr>
<td>Individual Freedom</td>
<td>28.39</td>
<td>27.32</td>
<td>27.78</td>
</tr>
<tr>
<td>Human Nature</td>
<td>24.87</td>
<td>23.91</td>
<td>24.32</td>
</tr>
<tr>
<td>Total Score</td>
<td>75.97</td>
<td>73.32</td>
<td>74.43</td>
</tr>
</tbody>
</table>

No significant correlation was discovered between pre and post value scores (both subsets and total score) and the two outcome measures. There were changes from pre and post results but not at a statistically significant alpha level of .05. Thus these variables were not used in further analysis of results.

One could logically argue previous exposure to the field through volunteer experience, paid work experience or previous classes would improve one's ability to perform in class so that information also was collected (see Table 5).
Table 5

Previous Exposure to Social Work Field by Control, Experimental and Total Groups

<table>
<thead>
<tr>
<th>Trait</th>
<th>Control N=30</th>
<th>Experiment N=39</th>
<th>Total N=69</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td><strong>Work Experience</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>26</td>
<td>87</td>
<td>33</td>
</tr>
<tr>
<td>1 year</td>
<td>4</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>2 or more</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td><strong>Volunteer Experience</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>20</td>
<td>67</td>
<td>27</td>
</tr>
<tr>
<td>1 year</td>
<td>3</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>2 or more</td>
<td>7</td>
<td>23</td>
<td>6</td>
</tr>
<tr>
<td><strong>Pre SW Classes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>16</td>
<td>53</td>
<td>29</td>
</tr>
<tr>
<td>One</td>
<td>8</td>
<td>27</td>
<td>9</td>
</tr>
<tr>
<td>Two</td>
<td>5</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Three or more</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 5 indicates the majority of students (86%) had no previous social work job experience. Further, the majority of students (68%) had no volunteer work experience. Finally, 65% of the students had no previous social work classes. Thus, students had very limited previous exposure to social work.

Another factor that may have influenced outcome was previous exposure to study skills classes. Two variables related to this issue; (1) whether or not students had attended study skills class previously and (2) whether they were familiar with the SQ3R intervention. Table 6 indicates students had little exposure to study skill methods.
The literature review indicated learning style might directly affect achievement so data were collected on students' learning preference. The first measure was a self report of learning style preference from students and the second was the results on the Embedded Figure Test (see Table 7). The Embedded Figure Test (Appendix H) measures field independence or field dependence, which is a measure of one's ability to differentiate a simple hidden figure in a complex context. The scores on this scale range from zero to 12. Persons scoring in the bottom fourth (1-3) of the range exhibit strong field dependent behavior. Those scoring in the top fourth (10-12) range exhibit strong field independent behavior. Persons scoring between four and nine are considered to score somewhere between the extreme scores, exhibiting skills in both preference areas. This
ability to differentiate part from field relates to more general psychological characteristics which indicates a preference for viewing situations in context or an ability to view parts as separate from total context. Most objective exams require field independent behavior. That was the rationale for investigating this preference.

Table 7

Learning Style Preference by Control and Experimental Groups

<table>
<thead>
<tr>
<th>Trait</th>
<th>Control N=30</th>
<th>Experiment N=39</th>
<th>Total N=69</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Self Report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Dependent</td>
<td>12</td>
<td>40</td>
<td>14</td>
</tr>
<tr>
<td>In Between</td>
<td>6</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>Field Independent</td>
<td>5</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>Missing</td>
<td>7</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td>Instrument</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Dependent</td>
<td>3</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>In Between</td>
<td>9</td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td>Field Independent</td>
<td>11</td>
<td>37</td>
<td>5</td>
</tr>
<tr>
<td>Missing</td>
<td>7</td>
<td>23</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 7 results indicate that 37% of the students reported a field dependent learning style preference, and 25% saw their learning style somewhere in between extreme field independent and field dependent. The Embedded Figure Survey indicated a little different results from the student self report. Only 12% of the students scored in the field dependent range, while 43% scored in between field
dependence and field independence, and 23% of the students scored in the field independent range.

Robinson indicated in order for study skills to be effective, students have to be present for instructions and they have to utilize the material. Three measures of student motivation or effort were collected; (1) attendance in class, (2) number of assignments turned in, and (3) the quality of assignments. Table 8 compares groups on these variables.

Student attendance ranged from three to ten with the majority of students attending from between seven to ten of the labs. There were nine assignments and the majority of students handed in seven or more assignments. The Quality of Assignment variable consisted of a rating of assignments completed by the researcher after the quarter was over. Each assignment meeting the minimal requirements received one point. Any assignment that indicated students put in more than minimal effort (in other words, went beyond what was required) received a second point. The possible range for this variable was zero to 18. The actual range was three to 18. The majority (51%) of students did the minimum work required for the assignments.
Table 8  
Motivation Variables by Control, Experimental and Total Groups

<table>
<thead>
<tr>
<th>Trait</th>
<th>Control N=30</th>
<th>Experiment N=39</th>
<th>Total N=69</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Attendance</td>
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<td>0</td>
</tr>
<tr>
<td>3-4</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>5-6</td>
<td>3</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>7-8</td>
<td>12</td>
<td>40</td>
<td>10</td>
</tr>
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<td>9-10</td>
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<td>5-6</td>
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<tr>
<td>7-8</td>
<td>11</td>
<td>37</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>12</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>Quality Assign</td>
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</tr>
<tr>
<td>3-5</td>
<td>1</td>
<td>4</td>
<td>8</td>
</tr>
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<td>6-8</td>
<td>10</td>
<td>33</td>
<td>9</td>
</tr>
<tr>
<td>9-11</td>
<td>13</td>
<td>43</td>
<td>22</td>
</tr>
<tr>
<td>12-14</td>
<td>4</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>15-16</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>17-18</td>
<td>2</td>
<td>7</td>
<td>0</td>
</tr>
</tbody>
</table>

Students vary in their prior knowledge of content to be covered in a class. When examining a teaching intervention, one way to accurately measure achievement and control for prior knowledge is to use pre and posttest design. The pre/post test results on the Basic Knowledge follows in Table 9.
Table 9

Basic Knowledge Exam Mean Scores by Control, Experimental and Total Group

<table>
<thead>
<tr>
<th>Test</th>
<th>Control N=30</th>
<th>Experimental N=39</th>
<th>Total N=69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>34.43</td>
<td>34.21</td>
<td>34.30</td>
</tr>
<tr>
<td>Post</td>
<td>55.77</td>
<td>59.56</td>
<td>57.91</td>
</tr>
</tbody>
</table>

Another comparison was made between experimental and control groups. The final grade (both letter and points) was compared. Table 10 contains that data. The final grade points consisted of: (1) points from posttest, 60%, and (2) points from lab assignments, attendance and homework (PQ4R or journals), 40%.

Table 10

Grade Results for Control, Experimental and Total Groups

<table>
<thead>
<tr>
<th>Trait</th>
<th>Control N=30</th>
<th></th>
<th></th>
<th>Experiment N=39</th>
<th></th>
<th></th>
<th>Total N=69</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td><strong>Letter Grade</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A - A-</td>
<td>8</td>
<td>27</td>
<td>13</td>
<td>33</td>
<td>21</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>B+ - B-</td>
<td>14</td>
<td>47</td>
<td>19</td>
<td>49</td>
<td>33</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>C+ - C-</td>
<td>7</td>
<td>23</td>
<td>6</td>
<td>15</td>
<td>13</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>D+ - D-</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Final Grade Points</strong></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>60-69</td>
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<td>6</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>70-79</td>
<td>6</td>
<td>20</td>
<td>6</td>
<td>15</td>
<td>12</td>
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<td>80-89</td>
<td>11</td>
<td>37</td>
<td>18</td>
<td>46</td>
<td>29</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>90-99</td>
<td>11</td>
<td>37</td>
<td>14</td>
<td>36</td>
<td>25</td>
<td>36</td>
<td></td>
</tr>
</tbody>
</table>

This summarizes the demographic characteristics collected on the sample population included in this research. The control and experimental groups were very
similar. The sample for this research was very homogeneous; made up mainly of traditional (young), white, female, sophomore students with little previous social work experience. They attended most of the labs and turned in assignments but usually settled for minimal effort on assignments. By the end of the course, their knowledge as tested by the Basic Knowledge Exam had improved statistically significantly at alpha .05 level. Their total value scores as measured by the Howard Value Scale had moved in the direction of more identification with social work values but the shift was not statistically significant. The most frequent grade was B. The groups were non-equivalent due to the lack of random selection and assignment but they ended up being very similar on characteristics where the data was collected.

Data Analysis

Instructor Effect

The first step in data analysis was to determine if there was an instructor effect. The results follow in Table 11. Using the Independent t-test of significance, no statistical significant difference was discovered on the dependent measures. Thus, labs were collapsed and the remaining analyses were conducted on control and experimental groups.
Table 11
Instructor Effect Analysis for Dependent Variables of Grade, PostTest and Gain Score

<table>
<thead>
<tr>
<th>Variable</th>
<th>Instructor</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>1</td>
<td>37</td>
<td>84.68</td>
<td>7.8</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>32</td>
<td>87.19</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>PostTest</td>
<td>1</td>
<td>37</td>
<td>58.08</td>
<td>9.3</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>32</td>
<td>57.91</td>
<td>7.7</td>
<td></td>
</tr>
<tr>
<td>Gain Score</td>
<td>Pre/Post</td>
<td>1</td>
<td>22.22</td>
<td>11.7</td>
<td>1.40</td>
</tr>
<tr>
<td></td>
<td>Test</td>
<td>2</td>
<td>25.22</td>
<td>4.9</td>
<td></td>
</tr>
</tbody>
</table>

Identifying Relevant Control Variables

Pre Group Equivalence - Covariates

The second step in the analysis was to examine the control variables gathered in the first week to see if there were any significant correlations between the variables and the outcome measures. G.P.A. was the only variable found to have a significant relationship (at .05 alpha level) — see Table 12.

Table 12
Pearson Product-Moment Correlation: Correlation Between G.P.A. and Posttest Scores and Final Grade

<table>
<thead>
<tr>
<th>G.P.A.</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttest</td>
<td>.36 *</td>
</tr>
<tr>
<td>Final Grade</td>
<td>.51 *</td>
</tr>
</tbody>
</table>

* p < .05
Then an analysis was made to test for significant differences between experimental and control groups prior to intervention. No statistically significant difference was found between the control and experimental group on any of the reviewed variables at .05 alpha level. Since the function of a covariate in this research was to statistically control for differences between groups prior to intervention, G.P.A. was not used as a covariate due to lack of significant difference between control and experimental groups. Therefore, the only covariate used in the analysis was the score on the pretest. This provided a control for previous knowledge of material.

**Post Group Equivalence - Ascribed Independent Variable**

All variables collected after intervention was completed were examined to see if there was a significant correlation between control variables and the final score on the posttest and the final grade. The three student effort variables — Attendance, Assignment and Quality Assignment (the evaluation of assignments by researcher after intervention was completed) proved to be significantly (alpha .05) correlated with both final grade and posttest score. Thus the analysis indicated that students who attended class more frequently, turned in more assignments, and did more than minimally required on their assignments, performed better on the final test and received higher final grades.
Table 13 and 14 display the results of the Pearson Product-Moment Correlation on the three motivation variables (also referred to as student effort). It is important to notice when interpreting results in Table 14 there was a confounding factor. Part of the final grade points included points given for attendance and assignments turned in. Thus a high correlation with grade was understandable.

Table 13

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend</td>
<td>.47 *</td>
</tr>
<tr>
<td>Assign</td>
<td>.38 *</td>
</tr>
<tr>
<td>Quality Assign</td>
<td>.27 *</td>
</tr>
</tbody>
</table>

* p < .05

Table 13 indicates a low but statistically significant positive correlation between the three motivational variables and posttest score. Table 14 indicates a statistically significant positive correlation between the three motivational variables and final grade points.
Table 14
Pearson Product-Moment Correlation Between Final Grade and Variables Attend, Assign and Quality Assign

<table>
<thead>
<tr>
<th>Variable</th>
<th>$r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend</td>
<td>.65 *</td>
</tr>
<tr>
<td>Assign</td>
<td>.59 *</td>
</tr>
<tr>
<td>Quality Assign</td>
<td>.44 *</td>
</tr>
</tbody>
</table>

* $p < .05$

The variable Attend was the number of times each student actually attended lab sessions. Assign stood for the number of assignments (either study skill homework or journals) that were turned in by each pupil. Quality Assign was the variable name for a score each student received after the course was complete when their assignment and journals were evaluated by the researcher. One point was given for handing in anything that met the minimum requirement for the task and a second point was given when student's written responses indicated that they went beyond the minimum requirement to put special effort into the responses. According to Robinson, who initially developed the PQ4R intervention, the presentation of study skill techniques by themselves will not result in learning. Students must practice and utilize the techniques in order to enhance retention and recall. Thus, it was logical to review the objective measures of student effort available to the researcher.
The above variables were analyzed to determine if there were significant differences between groups. Only Quality Assign showed significant difference between experimental and control groups (see Table 15).

Table 15
Summary Table: Comparing Control and Experimental Groups for Significant Difference on Variable Quality Assignment

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>9.93</td>
<td>3.11</td>
<td>3.26 *</td>
</tr>
<tr>
<td>Experiment</td>
<td>39</td>
<td>7.85</td>
<td>2.22</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05

Due to these results, Quality Assign. was used as the second main effect in the Two-Way Analysis. It could not be used as a covariate because it did not occur prior to intervention.

Two-Way Analysis of Variance With Covariate

As explained previously, the regression analysis indicated a significant relationship between Quality of Assignments and the outcome measures and, the comparison of groups showed a significant difference between experiment and control groups on this variable. Quality Assign was not included in the covariate list because it was not collected
prior to treatment. One assumption necessary for covariates is that covariates be independent of treatment. Because this variable was collected after the intervention took place, it was assumed to not be independent of treatment. But exclusion of this variable due to the significant correlation between it and posttest scores and final grade would provide inaccurate interpretation of results. Thus, the variable Quality Assign became the second independent variable, also referred to as Student Effort, with two levels, high and low effort. The first independent variable was treatment with two levels, treatment and no treatment. One covariate was used, pretest scores. Thus, the two-way analysis of variance with covariate was the statistical test utilized to test for significant difference between control and experimental groups and between students exhibiting high and low effort on the intervention assignments.

The seven assumptions listed previously for use of ANOVA were met in the following way:

1. Random assignment of treatment. This was violated but controlled using the covariate pretest.

2. Covariates independent of treatment. This assumption is best controlled for by using only characteristics present previous to intervention as covariates, which was done.

3. Covariates measured without error. The standard error of estimate and significance test was computed. Error was not statistically significant.
4. Linearity. Scatterplots and the R square statistic were examined. The relationship for the covariate did not prove to be linear. But it was not curvilinear either. Rather, the R square indicated a weak relationship between the covariate and outcome measures. This is congruent with correlation analysis which indicated a nonsignificant relationship between the covariate pretest and posttest score and final grade.

5. Homogeneity within group regression for covariates measure. Using the Bartlett F test, no violation was found.

6 & 7. Normality and homogeneity of error. Consistent with other researchers, the assumption of the robustness of the ANOVA with covariate model was made and no test for these assumptions were conducted.

Table 16
Summary of Two-Way Analysis of Covariance, Comparing Treatment and Student Effort, After Controlling for Covariate Posttest on the Dependent Measure PostTest Score

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Adjusted SS</th>
<th>DF</th>
<th>Adjusted MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment (A)</td>
<td>388.87</td>
<td>1</td>
<td>388.53</td>
<td>5.67*</td>
</tr>
<tr>
<td>Student Effort (B)</td>
<td>183.61</td>
<td>1</td>
<td>183.61</td>
<td>2.65</td>
</tr>
<tr>
<td>A X B</td>
<td>51.14</td>
<td>1</td>
<td>51.14</td>
<td>.74</td>
</tr>
<tr>
<td>Between</td>
<td>574.11</td>
<td>4</td>
<td>128.53</td>
<td>1.86</td>
</tr>
<tr>
<td>Total</td>
<td>4945.48</td>
<td>68</td>
<td>72.73</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05 level
Table 16 indicates that on the dependent measure posttest score, when controlled for pretest scores, treatment had a significant effect. While student effort (as measured by the variable Quality Assign) did not have a statistically significant effect at the alpha .05 level. The interaction between treatment and student effort was not significant either.

In order to show how the different levels of treatment and quality of assignment interacted with the results on posttest scores a multiple comparison of the Two-Way Analysis of Variance with Covariate was provided.

Table 17

Multiple Comparison of Direction of Independent Variables Treatment and Effect on Dependent Variable Posttest Scores

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>N</th>
<th>Unadjusted for Pretest</th>
<th>Adjusted for Pretest Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>30</td>
<td>-2.15</td>
<td>-2.93</td>
</tr>
<tr>
<td>Experiment</td>
<td>39</td>
<td>1.65</td>
<td>2.25</td>
</tr>
<tr>
<td>Student Effort</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>40</td>
<td>-.76</td>
<td>-1.53</td>
</tr>
<tr>
<td>High</td>
<td>29</td>
<td>1.05</td>
<td>2.11</td>
</tr>
</tbody>
</table>

Table 17 indicates that the experimental group varied from the Grand Mean in a positive direction and students who showed high effort varied from the Grand Mean in a positive
direction also. This means that those who receive PQ4R training performed better than those who did not and students who put more effort into their intervention assignments received higher scores on the posttest than those who put little effort into assignments.

The results of the Two-Way Analysis of Variance with Covariate for final grade follows in Table 18. For the dependent measure, final grade points, treatment did not have a significant effect but student effort did (alpha < .01). The interaction between treatment and effort also was not significant. The Multiple Comparison test does indicate the experimental group varied from the Grand Mean in a positive direction, while the control group varied in the opposite direction. But the Two-Way Analysis of Variance with Covariate indicates that this variation was not statistically significant for the independent variable treatment. The students who showed high effort on assignments had scores that varied in a positive direction from the Grand Mean in contrast to those who showed low effort. In summary, student effort significantly affected final grade at the alpha level p < .01.
### Table 18

Summary of Two-Way Analysis of Variance With Covariate: Treatment and Student Effort as Independent Variables and Controlling for Covariate: Pre Exam Scores. The Dependent Variable was Final Grade

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Adjusted SS</th>
<th>DF</th>
<th>Adjusted MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment (A)</td>
<td>190.19</td>
<td>1</td>
<td>190.19</td>
<td>3.40</td>
</tr>
<tr>
<td>Student Effort</td>
<td>369.28</td>
<td>1</td>
<td>367.28</td>
<td>6.57 *</td>
</tr>
<tr>
<td>A X B</td>
<td>29.9</td>
<td>1</td>
<td>29.95</td>
<td>.54</td>
</tr>
<tr>
<td>Between</td>
<td>532.27</td>
<td>6</td>
<td>133.07</td>
<td>2.38</td>
</tr>
<tr>
<td>Total</td>
<td>4111.25</td>
<td>68</td>
<td>60.46</td>
<td></td>
</tr>
</tbody>
</table>

* p < .01

### Table 19

Multiple Comparison of Direction of Independent Variables Treatment and Student Effect on Dependent Variable Final Grade

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>N</th>
<th>Unadjusted for Pretest</th>
<th>Adjusted for Pretest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>30</td>
<td>-.94</td>
<td>-2.05</td>
</tr>
<tr>
<td>Experiment</td>
<td>39</td>
<td>.72</td>
<td>1.58</td>
</tr>
<tr>
<td>Student Effort</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>40</td>
<td>-1.69</td>
<td>-2.16</td>
</tr>
<tr>
<td>High</td>
<td>29</td>
<td>2.33</td>
<td>2.98</td>
</tr>
</tbody>
</table>

Grand Mean 87.19
In summary, the results indicate the independent variable, treatment, significantly affected posttest scores, while student effort did not significantly affect posttest scores. Nor, did the interaction between treatment and effort significantly affect posttest scores. In other words the teaching and practice of study skills techniques did statistically significantly affect the posttest scores for the experimental group over and above the use of control conditions. When looking at final grades as a dependent variable, the results differ from above. Student effort significantly affected grade but treatment and the interaction between effort and treatment did not.

Summary Results of Journal Responses

There are a number of ways to collect information about facilitating learning. One can review the research literature and study theory that has been developed. Empirical studies can be designed to gather information, or researchers can ask students what they think facilitates learning. Within this research study all three methods were utilized to further understand retention and recall of content material.

The control groups were introduced to the journal assignments with the following explanation:

Professors could approach teaching and learning with two divergent methods, pedagogical or androgogical. Using the pedagogical method, the teacher would assume to know how to facilitate learning and structure activities in such a manner
to do so (thus, telling students how to study). When using the androgogical approach one would assume college students know how to facilitate their own learning and what works for one student will not work for another, thus, a major part of facilitating learning is the responsibility of the learner. So if researchers wanted to know what facilitates learning they would ask students to tell them.

Students were asked to keep a journal, handed in weekly, of what happened during the quarter to facilitate their learning. In order to assure more honest answers students were reassured their journals would not be read until after their grades were turned in but they would be given credit for handing in the journal sheet each week. A summary of journal responses follows in Table 20.

Table 20
Journal Response for Control Labs on "What Facilitates Your Learning"

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Structured Activity</strong></td>
<td></td>
</tr>
<tr>
<td>* Described what learned not how</td>
<td>7</td>
</tr>
<tr>
<td>* Confused on what to write</td>
<td>1</td>
</tr>
<tr>
<td>Related something from class to another event in their life (connection made)</td>
<td>17</td>
</tr>
<tr>
<td>Outside interference (illness)</td>
<td>8</td>
</tr>
<tr>
<td>Own efforts (Taking notes, answering questions, etc.)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Teacher's Structured Activity</strong></td>
<td></td>
</tr>
<tr>
<td>Book construction</td>
<td>3</td>
</tr>
<tr>
<td>Lecture</td>
<td>16</td>
</tr>
<tr>
<td>Discussion</td>
<td>2</td>
</tr>
<tr>
<td>Lab exercises</td>
<td>16</td>
</tr>
<tr>
<td>Assignments</td>
<td>6</td>
</tr>
</tbody>
</table>

* Response indicates error in understanding task.
Every journal was read by the researcher. A list was created containing every activity students mentioned that facilitated their learning. Each time an activity was mentioned it received a point. The total number of responses was then added up and percentages arrived at by dividing the number of votes for an activity by the total number of responses.

The results from the journal responses could be categorized in two broad areas; student structured activity and teacher directed activity. Students indicated what they thought facilitated their learning the most was when they could relate what they had learned in class to their own life experience (17%), and their own efforts to study (24%). Teacher activities when combined, Book construction, 3%; Lecture, 16%; Discussion, allowed, 2%; Lab Activities, 16%; and Assignments, 6%, come to 43%. Thus, students seem to indicate learning was facilitated by their efforts and a variety of instructor activities. The problem was that there was no agreement on which activities helped. Some students liked discussion, others found it distracting. Some liked lectures, others would rather read the text. It would seem from the student perspective learning was facilitated in a variety of ways and preferences for learning activity were very individualized.
Exit Questions

In order to gain information from all students, in the final lab session, students were asked to respond anonymously to the three questions:

1) What helped you learn?
2) What didn't help you learn?
3) What would you change about the class?

For the Control Groups the three most frequent responses to what helped them learn were; (1) lab exercises, (2) the book and (3) lectures. The three most frequent responses to what did not facilitate their learning were; (1) lecture, (2) the book and (3) lab assignments. What they wanted changed were (1) more discussion, (2) final exam worth less and (3) more options for assignments.

Students in the Experimental groups thought (1) lab exercises, (2) study skills and (3) lecture helped them learn. What they most frequently indicated did not facilitate their learning was (1) lecture, (2) study skills and (3) lab assignments. They mentioned the three following changes most frequently; (1) change study skills assignments, (2) have lab more frequently and give more credit for work in it and (3) have a graded midterm. Student responses in exit questions showed a lot of individual variation.

Unfortunately, the results from the exit questions indicate that what students think facilitates learning varied. This type of information is difficult to utilize
thus pointing to the need for more empirical research on learning activities.

Conclusions

The results indicate even though students expressed both negative and positive feelings about the study skills intervention it did improve final scores on posttest but not the final grade. Student effort significantly influenced the final grade and treatment did not. Thus, in this study, PQ4R techniques significantly improved performance on the posttest, which was designed to test retention and recall of text material. On the other hand, student effort was the most significant factor as far as the final grade was concerned. This may have been due to the fact that the final grade was made up of a variety of measures only one of which related to retention and recall of text material.
Within this chapter, the research results will be examined in light of the research hypotheses. Variables other than the intervention that significantly affected the outcome measures will be reviewed. The purpose of this research was to determine if student retention and recall of content material could be facilitated by teaching study skills. The particular method (PQ4R) utilized incorporated the principles of information processing model of cognitive psychology to facilitate learning.

Population

In comparing the students in this research sample with student enrollment trends at the same university in the undergraduate social work population from 1983 - 1987 (1988 data were not available), the sample seemed to be very similar in composition although the sample population was a little younger and more racially diverse (see Table 21). Table 21 shows the demographic characteristics of students admitted into the Social Work undergraduate program (years 1983-1987). These students would usually be juniors and have taken SW 220 the year of admission or the year before.
Thirty-five percent of the sample population applied to the social work program by the end of the quarter. Six percent had already applied prior to Winter Quarter. Forty-eight percent considered themselves social work majors and twenty-three percent were undecided. Thus, the sample population was not made up of only social work students but the social work department does use SW 220 as a recruitment class for the department.

Table 21
Summary Table: Sample demographic data on gender, race and age compared with similar enrollment data from OSU Social Work undergraduate program

<table>
<thead>
<tr>
<th>Gender</th>
<th>Research Sample n=69</th>
<th>83-84 n=102</th>
<th>84-85 n=103</th>
<th>85-86 n=77</th>
<th>86-87 n=76</th>
</tr>
</thead>
<tbody>
<tr>
<td>female</td>
<td>(81)</td>
<td>(84)</td>
<td>(89)</td>
<td>(86)</td>
<td>(88)</td>
</tr>
<tr>
<td>male</td>
<td>(19)</td>
<td>(16)</td>
<td>(11)</td>
<td>(14)</td>
<td>(12)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>white</td>
<td>(83)</td>
<td>(93)</td>
<td>(92)</td>
<td>(87)</td>
<td>(91)</td>
</tr>
<tr>
<td>black</td>
<td>(16)</td>
<td>(5)</td>
<td>(7)</td>
<td>(13)</td>
<td>(9)</td>
</tr>
<tr>
<td>foreign</td>
<td>(0)</td>
<td>(0)</td>
<td>(0)</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>other</td>
<td>(1)</td>
<td>(2)</td>
<td>(1)</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>range</td>
<td>18-41</td>
<td>19-58</td>
<td>19-39</td>
<td>19-38</td>
<td>19-54</td>
</tr>
<tr>
<td>mean</td>
<td>21</td>
<td>23.8</td>
<td>23</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>mode</td>
<td>19</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>median</td>
<td>20</td>
<td>20.6</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
</tbody>
</table>

(data from College of Social Work Annual Report)
In Statistics on Social Work Education in the United States: 1986, the percentage of females (82%) and males (17%) enrolled in baccalaureate programs was reported. For the same period, the ethnicity enrollment was as follows: white, 74% and all ethnic minorities, 26%. Thus, the sample population not only appeared to be representative of students accepted into the OSU social work baccalaureate program, but also similar (on variables examined) to other baccalaureate populations in accredited social work schools in the U.S.

Major Findings

Using the Two-Way Analysis of Variance with covariate as the test statistic, the null hypothesis of no significant difference between control and experimental group adjusted means on posttest and final grade could be rejected for posttest scores but not final grade. In other words, teaching study skill techniques and relating them directly to the text did significantly improve exam scores but not the final grade. Student effort was the major independent variable determining the outcome for final grade points.

One purpose of the research was to encourage competency-based learning of the text material. In other words, the researcher was interested in encouraging students to meet a minimum criteria for comprehension of the text material. In order to accomplish this task, three criteria suggested by Arkava and Brennen (1976) were met: (1)
explicit specifications of educational goals were outlined (see Appendix I), (2) procedures for assessing achievement of competencies were provided in the syllabus and orally to students in class, and (3) learning experiences were designed (PQ4R) to enable students to attain these competencies.

Main Effects

There were two main effects or independent variables; treatment (manipulated) and student effort (ascribed). On the first dependent measure, posttest score, treatment had a statistically significant effect on the outcome, but student effort did not. The interaction between treatment and motivation did not have a significant impact on outcome either. In other words, those students who received PQ4R training performed significantly better than those who did not. Further, student effort was not a significant enough factor to improve test scores above those who had received PQ4R intervention. When it came to posttest scores, the only factor which had a significant effect was exposure to and practice of PQ4R techniques.

These results both support and contradict previous research. The control group results showed that when left to their own study methods, students did not do as well on the exam as those who had to hand in weekly assignments and received on-going feedback from a GTA. This difference held even though some students in the control group put more
effort into their studying (as reported in the journals) and some in the experimental group put little effort into their assignments. This supports Robinson's (1946) conclusions that SQ3R techniques are more effective than students normal study habits, at least for the specific task of facilitating retention and recall of text material.

This research focuses on one of the early stages of learning. This stage is typical for entry-level students and a necessary level when learning any new material. Before students can move on to higher level learning tasks, they must first comprehend basic concepts. For example, an analysis of a social problem could not take place until students understood what the problem was (definition), the parameters of the problem, the value that defines and shapes the problem, the history of the problem, the resources available to resolve the problem and so on.

What was surprising about these results was the fact that student effort in interaction with treatment did not significantly affect posttest results. Rogers (1986), Robinson (1946) and Ausubel, Novak and Hanesian (1968) all indicated that student effort is a significant factor related to achievement. One problem may have been with the measurement of this factor. Three variables were used to measure effort: (1) the number of times students attended class, (2) the number of times they turned in assignments and (3) the quality of their assignments produced.
Two of these variables were not included in the ANOVA because the univariate analysis resulted in no significant difference between groups. Quality of assignment was included though (because there was a significant difference between control and experimental groups on this variable). It became the second independent variable in the analysis. It is difficult to say if this variable was measured without error. The evaluation of assignments was made only by the researcher. To strengthen this measure the use of another rater and the establishment of inter-rater reliability would have strengthened the measure. Another question arises about this measure. Did it measure the same thing for each group? The variable measured student effort on intervention assignments. Because the assignments were different (specific homework assignments in the experimental group and journal descriptions of the learning process by the control group), the variable may not have measured the same thing for each group. Research (Swing and Peterson, 1988) has indicated student effort should be considered when comparing teaching methods but a more reliable measure should be developed to insure more confidence in results.

Another problem with the use of the Quality of Assignment variable is that when it was collected it was interval data. But in order to use it as a main effect it was converted to a dichotomous measure. More divisions were not possible because of empty cells. But when looking at
demographic data (Table 8) one notices student's results clumped together around the dividing point (9), thus, suggesting when division was made in this way the variable lost some of its variability.

Different results were discovered when looking at the dependent variable final grade. Treatment did not have a significant effect on final grade, while quality of assignment did ($p < .01$). The interaction between the motivation variable and treatment did not have a significant effect either. In retrospect, the fact the treatment intervention did not significantly affect this outcome measure is understandable. The PQ4R intervention was specifically designed to relate to the text material. The posttest measured that content, whereas the other assignments related to other learning objectives (problem solving, exposure to minority experience, exploring values, etc.) Since only 60% of the grade was related to the intervention, it was possible for students to work hard and perform well on other assignments and counteract the impact of the treatment effect. For the final grade, how much effort a student put into the class was the most significant factor determining their grade. This is consistent with research (Wittrock, 1986). No teaching strategy removes the responsibility of students to put effort into the learning process. Effort when closely guided by clear expectations correlates well with achievement (Wittrock, 1986).
The cognitive perspective on learning was instrumental in guiding the development of the intervention utilized. That same perspective can be utilized to explain the results (refer to Figure 2). The classroom setting was the environment in which the intervention was practiced. Student attention was increased by giving students credit for their participation. Perception was stimulated by required weekly activities that encouraged students to read their textbook. PQ4R was suggested as a blueprint to guide text reading. PQ4R suggested a method or way to break down text content into smaller chunks of information and create a meaningful pattern of storage for main ideas to be remembered. Exercises were designed to increase storage and retrieval of material. For example, (1) students were asked to create questions about a chapter that they would use to guide their reading in order to answer, (2) students were asked to quiz each other, (3) students discussed main ideas with each other inside and outside of class and (4) a midterm practice exam was given and feedback on how students performed was provided. The corrective feedback given by graduate teaching assistants on homework and the practice exam facilitated student's constructing in their memory a clearer picture of what material should be placed in long term memory. Students made decisions (being active participants in the learning process) as to how and if they were going to utilize the intervention. Then the posttest
measured how well the intervention process functioned. This confirms the cognitive perception and can be utilized in guiding the development of teaching techniques for introductory students when the learning task is comprehension.

With the final grade results, conclusions about learning were different. PQ4R was not as effective as student effort as far as having an impact upon the final outcome. This also is consistent with the cognitive perspective which sees students as active participants in the learning process. Students can be influenced by the learning process (Weinstein and Mayer, 1986). The final grade consisted of points from learning task that called for a variety of learning behaviors, thus, student effort had more influence on the results than PQ4R which focused only on text comprehension.

Even students' responses about what facilitates learning were consistent with the cognitive perception. The most frequent response given by students for what influenced learning was when students could relate what they were learning to something relevant in their life. Educators like Woolfolk (1987) suggest one of the guidelines for increasing memory of new material offered by the information processes model is helping students make connections between new information and what they already know. Students indicated that when this happened, it facilitated their
learning. Given the results, the cognitive perspective on learning provides a useful mode for interpreting the results of this study.

The research findings do support the premise that students' retention and recall of text content material can be significantly affected by the incorporation of study skills techniques within the classroom situation. However, the researcher stops short of recommending the inclusion of PQ4R in all classroom situations. PQ4R as implemented, required weekly homework assignments that had to be read and feedback provided to students. For classes with a large number of students (over 30), this is not a practical approach. It was feasible in SW 220 because there were two Graduate Teaching Assistants who read the homework and provided feedback to the students. But the principles of cognitive learning theory used in PQ4R can be implemented in a modified manner for use in large classrooms. PQ4R used five basic principles or steps to facilitate the processing of information: (1) information was broken down into smaller pieces, (2) advance organizers were used as cues in order to inform students what material they would be held responsible for, (3) students were asked to create questions to guide their reading, (4) students were provided with feedback on their learning progress, and (5) students were asked to comment on how what they read confirmed or contradicted what they already knew. Making connections
between new material and previously learned material facilitates memory. These principles, in a modified form, could be implemented in large classes.

To use the above-mentioned guidelines in a large classroom: (1) lectures would be designed to cover only one chapter, one section or one complex idea (this would limit the amount of material covered but it probably would facilitate the retention of what was taught), (2) list of names, terms and concepts should be provided early in the course so students would have a clear idea of what material they were expected to learn, (3) at the end of each lecture, hand out two or three questions that students should use to guide their reading; then begin each class by asking those questions of the students, (4) give students frequent feedback on how they are doing - for example, short quizzes, and (5) for discussion purposes, ask students how the material they are reading agrees or differs with what they already know. The specific method (PQ4R) may not be relevant to all classes, but the principles behind its success can be modified and implemented in a variety of situations.

Control Variables

Social Status

A number of authors, like Ballantine and Hall (1983), have indicated that demographic factors like gender, age, race and social status, relate to achievement in college.
With this sample there were no significant relationships between these variables and the dependent measures. There were probably two main reasons for these results. The first is the nature of the student body itself. Students were enrolled in a large midwestern public university and although there was diversity in the population, the students were still rather homogeneous (see description of sample, Table 1). The second factor was the way the course and PQ4R intervention was designed. Both were designed to help as much as possible (i.e. with advance organizers and review for exam and clear explanation - both written and oral - of assignments) those students who might not be as well prepared. The main idea motivating both the course and the intervention was to facilitate learning regardless of the students background. A conscious effort was made to guide students through every assignment, so all had an opportunity to learn and perform well, even if they came to class with varying positive predictors.

Educational

One reason for using an analysis of variance with a covariate (pretest) model was to control for the students' previous knowledge of material. Often, previous knowledge and grade-point average are good indicators of future performance (Ballantine, 1983). In this case, only G.P.A. was. Four reasons can be proposed for previous knowledge and pretest not being significantly correlated with the
outcome measures: (1) a majority of the students (65%) had no previous social work classes, (2) students who were familiar with the material may have taken a more relaxed attitude about studying and not put as much effort into studying, (3) the exam was so text specific, using the authors words and meanings, that previous knowledge may not have been helpful anyway, and (4) in the review sessions, GTAs went over actual questions on the final exam in order to facilitate retention of material so students had a clear idea of what they would be tested on.

Previous Social Work Experience

One might expect that previous exposure to the field would facilitate learning but that was not the case. Two explanations are offered: (1) the exam was text specific and previous exposure did not guarantee exposure to material the author covered in the manner covered. This is particularly true because the course dealt with policy issues and students' social work experience was almost always related to the clinical area; and (2) students did not vary that much, as most had very little experience in the field; 95 percent had one year or less work experience, 81 percent had one year or less volunteer experience and 90 percent had one or no previous social work classes.

In summary, the major reasons demographic data had little relation with exam and final grade results was that the research and the class were intentionally designed to
mediate those factors and plus the fact that the population was rather homogeneous to begin with.

**Howard Value Scale**

Because of the controversial issues addressed in the course (the social welfare system), having values similar to those of the profession could have increased motivation and learning (Ausubel, Novak and Hanesian, 1986). This assumption was not verified by the results. Part of the reason probably was because the class attracted mostly persons interested in social work and those students probably came with a prior identification with the professions value system. Also, in the review for the exam, it was made explicitly clear that questions would be worded using the author's point of view. Students were encouraged to disagree and discuss but they were informed that all answers would be graded according to how the author saw the issue. Thus, students were not asked to agree, only to remember and recall what the author had written. Clear expectations, along with the opportunity for students to disagree openly in class, probably reduced the influence of value identification on the measure of achievement (final exam).

**Learning Preference Style**

The majority of students described their learning preference as Field Dependent (37%) or combination (Field
Dependent/Field Independent = 25%) which is consistent with the data that indicated that those with FD preference are attracted to social work. But it is interesting that students were more likely to score in the FI (49%) range on the instrument used to measure such. This conforms with the recent research (Ward and Clark, 1987; Thomas, 1986) and Witkin's (1982) latter work which suggested socialization and learning affect the measurement of this construct. For adults, at least, the instrument seems to measure ability which can be learned, not just preference.

The objective exam was a field independent task. It called for breaking down the text content and picking out the main ideas to remember and recall for the exam. Field dependent persons should have more difficulty with this type of task than field independent persons. PQ4R is designed to facilitate identification of main ideas. It provides a blueprint for structuring content material in such a way to facilitate learning. Field dependent persons who accept structure provided more readily then field independent persons should find PQ4R a helpful scheme for learning.

With the research sample, learning style preference did not significantly correlate with the outcome measure of posttest score. This leads the researcher to suggest when a task is relevant (i.e. students want to do well in order to be admitted into the department) FD students may not prefer the task but will perform as well as FI students.
Student Evaluation

When students were asked what they felt facilitated their learning, the most frequently chosen response was lab activities. This is not surprising considering the number of field dependent students in the class. Lab activities required a lot of social interaction, which FD persons enjoy. The labs were structured so that they encouraged exploration of such things as values and decision-making. Understanding both one's value orientation and how that has an impact upon the decision-making process are extremely important developmental learning tasks for future social workers. The three lab assignments related to these value exploration and decision-making issues also and resulted in 30% of the grade.

Strengths of the Research

The strengths of this model outweighed its weaknesses. For one thing, even though the groups were non-equivalent due to the lack of random selection or assignment to group or treatment, they ended up being homogeneous and similar to previous OSU social work students and other baccalaureate social work students in the U.S. The measure of one of the student effort variables needs to be improved. Often, when comparing teaching methods, student effort is ignored and with non-equivalent groups, this could be a serious error. The intervention took place in an actual classroom. Thus, results are more generalizable than if intervention was
implemented in a contrived environment. Further, these results indicate that it is possible to do research while practicing and the research did not interfere with the primary goal of education.

Conclusions

The research results support the premise that students can benefit significantly from teacher directed study activities. Although some resistance was encountered, it did not alter the fact that those who had weekly assignments and feedback from Graduate Teaching Assistants retained and recalled the text material more than those in the control group. In fact, the results suggest that when retention and recall of specific facts is the learning task, student effort by itself is not equal to teacher directed activities in facilitating this type of learning. Thus, for entry-level students, incorporating guided learning activities encourages retention of such material.

Results of final grades supported research findings that indicate student effort is a significant factor in college achievement. The lack of significant interaction between motivation and treatment indicates the need for further research in this area in order to understand more fully these results. More accurate measures of student effort need to be developed in order to ascertain if the results reported here are accurate. On-going empirical research is necessary in order to better understand the
interaction between content, student and teaching activities.
CHAPTER VI
CONCLUSIONS AND RECOMMENDATIONS

In introducing this research project, the question of why social work should be involved in research focusing on facilitating retention and recall of content material was addressed. Prominent social workers were cited to make the case that social work educators have always expressed an interest in how to best equip trainees for their tasks.

The experiment conducted in an actual undergraduate classroom with intact groups was based on principles of quantitative research utilizing an intervention grounded in one area of cognitive psychology, information processing (Ausubel, Novak and Hanisean, 1968). Similar research has been conducted by persons both in psychology and education (Talton and Simpson, 1987; Swing and Peterson, 1988). Such research has indicated that students have poor study habits and that teaching and practice of more effective study habits will improve retention and recall of content material (Beard, Bligh, Harding, 1979 and Wittrock, 1986). The results in this project indicated the experimental group did perform better on the posttest after group means were adjusted for covariate, pretest score. When examining the dependent measure final grade, student effort as measured by
the quality of intervention assignments turned in indicated that students who had high quality assignment scores received higher final grades.

Implications for Social Work Education

Compton and Galaway (1989) discuss social work's function as mediating the process through which the individual and society reach out to each other through a mutual need for self fulfillment. Society needs its youth socialized and trained in ways that prepare them to effectively solve problems and perform jobs. Individual students who want jobs offered by society need the credentials necessary to enter those jobs. In the research detailed, the researcher had the goal of facilitating learning and retention of material in a manner so students could internalize and generalize to other situations. All students in the experimental group were given a diagnostic quiz and 100 percent of the students expressed some problem with their learning or study habits and a willingness to work on such, but their behavioral responses as measured by the quality of the assignments indicated many did not accept the goal of facilitating learning by practicing study skills assigned. For example, 44 percent of the experimental group did not turn in all of the assignments. Since the intervention required active participation in order to facilitate learning, this was a problem. However, this problem is one that educators face daily. Cooperation with
any intervention is never guaranteed. Even though some students did not cooperate fully with the intervention, the adjusted mean scores for the experimental group were significantly better than for the control group on posttest scores.

At the college level, holding students responsible for their learning is appropriate. But this study indicated that when it comes to a specific task that requires recall and retention of material, teacher directed learning activities facilitated learning more effectively than regular student behavior. The field of social work has some basic concepts and constructs that students need to learn. Educators can facilitate such learning by structuring activities in such a way to facilitate retention and recall. As the profession moves away from the friendly visitor role to that of professional role, a body of knowledge is being generated that graduates are expected to acquire. This is extremely relevant in states like Ohio, where in order to practice social work, a person has to be licensed in order to practice. One step in the licensing process is passing an objective exam which requires retention and recall of content material relevant to the profession. Encouraging students' skill in this area is another example of how social workers start where the clients (students) are (ability-wise) and facilitate movement.
Another possible advantage of the intervention suggested was the encouragement of student understanding of meta-cognition. In a field that changes so rapidly, not only do educators need to train students in the basic principles, but they need to facilitate students' life-long learning skills. With this research there was no evidence provided that such life-long skills will be practiced. This would be a fertile area for future research.

No undergraduate program can prepare students for every situation they will encounter after graduation. However, if students leave an academic program with the basic knowledge and skills necessary for a field and an understanding of how to continue their own learning process, they are well on their way to becoming assets to their profession. Because of the changing nature of the field, more emphasis should be placed on fostering life long self-directed learning skills (Lovell, 1986; Knowles, 1975) - in other words, teaching students how to learn rather than what to learn. If the researcher would have contacted students in this project one quarter after intervention and asked if they continued to use PQ4R skills, this would have provided information about whether or not the intervention facilitated meta-cognition. PQ4R was chosen as the intervention because it provided a scheme or blueprint for structuring and organizing text content material (Bowine and Dowinowski, 1987). The researcher wished to empower students by presenting the PQ4R
techniques so that students could improve their metacognition (thinking about learning). Unfortunately, no measure of whether or not this took place was done. Such follow-up research would be helpful in order to increase the profession's understanding of how to facilitate metacognition.

This research project was one piece in the overall process of learning about how to facilitate learning with social work students. The techniques utilized (PQ4R) did facilitate retention and recall more effectively than normal student study activities. Thus, supporting Kuethe's (1968) contention that persons can learn to make better use of their learning capacity. The intervention results provided empirical evidence that PQ4R can be an effective teaching technique for facilitating comprehension and recall. Further, the results indicated a relationship between teacher behavior and learner outcome.

The second main finding, that the PQ4R intervention did not significantly affect final grade suggests a need for examining what procedures or techniques might be utilized to focus on other kinds of learning tasks, for example, problem analysis and synthesis (which were required for two tasks, including the final grade). No profession would be satisfied with students only learning to comprehend facts, students must be able to utilize facts and information in order to analyze and problem-solve. Some, like Bransford
and Stein (1984), suggest that there are teaching methods which can foster the higher level thinking processes of analyzing and synthesis. Examining other teaching techniques for utilization with different stages of learning would be an appropriate focus for further research.

With the dependent measure final grade, student effort as measured by the quality of assignment students handed in, was more significantly related than PQ4R intervention to the final outcome. These findings are consistent with the cognitive perspective on learning that students are not passive recipients of learning, they actively participate in the learning process. These results suggest a need for research on ways to increase student's active participation in the learning process.

Perry (1968) suggested that students' intellectual and ethical development moves through different positions. In the first position, Basic Duality, students tend to see things as right or wrong, black or white. Multiplicity is generally not perceived or accepted. They look to authorities to tell them what is right or wrong. In the ninth position, Developing Commitment, multiplicity is accepted while the ability to take a stand and make a commitment on what one believes in is strong. In other words, a person in the ninth position would understand and respect the fact that persons disagree, but have a clear understanding of their own person stand on an issue. They
would decide for themselves what is right and their decision would not be determined by what the "authorities" say. When examining the different positions it is apparent that different teaching techniques are needed to foster learning at different positions. The intervention utilized in this research would be most appropriate when students are in earlier positions of ethical and intellectual development. The early positions call for more external (teacher) directed techniques, while the later stages clearly call for more internal (student) directed techniques.

In this research project there has been discussion of five major factors that have an impact on learning. The first was the students themselves and the effort they were willing to put into any given task. The second was the learning task that was required (for example, comprehension or analysis). The third was the intellectual and moral development position of the student. This was not measured. The fourth was the learning style preference of the student. The fifth and final factor was the different teaching techniques that could have been utilized. Hopefully, these results underline the complexity of the learning process, while showing that the processes can be broken down into components and empirical research can be conducted, thus gaining information on how to facilitate learning.

Another suggestion for research is that considering the complexity of factors that affect learning a qualitative
longitudinal, multi-dimensional study may be necessary in order to ascertain from students what they think facilitates their learning and what actually would encourage them to accept the role of life-long learners. Students may not always know what facilitates their learning but they usually can tell you what motivates them to perform. This type of research is important because it is impossible for an educator to match his/her teaching strategy with each student's varying learning style, moral development, sociological background and so on. Thus, educators need to find ways of encouraging students to take responsibility for their own learning and share the task of facilitating learning with students.

Needless to say, there is a need for more research in this area so schools of social work can more effectively facilitate their students becoming the most effective life time learners possible. Higher education is continually being criticized for not properly preparing students for the occupations they enter (Ifill, 1989 and O'Connor, 1986). Educators need to increase their methods of demonstrating results.

**Implication for Social Work Practice**

The results of this research suggested two major implications for social work practice. The first has to do with the individual professional as a life long learner.
The second has to do with implications for practitioners and clients.

As implied above, learning does not, or should not, stop at graduation. Learning needs to be an on-going process. Much learning takes place on the job. For each new social problem (i.e. alcoholism, Alzheimer's Disease, AIDS, sexual abuse, homelessness, etc.) or population, served, content material has to be learned before effective interventions can be planned. Much content material must be learned while on the job. Every new social problem has certain facts that need to be memorized and utilized. For example, when working with families who have a loved one who has Alzheimer's, workers need to know symptoms, causes (if known), what behavior changes to expect, coping skills, resources, and so forth. Initially, this material will have to be memorized until the worker gains needed experience with the disease and its victims. On the job, supervisors have little or no training on how to encourage such learning, other than suggesting to new workers that they need to read about the problem. As indicated by this research and others, reading may not be sufficiently effective to retain material. So as a profession, social work either can train supervisors in skills to facilitate learning or train students so that they understand their own meta-cognition processes and how to facilitate them.
The second implication has to do with the relationship between worker and client. BSWs often obtain jobs in which they function as change agents (Zastrow, 1989). Part of the role is to teach clients more effective coping skills. For example, the abusive mother needs to learn more effective ways of parenting, a passive teenager needs to learn to be assertive, and an AFDC mother needs to learn to manage money in the most effective way possible. A basic principle is to start where the client is, but in all three of these situations, the worker will need to be very directive and act as a teacher.

The profession talks of the role of social worker as teacher (Compton and Galaway), but spends little or no time training students how to teach. The assumption is that if persons know how to do something, they can teach it.

Another criticism leveled against social work graduates is that they do not do research to evaluate their interventions (Faver, 1986; Ivanoff, 1987). Workers complain that they do not have time to do research, or that research methods interfere with their primary goal of serving clients. This research was conducted in an actual classroom and showed that one can incorporate empirical evaluation into normal social work activity.

**Recommendations for Further Research**

Teacher structured activities did facilitate learning of text content. But some issues raised suggest a need for
further research. First, a more accurate measurement of student effort is necessary for comparing teaching methods. No matter how well designed and grounded in theory an intervention is, if students do not use it, the intervention can not be effective. Thus, examining student effort, amount and quality, when using nonequivalent groups is very important. Unfortunately, the variable is very difficult to measure (Ausubel, Novak, Hanisean, 1986). One usually can only measure the outcome (product) and make a subjective evaluation of amount and quality of effort that went into producing the product. However, having clear expectations prior to intervention of what would be included in a product judged as exhibiting high effort would improve the validity of this measure. Using different raters to evaluate and establish interrater reliability would strengthen the measure. Providing clear guidelines of expectations to students for assignments and informing them that they would be evaluated on quality of product might improve student effort also.

Second, the population studied supported the claim that social work attracts a number of field dependent persons. This construct should be explored to ascertain how best to match learning style and learning task, and how to develop skills in both preference areas. Certain assumptions about and evaluation of this concept have been made using a linear perspective, which needs to be questioned. Witkin, in his
most recent writings, has moved away from the linear perspective and now describes the field dependence, field independence preference as bipolar. Witkin also indicates both preferences have certain arenas in which each would be seen as superior. For example, field dependence in the interpersonal area and field independence in the analytical problem-solving area. This shift in interpretation was facilitated by research that challenged his earlier interpretations. For a profession which tries to encourage students to see problems in context, it is important that social work be actively involved in the research on this construct.

The structure of SW 220 is ideal for further quasi experiments comparing educational interventions in order to learn more about such issues as how to (1) facilitate problem-solving and thinking, (2) design activities that affect value changes, (3) develop more accurate measures of student effort, and (4) match learning styles with different learning activities, and so forth. The four different labs provide ready-made groups that can be compared using the statistical test of analysis of covariance to control for non-equivalence prior to intervention.

One of the above-mentioned issues, how to design exercises to affect value changes is very relevant to the Social Work 220 (policy) classes. This issue was not the focus of the research intervention but data was collected
pre- and post on values to see if values did change throughout the course. There was movement but it was not statistically significant. This is consistent with other research (Howard, 1985; Robeach, 1979) which indicates that it is very difficult to change values, particularly in a short time span like ten weeks. Social Work 220 is open to all students and one function of the course was to move students from seeing social problems as individual failures (blaming the victim) to understanding how society contributes to the maintenance and perpetuation of social problems. Thus, as a profession, social work is interested in ways to influence value orientations. Research in this area might lead to a better understanding of how to have a significant impact upon value formation or reformation.

Through the political process, laws are created (for example, non-discrimination) and resources allocated (funding for AIDS research) that directly impact upon the social work profession and the persons it serves. Many laws and programs are directly affected by voters. All SW 220 students are potential voters and the profession needs to facilitate voters' ability to effectively analyze social problems before they vote on issues that shape the country's approach to such problems. Gaining more information on how to effectively participate in the political process is part of the macro function of the profession.
Summary

The research results support the premise that students can benefit significantly from teacher directed study activities. Although some resistance was encountered, it did not alter the fact those who had weekly assignments and feedback from the GTA retained and recalled more text material than those in the control group.

In fact, the results suggest that when retention and recall of specific facts is the learning task required, student effort by itself is not equal to teacher directed activities in facilitating this type of learning. Thus, for entry level students when learning new concepts and constructs, including guided learning activities within the actual classroom, encourages retention of such material. By designing such activities and utilizing them, social work educators will increase their skills in facilitating student growth.

Wessel and Faith (1953), in *Professional Education Based in Practice*, challenged social workers to develop an understanding of the theory behind their behavior. The same challenge can be applied to social work educators. Understanding the theory behind learning and applying it in a systematic way can enhance the educational process. Much empirical work has been conducted trying to assess how learning occurs and how it can be facilitated. The problem is that information is not systematically applied,
encouraged or sanctioned for use by educators. There are a number of reasons why the integration of theory and techniques on learning are not always utilized in institutions of higher education. One reason is that those who are hired to teach are hired because of their expertise in a profession, not because they are aware of specific teaching techniques. When they join a faculty they discover that teaching often is not rewarded in the same manner as research, publishing and grant-writing. Faculty find little incentive or time to learn how to improve their teaching. This conflict between facilitating learning (and developing skills in order to know how to facilitate learning) and the requirements of the larger system in order to survive (publish) is a difficult one to overcome. Facilitating learning is a complex issue offering opportunities for both student, faculty and system growth. This research provided one small piece in the analysis of the overall process of learning in higher education in hopes of encouraging the ongoing development of a body of knowledge on how to facilitate the learning and growth of social work students.
APPENDIX A

INTERVENTION: SCRIPT
220 Research Project

You are participating in a special project. We are genuinely interested in understanding better what facilitates learning in the classroom. Our purpose is to discover if you can benefit from special assistance in the learning process. In order to gain this information, we are asking your cooperation. Throughout the quarter, starting today, you will be asked to give us information about yourself, your attitudes, and your knowledge of social work content. In order for us to determine if you already know the material that we will be presenting this quarter, we are asking you to take pretests; you will do that Monday. In the labs and lecture you will participate in activities that we hope will facilitate your learning and at the end of the quarter exams will be given to determine if any changes have taken place. None of the background information or results on pre and post exams will be used to determine grades. After grades for the class have been turned into the Registrar, study information will be coded and names and social security numbers will be removed so that your individual identity will be anonymous. At that time, the analysis of the pre and post test information will be done.

So as not to bias the study, the specific questions examined cannot be described at this time, but the procedures planned have been explored in detail in other studies with positive results. If you wish to know the
results you may give me your name and mailing address and we will mail you the final results when the study is finished (Spring or Summer Quarter).

Thank you for your cooperation. Hopefully, the results of this study will give us some indication of how we in social work can facilitate teaching and learning in undergraduate education.
Pre-test

People could argue that any changes we report at the end of the quarter are not due to anything we did, but result from the fact that some of you started the quarter knowing most of this material. In order to see if this is the case, we have a basic knowledge exam we would like for you to take today. The results of the exam will not be used in figuring your grades. Rather, this is our method of determining a baseline of knowledge for each of you. Do the best you can but, because you will only be allowed 30 minutes to take the exam, do not spend too much time on any one question, move on to answer those you do know.
Some of you may have had experiences, job or life or educational, which would affect your learning experience in this class. Please fill out the demographic sheets as completely as possible. Your answers will help us discover whether the unique factors you bring to the class result in learning difference or if any changes we notice are due to our intervention. Thank you for your cooperation. It may facilitate our teaching methods in the future.
Value Survey

Social Work is a value oriented profession. Social workers have certain values which are part of their code of ethics. I do not expect you to know what those values are yet, but we are curious to know if we attract people who already have these values or if we need to teach our values to aspiring professionals.

In order for this to be valid research, please answer how you truly feel, not as you think I might want you to respond. The results of this exercise will in no way reflect on your grade. There are no right or wrong answers, only your opinion on an issue.
Week One Lab

1. Ask them to fill out the Demographic Sheet. Explain that we wish to know who they are and it will help with the research we are doing. Explain if any of the questions offend them that they do not have to answer, but we would appreciate it if they answer all of the questions (this takes about 15 minutes).

2. Then ask them to fill out the value survey, explaining that there are no right or wrong answers, only their opinions. This takes around 30 minutes.

3. Treatment Group - read 1st Lab - Experimental Group
   Introduction - do the diagnostic test - give homework.
   Control - explain the journal concept.

4. Then introduce yourself - have them do the same and tell of their experience with the welfare system (do this in a circle - it takes about 30 minutes).
As you already know, you are participating in research right now. We are trying to find out how to facilitate learning in this class. There are a number of ways to approach this problem. We as researchers can study the problem and read research literature focusing on this topic and then design a plan that we think will facilitate learning or we could ask you to tell us what helps you learn in this class. It may differ for each person, it may be something that happens in lecture or lab or it may be something you do on your own. No matter what it is, we want to know. So, we would like you to keep a log of what you do or what facilitates learning in this class. These logs will be collected in each lab period. You will get 1/2 a point for each time you hand a log in on time. But we want to reassure you that what you report in this log will not impact on the grade you are given. You will gain 1/2 a point simply for doing each one. We will not read the logs until your grades have been turned into the Registrar. The reason for this is that some may fear being honest. For example, in the past we had a student who admitted that he did not read the text until the night before the final exam. Of course no one in this room would do that, but if you did, you might be reluctant to tell us that, fearing we may use the information against you. That is not our purpose. We honestly would like to know what helps you learn the content
material that we present. So that we do not know what you write until the quarter is over, hand your logs in folded length wise with a blank sheet toward that back. On that sheet put your name, date and lab session. Are there any questions?
1st Lab - Experimental Group Introduction

In the past quarters we have noticed that some students do poorly on our exams in SW 220. This upset both students and us. There could be a number of explanations for this result, the test could be poorly designed, we may not prepare students adequately, or students may not know how to study appropriately for our exams. Previously, we have worked to improve our exam design and preparation process. In addition, this quarter we have planned a particular intervention that should help you learn how to study effectively for objective exams. This intervention will require a little extra work on your part because there will be mini homework assignments to be turned in each lab period. You will receive 1/2 point for each assignment you turn in. It will not be graded although you will receive feedback on your work. All of the assignments will be designed to facilitate your retention and recall of material presented in the text.

It is our hope that you will find the skills we ask you to practice useful and helpful in your other classes as well. You have gotten this far in your educational careers and thus have developed some study habits already. Previous research has indicated that even the best students have extremely unproductive study habits. Learning these new skills in the long run should cut down on the time you'll need to study because you will use your time more
efficiently. Instead of assuming that I know where you need help, I am going to give you a diagnostic test and let you tell me the areas in which you could use some help. Remember this is not a quiz for a grade - there are no right or wrong answers, only your answer.

In order to get us all in the right frame of reference, let's discuss this topic of study habits for a few minutes.

1. How do you go about studying for an important textbook exam on your own?

2. How do you go about remembering what's important?

(Have three people answer each question - if no one volunteers, call on people saying "everyone can answer these questions, we all have unique ways of studying. I, for example, "---------" (then relate your own method) - then say, "how about you? What's your approach?")

After they have all answered ask:

1. How many are satisfied with the way you presently study?

2. Would anyone like to know a more effective way you can learn the material you need to know to do better on exams?)
1st Assignment

I want you to go on a textbook tour. Notice the title of chapter headings. Leaf through the book, read bold headings, read chapter summaries and some of the questions and terms at the end of the chapters. Then close the book and write out in your own words what you think some of the main ideas are and what is the overall objectives of the text. Make your summary no longer than one page. Remember, this assignment will not be graded, but you will receive 1/2 point for handing it in next ___________. We then will discuss what you discovered.
Diagnostic Study Exam

Name ________________________ Lab ____ Date ________

What kind of study skills would be helpful to you? The factors that follow are often mentioned by students as influencing their study behavior. We will utilize your suggestions to try and help you design an individualized study plan.

1. I often need help in learning the meanings of new words. ______
2. When I read an assignment, I often need help in comprehending the readings. ______
3. I need to be able to tell the difference between what is important and what is unimportant as I am reading. ______
4. I need help remembering what I have studied. ______
5. I would like to have help in taking notes when I read an assignment. ______
6. I need help in bringing ideas I have gained from reading together into a final paper or oral report. ______
7. I need to become really interested in what I am reading - to learn to concentrate better. ______
8. I need help because it takes me so long to read my assignments. ______
9. I need to learn how to critically analyze material. ______
10. I am not aware of difficulties. ______

What else can you think of that will help you have a good year in this class? Please write your comments below.
2nd Lab - Experimental (Treatment) Group

1. Collect the homework and ask if anyone wants to comment on it.

2. Give them group data about the study skills survey.

3. Don't do the Jury exercise.

4. Treatment: Take students on a Textbook Tour. (1/2 an hour)

   Explain: "Authors give you hints as to the main ideas and relevant points in every well-written text. Let's look at your text and discover these clues."

First, look at the title: Social Welfare: A Response to Human Need - ask a student in their own words to say what that means to them. No matter what they say, respond with "let's see!"

Second, look at the Table of Contents - as you read it, ask students what they think the terms mean and ask them to write these comments down (resist answering any of your own questions). After finishing the Table of Contents, return to the person who explained what the title meant to them and see if he/she still thinks their answer is correct or if they wish to modify it.

Ask students to read the Preface silently and have one person explain in his/her own words what the author says is the purpose of the book. Then ask if anyone got a different idea of the purpose from reading the Preface.

Point out that the author has a brief summary at the beginning of a unit and the end of each chapter, which should outline the purpose and main ideas. Ask students to write in a few sentences what they anticipate Chapter One will be about, after reading these.

Then go to Chapter Two. Look at the bold face headings and read them out loud. Then ask students to read the chapter summary (page 41) and close their book and write a brief summary of what they think the chapter is about.

Then go to Chapter Three. Turn to page 60, note the Key Terms and Questions for Discussion (point out the author used italics to emphasize these words in the text).
Also point out pages 82 and 83 - the graphics - and explain the importance of graphs as an aid to underline main points.

Then look at Chapter Four and have the class turn bold headings into questions to be answered through reading.

Wrap it all together by stating, "By looking at a text in this way you provide a guide or road map for yourself with which you can structure your learning. It also should help your retention because you are more actively manipulating the content material."

5. Go over Minority paper.

6. Do the "Who Will Survive" exercise (see Control instructions).

Assignment:

1. Check your initial impressions of what this book is about with what you've read in the first five chapters. Were they right or wrong, or a little bit of both?

2. Answer your own questions which you have written down in this class.

3. For Chapter Three, define the key words in your own words.

4. In Chapter Four, answer questions One and Two on page 80.

5. Write a brief paragraph in your own words as to what the main ideas are.

By now, students may be angry or upset with what they see as extra work. Acknowledge that, but explain that in the past students have had difficulty passing our exams which mainly deal with the text content. These exercises should help them learn and retain the material.
2nd Lab - Experimental (Treatment) Group Adapted

We asked you to go on a textbook tour so I'm sure you have formed some ideas of what this text is about. On the Study Skills Survey you filled out, one of the most frequent comments was that of having difficulty selecting main ideas. Your authors have given you many cues as to what they felt were important concepts. Which ones did you notice?

Title (by the way, what does it mean?)
Table of Contents (4 areas)
Preface
Introduction to the chapter
Summary at the end of chapter
Bold face headings
Key Terms
Discussion questions
Graphics 6 & 17

All of these can be used to develop a road map to guide your reading.

Then hand out assignment.
1. Collect the journals. Ask at least one student to share what is in their journal. Praise them.

2. Give instructions for the minority paper:
   a. Explain the purpose - i.e. for them to experience being a minority and to write about that experience
   b. Discuss grading - go over the five points so that they are clear about what they will be held accountable for and give examples
   c. Hand out suggested list of places they could go (this takes about 15 minutes).

3. Do the "Who Will Survive" exercise. Divide them into groups of no more than 15. Then hand out the list of people. Explain the purpose of the exercise: "Our decisions are guided by values. Values are attitudes and beliefs we have about people and things. Sometimes we are aware of our values, other times we are not. Sometimes we treat our values as if they are fact. Hopefully, in this class you will become more aware of your values."

Set up the exercise by telling them that they have been choice to select the people who will go into a bomb shelter. These people may be the only person who will survive a nuclear attack. The people are waiting for their decision, the bomb is on its way and everyone has agreed to abide by their decision. They will not survive. The group has to come to a consensus about their decision, if they do not, everyone dies. (Give them 20-30 minutes to do this.) Then find out who survives and process.

1) How was the decision made?
2) Why were people excluded?
3) Why were people included?
4) What issue was most significant (i.e. reproduction, fairness, race)?
5) Who was the leader?
6) Did anyone not speak?
7) How did they feel about their decision?

8) When there was a disagreement, how was it resolved?

As they respond to these questions, point out values when you hear them and underline differing values. Concluding remarks should deal with how all decisions are guided by values and that it is important to be aware of them and, from time to time, question them.

4. If you have time, pick 12 people to become a jury and the rest will be observers listening for "value" statements.

Set the case up. Parents for a 13 year old girl being tried for murder. She died of cancer. They did not seek medical treatment because it was against their religious beliefs. The parents were very loving and caring to the end. The daughter left a tape recorded message indicating she was "happy to do Gods will." Doctors argued that medical science could have saved the girl. (You need to argue both sides strongly - then ask your jury to bring in a verdict - allow time for the observers to comment.)
2nd Lab Assignment

1. Check your initial impressions of what this book is about with what you've read in the first five chapters. Were they right or wrong, or a little bit of both?

2. For Chapter Three, define the key words using your own words.

3. In Chapter Four, answer questions one and two on page 80.

4. Write a brief paragraph, in your own words, as to what the main ideas are in Chapter Five.
Preview - preview the test, develop a mental map of where the author wishes to take you

Question - turn the authors main theme cues into questions to be answered

Read - read the text - was your mental map correct?
   Answer your question? Did more questions arise?
   Did what you read surprise you or confirm what you know? Do you agree with the author?

Self-Recite - tell someone else what you discovered when reading - try to explain to someone else what you learned

Test (review) - review material - see if you can answer the questions at the end of the chapters, do you know the meanings of the key words without looking at the book - quiz each other
I. Take attendance - send sheet around

II. Collect assignments and ask if there are any questions or problems. Hand back feedback on last assignment - keep it positive and corrective (also relate it to exam questions when appropriate).

III. Give them the quiz. Tell them to take it after reading the first five chapters. The answers are in the book. We will not be collecting them. This is a self check to see how you are processing learning the text material.

IV. Treatment - generally in college you are told "read this text and master the content." But few of us have developed an efficient approach to textbook reading. I, for example, (give your own experience).

Today, I am going to share one package of study skills that has proven helpful to students. This package goes by the acronym PQRST. PQRST is a cluster of study skills that are helpful in improving the reading of expository materials when a students purpose is thorough mastery of content. It should help comprehension and retention. The steps in the procedure are: Preview, Question, Read, Self-Recite, and Test (or Review). This method was developed by Francis Robinson, a psychologist at Ohio State, for the Army.
The Army was bringing in some of the brightest people and placing them in complex, difficult tasks and even with training manuals, these people were unable to read the material and perform the tasks required. They discovered that even intelligent people can read material and not learn the content. This method is not a lock-step procedure, you can adopt it to meet your needs. Use what is helpful to you, but give it a fair chance - practice it. Habits, even good ones, take time to become ingrained and comfortable.

The Preview Step - this can save you time (look at Chapter Four, Five or 11). What are the clues the author gives you about the chapter? What do you think the main ideas are? (Write this on the board) This is your mental map - you start with when you read. The reason this helps is because it gives you an idea of what are the main ideas that you should be trying to remember and you process it more deeply (you've manipulated the material and thus, it's more likely to go into long term memory - where you can store it until test time).

The Question Steps - demonstrate how you can turn the mental map into questions to answer as you read (do this on the board for the class). For your next assignment - for the chapters that are due next week-
preview them and make questions out of your mental map and then pretend that you are the teacher. Answer these questions:

What would I want my students to get out of this section?

What questions would I ask them on this chapter? Can you answer your own questions? If so, do it - if not, read for the answers.

V. Play "Star Power" - see control group instructions.

Eliminate one trading round

Give homework assignments
3rd Lab - Control Group

I. Take roll - send sheet around

II. Collect journals and ask if anyone is learning anything about their learning habits that they didn't know before.

III. Play "Star Power"
   A. Hand out name tags
   B. Hand out envelopes with chips and have people put their initials on the board under their family name (Square, Circle and Triangles)
   C. Explain the rules of trading and have chip points listed on the board
      1. 10 minutes to improve score
      2. Trade with anyone
      3. Only 1 for 1 trades
      4. Must be standing to trade
      5. Once a trade has begun, if a trade cannot be accomplished both players are out
      6. There is no talking except for trading
      7. Once you sit down you are out of the trading
      8. Keep chips hidden in envelope
D. After the first round, have everyone add up their points and put their total on the board next to their initials. Then move people from family to family.

The Squares are those who have the most points, then the Circles and finally, the Triangles. Make a "big" deal about the move saying that the Squares did very well, they must really understand the rules of the game, etc.

E. Do another round just like the last. Then have them add up points and change "families" accordingly.

F. Have a bonus round. Hand out three bonus cards. Now the families have to decide what to do with the three cards (each worth 25 points). Remember, individual cards cannot be divided but cards can be given to different people.

G. If they ask a question not covered by the rules, say "in our society, we do not have a hard-fast rule about that."

H. After the bonus round, have them add points and change positions accordingly.
I. Have one more round of trading. After this round you congratulate the Squares for doing so well - "since they have done so well, they have earned the right to set the rules for the next round of trading."

J. Final round with Squares rules, add points and reposition people. End game.

K. Ask them to process:
   1. What is this game all about?
   2. Did it remind you of anything (American economic system)?
   3. Those who have power keep power and make the rules.
   4. Some move - how and why, point out a few had as many points as the Squares and thus moved. Movement is an exception, not rule, in this society.
   5. This game upsets some people because it challenged some strongly held beliefs - it can be painful to face the fact "we don't all start with the equal amount and no matter how hard you work you won't get to the top."
   6. The only way to change this is to change the rules of the game - making money cannot be the goal.
Assignment - Lab #3

For the chapters that are due:

1) Preview
2) Develop questions to answer for yourself
3) Read
4) Pretend you are the teacher - answer these questions:
   a) What would I want my students to get out of this chapter?
   b) What questions would I ask?
   c) Can you answer those questions?
   d) If so, do - if not, read again
4th Lab - Control Group

I. Take roll - send sheet around.

II. Show videotape "Report on America: Home Street Home" - (takes 50 minutes).

III. Ask for any comments - this tape usually depresses people - process that and challenge them to turn that depression into action and do something about the problem.

IV. Then do the social problem sheet orally in class. Walk them through it - make them do critical thinking. Encourage them to verbalize all sides of the issue (using the brainstorming technique is helpful). Then inform them that in about two weeks they will have to repeat this activity in lab for a grade on the social problem of ________________.

V. Collect logs.
4th Lab - Treatment Group

I. Take roll and collect assignments

II. Show video

III. Work through social problem sheet

IV. Hand out assignments
Social Work 220

Social Problem Worksheet

The social problem is ________________________________.

1. What factor(s) have been identified as cause(s) of this social problem (list both individual and societal factors).

2. What are the value assumptions underlying this social problem?

3. What possible solutions have been proposed to resolve this social problem? Give both individual and societal responses (victim blaming and system blaming).

4. Now, what solution do you propose and why? Demonstrate that you have critically analyzed this issue.
Assignment Lab #4

Reading for pleasure and reading a textbook in order to increase knowledge and comprehension of material are two very different activities. Using the chapters assigned for this week (Chapter ____ and Chapter ____), divide the chapters into manageable "bites." Usually, the author helps with this activity by dividing his or her content themselves with bold heading. Within each subheading draw a line under only the sentence or sentences you think contain the main idea of each paragraph. When you have finished reading each section under a subheading, write in brief form, using your own words, what you think the main theme of the subheading section is (these main theme sentences should be handed in next week). When you finish the chapter, close the book and write your own summary of the chapter (make it no more than one page per chapter). For each chapter, do some reflective thinking and answer for yourself:

1. Did I learn anything new?
2. Do I disagree with anything I read?
3. Did anything in the chapter clear up something I did not understand in previous chapters or lectures?
Lab #5 - Control Group

I. Collect journals - ask again: (A) if anyone has learned anything new about how they learn, (B) found anything that doesn't work and (C) have three or four indicate what really works for them - praise students for their feedback.

II. Go over the Family Tree Paper -
   A. Purpose: to show that every family gets "welfare" from the government
   B. Have students explain a little of what they are learning to their families
   C. I usually use my own family as an example:
      1. father gets VA medical benefits
      2. when father bought land, VA insured mortgage loan
      3. government paid father not to grow crops on land
      4. government built and stocked pond on land
      5. mother and father get Social Security and Medicare
   Encourage them to check their text for other examples. Warn them that this exercise will upset some of their parents.

III. Have class sit in a circle as each student shares their minority paper experience.
Lab #5 - Experiment Group

I. Do the practice reading exercise (instructions follow).

II. Go over Family Tree paper.

III. Do Minority Paper exercise.

Reading Exercise

Use the chapters assigned for this week. Pick some key passages that confuse students and go over with students. Emphasize they have to read for "author's" meaning.

Encourage them to use these questions on following chapters and explain that if they manipulate content in this way they're more likely to comprehend it and retain it because they have created linkages with previously learned material.
Assignment - Lab #5

For each chapter assigned this week, pick out three sections you think will be tested on (if Dr. Toomey has lectured on them that would be a good clue that the material covered will be on an exam) and answer the following questions:

1) What is (are) the main idea(s)? (What the author says)
2) What is the meaning of this material? (significance/implication)
3) How does it relate to what we've already studied?
4) Does it contradict anything else in the text, in lecture or in your own life experience? (be brief)
Circle T if statement is correct and F if it is not correct

T  F  1. The arrangement of mutual aid as a means to meet human needs can be defined as the provision of support (e.g., food, clothing, shelter, health care) to persons unable to support themselves by governmental social welfare structure.

T  F  2. The arrangement of social insurance is another term describing assistance provided to people unable to meet their own needs funded through general tax revenues.

T  F  3. Indiscriminate relief is a major provision of the English Poor Law.

T  F  4. The Social Security Act of 1935 is funded by State tax.

T  F  5. Social work in the United States had its development in the late 1800's and early 1900's in psychoanalytical approach of Freud.

T  F  6. The official accrediting organization for social work education today is the Council on Accreditation of Schools of Social Work.

T  F  7. An important attribute of a profession according to Ernest Greenwood is an agreed upon approach to solving problems.

T  F  8. A major goal of the provision of the social welfare system is to maintain social order and control.

T  F  9. A societal change which has affected the response to human need via social welfare arrangement is the dependence on a monetary economy.

T  F 10. Relative measures of deprivation hold the view that poverty should be measured on minimum fixed standards of living.
6th Lab Control Group

I. Collect journals - how are you preparing to do the social problem exercise?

II. Hand out General Assistance and Food Stamp forms. Make up a scenario where they needed help - for example:
   1) parents refused help due to low grades
   2) roommate moved out without notice and rent is due
   3) loan denied by bank
   4) been ill and had to quit part-time job
   ...and so on, and ask them to fill out the forms. Give them at least 15 minutes. Then have them read the warning page. Ask for comments. Process experience.

III. Show Donahue tape on welfare. Have them explore values they heard expressed on the tape. Find out if they heard any causes of poverty discussed. Remind them that next week they'll do the social problem sheet for a grade in lab.
6th Lab - Experimental Group

I. Self-Recite Step
Ask students to get into small groups (about 4 people per group). Have them share with each other what they picked out as significant passages and why. What do students in the group think the main ideas are for each chapter?
What kind of exam questions do they think will be asked?
(Limit to 30 minutes) - come up with two

II. Collect assignments - ask if there are any questions - hand back previous homework with feedback.

III. Do the General Assistance and Food Stamp form exercise.
(Limit it to 20 minutes - written and discussion)

IV. Show Donahue tape (about 15 minutes) and the discuss difference between value and cause. Remind them that in the next lab they'll do a Social Problem Sheet for a grade.
Assignment - 6th Lab

Find someone in this lab if possible, if not a roommate or friend, and explain what the chapters assigned for this week are all about. Answer any questions they may have. Briefly, write their overall reaction. Explain any difficulty you had.
I. Collect journals - encourage students to keep up with readings and tell them that next week there will be a practice exam (5 minutes). Ask them to share in their journals how they are preparing for the exam.

II. Do Fantasy Trip: Cultural Exercise

You have graduated from OSU, with a degree in Social Work.

You've been hired by Franklin County Children's Services.

You are a new worker and you receive a phone call from a concerned citizen. She wants someone from your agency to investigate her next door neighbors. She feels that the children are being neglected and thus, are in danger.

You quiz her and ask for specifics. She indicates that the children are left unsupervised, go outside without proper clothing, there are always a number of strange people around and "she's sure they are doing drugs."

After this phone conversation, you decide you need to investigate, so you call and try to arrange a meeting. You reach the father, but when you explain who you are and why you are calling he refuses to speak with you and gives the phone to his wife. Unfortunately, you
do not find his wife much more cooperative, she doesn't hang up, nor does she yell or refuse to let you visit, but when you try to pin her down to a specific time she gets very vague and quiet. Finally, in frustration, you say, "OK, I'll be there tomorrow at one o'clock to meet with you and your husband." You show up at the appointed time, it takes a few minutes for someone to answer the door. You become frustrated when you realize the man answering the door is not the person you were expecting. Further, the couple aren't even home, the gentleman who answered the door says they would be back soon. So you decide to use the time to look around. You look outside (into the back yard and see five small children running around - seemingly having a good time but none have heavy coats on, none have on mittens or hats, and a few don't even have socks on, or their jackets zipped up. Because it is 30 degrees out, this has you worried. Also you notice no adults in attendance (nor even seemingly aware of what the children are doing). Then you become aware of an odor you recognize from your college days. You follow it to a closed door and open it. As you peer into a rather large room, you see seven adults (male and female) sitting around in a circle on the floor smoking. They are passing around what looks to you like a joint. You quickly back away. You're
not confronting them — after all, you are out numbered. You decide to get out of there — but sure enough, guess who arrives as you are leaving. You explain who you are and ask the parents to answer some questions. You ask if the people in the next room are smoking marijuana. They answer yes. You ask if they know that it is illegal to which neither answer. You ask, "who are those people?" The reply is "friends," to which you ask, "do they live here?" You get a "yes" and "no" from the couple, but no clarification. It begins to dawn on you that this couple look a little different and you wonder if they are of a different race. You ask their nationality and they say that they are Cherokee Indians. By then two of the children come tearing through the room yelling and run upstairs. You ask, "who's watching the children?" They look at each other and the wife says, "they are good children." You ask about discipline and get a similar response about the children "being good." By now, you realize that this interview is getting you nowhere and you leave. When you return to your office, you seek out your supervisor and relate your story ending with the comment "we have to remove those children."

What is the supervisor's response? (15 minutes)

III. Give them the Social Problem Quiz to do in class — (takes anywhere from 15 minutes to one hour)
7th Lab - Experimental Group

I. Collect assignments - hand back previous assignments with corrective feedback.

II. I asked students if they had any idea why we were having students do the assignments. (A student answered correctly and that was praised.) Then I explained that students sometimes do poorly on exams because they are overwhelmed by all the material and cannot remember it for exams. But by breaking content material down in smaller chunks and giving them feedback as they go along, they should be better prepared for the exam. Then they were reminded that the next lab they would take the practice exam and I suggested they go back over their assignments and be sure they use the feedback provided.

III. Do Fantasy Trip - unless first part (treatment) took longer than 1/2 an hour.

IV. Have students do Social Problem Quiz (leave at least 45 minutes).
7th Lab - Assignment

Find someone else in this lab and orally quiz each other if you can.

1. Discuss what you think the main points are.
2. Make up questions and ask the other person to respond.
3. Try to answer some of what you think are significant questions at the end of chapters.
4. Quiz each other on the terms at the end of chapters.
5. If you cannot find someone else to do this with, then question yourself.

Hand in the following:

1. What is your overall reaction to this exercise?
2. Did you come up with any questions you would like to review or discuss in Lab?
Lab #8 - Control Group

1. Collect journals.

2. Ask if anyone would be willing to share anything about the paper they just handed in (spend 15 minutes).

3. Briefly go over the correct answers to the Social Problem Quiz.

4. Give Basic Knowledge Exam (allow no more than one hour).
1. Collect homework.

2. Report: no family was found to be "welfare recipient" free.

3. Go over the correct answers for the Social Problem Quiz.

4. Today you will practice the test step of our study skills package. Do the best job you can but also use this opportunity to become aware of what content material that is covered on the exam so you can use that information as a road map for future study. Before we get to the exam, let's adapt what you have been practicing to prepare for test questions on material covered in lecture. What principles would you develop for studying material covered in lecture (try to get the class to come up with their own, but be sure the following are covered):

(Preview) 1. Use what Dr. Toomey lectures on as clues to what should be focused on in the text.

(Preview) 2. When Dr. Toomey writes principle on the board - they are like your bold headings in a text - use them as a guide.

(Question) 3. After Dr. Toomey lectures why questions for yourself to get answered while reading.

(Reflective Thinking) 4. After each class, ask yourself - what were the main points? - how did they compare or contrast with what you already know? - and, why is this material of any relevance?
5. Talk to at least one other person in class and see how they answered #4.

6. Form a study group so you can quiz each other.

7. Review notes frequently - compare your notes with other students.

8. If you do not understand something discussed in lecture, ask questions.

Then praise them for adapting PQRST, with one exception - 'read' would now be 'listen.' (take only 1/2 hour)

4. Give them the Basic Knowledge Exam.
Lab #8 - Assignment

Check with one other student in class and compare notes from the lecture. Did you pick out the same material as significant? How does the main ideas relate to the material in the text? Answer the above two questions and hand in your answers.
Lab #9 - Control Group

A. Collect journals.

B. Using overhead projector, go over the practice exam; only the questions students had difficulty with.

C. Explain the final - we'll include some additional questions from the lectures and some essay questions.
9th Lab - Experimental

I. Start out by asking students what their thoughts were about the exam.

II. Then ask students what main themes were covered by the exam? List the themes on the board.

III. Then go over the question, cover the ones most students missed.

IV. Now go back to your theme list and ask:
   A. Which theme's actually were covered?
   B. Any covered that are not listed?

V. Then encourage students to review these areas again.

VI. Then ask: "Anyone have any idea's from your class lecture notes about what material may be covered? If so, write them on the board, if not, encourage students to go over notes.
1. Write three essay questions you think may be asked. Answer one.

2. Do you think the PQRSST Study Skills facilitated your learning? Explain your answer.
Lab 10 - Experimental Group

I. Collect assignments. Send sign-up sheet around.

II. Follow the steps II through V, same as with the Control Group.
Lab 10 - Control Group

I. Collect journals.

II. Have students fill out the lab evaluation. (Ask them to answer four questions: 1) What helped you learn? 2) What didn't help you learn? 3) Specific changes recommended? 4) Other comments

III. Give students Post-Attitude Scale.

IV. Do Field Independent, Field Dependent Task

V. Discuss jobs available for BSW students in each of the fields of practice. Bring in actual job ads if available.

Fields of Practice:

1. Income Maintenance
   - Food Stamps
   - AFDC

2. Service for Children
   - Child Care Worker
   - Protective Services
   - Youth Group Work
   - Refugees

3. Services to Families
   - Groups
   - Educational - parenting

4. Health Care
   - Hospitals
   - Hospice

5. Social Welfare and Mental Health
   - Day Care - adult & adolescents
   - Alcoholic/Drug
   - Homeless
   - Mentally Ill

6. Social Work and Corrections
   - Juvenile Detention
   - Residential Treatment Centers

7. Gerontological
   - Nursing Homes
   - Senior Centers
   - Alzheimer Disease Association

8. Rural and Industrial
APPENDIX B

DEMOGRAPHIC SHEET
The Ohio State University
College of Social Work
Demographic Sheet for SW 220

Please provide the following information:

1. ___________________________ Name _____________ Phone

2. __________________________ Social Security Number

3. ______ Age 4. _______ Sex 5. _______ Race

6. ______________ Class rank (i.e. freshman, etc.)

7. ______ Father's education ______ Mother's education

   Choose from: 1=less than 12 yrs. 2=H.S. graduate
   3=some college 4=baccalaureate degree 5=grad/prof educ

8. ___________ Father's Occup ___________ Mother's Occup

9. a) ______ # years of social work practice experience
    prior to this class? b) ______ # years of volunteer
    social work experience?

10. _______________ Undergraduate major

11. ______ Number of previous social work classes taken

12. ______ Have you applied for admission to the social
    work program?

13. ________ Marital status 14. ______ # of children

15. __________________________ Religious identification

16. ______ Grade-point average

17. Who recommended this class to you? (relationship/reason)

18. ______ Have you ever taken a study skills course?

19. ______ Have you ever heard of PQ4R or SQ3R study skills?

20. Why are you taking this class? (Please answer on back
    of this page)
APPENDIX C

HOWARD VALUE SURVEY
PLEASE NOTE:

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

198-213, Post Exam
215-250, Content Validity Instrument
APPENDIX D

POST EXAM
APPENDIX E

CONTENT VALIDITY INSTRUMENT
APPENDIX F

CONTENT VALIDITY CHARTS
Table 22

Content Validity Chart
Questions Receiving 100% Agreement From Raters

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* Category in which 4 raters placed item.
APPENDIX G

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APPENDIX H

COURSE SYLLABUS
COURSE TITLE: Introduction to Social Welfare

LEVEL OF INSTRUCTION: (U) 3

COURSE DESCRIPTION

The purpose of this course is to provide new social welfare students with an understanding of the values which ideally and actually underlie the provision of social welfare services from their early origins through an analysis of the forces which led to their development and current operation.

PREREQUISITES: None

OUTCOMES

Upon satisfactory completion of this course, the student will:

1. Have acquired familiarity with changing conceptions of social welfare;

2. Have acquired familiarity with the varied means of meeting socially recognized needs;

3. Have acquired understanding of the societal functions of social welfare and its value base;

4. Have developed an understanding of social welfare as a social institution and social work as a profession;

5. Have developed the ability to evaluate the impact of social welfare policies and programs for individual well-being and human welfare;

6. Be able to recognize the presence of classism, sexism and racism in social welfare policy and programs and the imperative for social action to reduce the negative impact of these phenomena upon the quality of life.
COURSE REQUIREMENTS

1. Type of Instruction: Lecture and discussion

2. Specific Expectations:
   a. Class attendance and participation are required. Readings should be done before the class and you should be prepared to discuss material. Your grade could be reduced one-half a letter for lack of participation.
   b. If you miss class, you are responsible for all material covered. This includes subject content and all announcements relevant to procedures such as changes in examinations or other requirements.
   c. Please feel free to contact me at any time about any material being covered or class assignments. I maintain office hours; however, an appointment is recommended. Office phone 292-6900. Teaching assistants are also available by appointment. You may contact them at 292-6900.

3. Student Evaluation:

   You will have multiple opportunities to demonstrate your learning. Assignments and due dates are the following:

   a. Two reaction papers: 20% of grade (10% each). Papers must be typed double-spaced, 3-5 pages in length. Correct grammar and structure are expected and will count in grading. Citations should follow the Encyclopedia of Social Work format.
      i. One paper must relate an experience "Being a Minority Person" (see lab assignment). It should report your participant observation, your reactions, your ideas. Due Jan. 30.
      ii. The second paper is an economic family tree (see lab assignment attached). Due Feb. 20.

   b. Social problem assignment (see attached form). You will do this in lab and it will count 10% of your grade.

   c. Lab attendance, homework and participation will count for 10% of your grade.
d. A Final Exam will have objective and short answer essay questions. It will cover readings, and all class and lab content -- discussion, guest speakers, movies. It will be given during Exam Week and will contribute to 60% of your grade.

e. Special advice: 1) Due dates and exam dates are expected to be met. 10% will be deducted from grade on all late papers. 2) Students should keep copies of all papers which they submit for assignments.

4. Method of Course Evaluation by Students:

The instructor will expect to get input from students about her performance as well. Please feel free during the quarter to comment on class content or presentation to help improve your learning experience. You will receive an evaluation form at the end of the course to give structured feedback on the course.

5. College Incomplete Policy:

"I" (Incomplete) course grades will be considered only in relation to emergency and hardship situations and a request for such a grade option must be discussed with me prior to final exam week. A date for completion of the incomplete work will be established with you. University policies governing the circumstances under which "I" grades are given and deadlines for completion will be adhered to.

However, student should note that when an "I" with an alternate grade of "E" is assigned in a course which is prerequisite to a course the student must take the next quarter, the course requirements for the "I" must be completed by the second week of the next quarter.

6. Social Work Lab Experience 220:

The 220 Social Work Lab experience is designed to assist students in understanding social welfare issues and services covered in the Monday lecture class. The purpose of this experience is to allow students through group interaction to sensitize themselves to the real dilemmas in understanding social problems. Students sharing their own values and life experiences will provide an enriched environment for learning about social issues.
The student's responsibility in this section of the course is to openly contribute to the group discussions and group experience. It is critical for the group process that students commit to regularly attending the lab class.

As noted in the course outline 40% of the final grade (two papers, social problem assignment, class participation and homework) will be assessed in the lab section of the class.

TEXT


CONTENT OUTLINE

Jan. 9 Introduction and Overview
Jan. 23 What is Social Welfare? Blaming the Victim Social Values and Social Work and Social Change - Chapters 1, 2, 3, 4, & 5 (Johnson and Schwartz)
Feb. 6 Inequality in America - Discrimination against Women, Minorities of color and other Oppressed Groups Racism, Sexism and Ageism Chapter 6 (Johnson and Schwartz)
Feb. 13 Services -- Income Maintenance Chapter 7 (Johnson and Schwartz)
Feb. 20 Services to Families and Children Chapter 8 & 9 (Johnson and Schwartz) Economic Family Tree due Feb. 20
Feb. 27 Health Care, Corrections, and Gerontological Services
Chapters 10, 12 & 13 (Johnson and Schwartz)

Mar. 6 The Social Work Profession
Chapters 15 & 16 (Johnson and Schwartz)

Mar. 15 Final Exam -- 8:00 a.m.
Many of the clients social workers come in contact with are members of a minority group. It is difficult to understand the nature of their problems unless you have experienced being part of a minority yourself. Until you comprehend what it means to be excluded, labeled, discriminated against and denied access to resources, you cannot fathom what it means to tackle problems from that vantage point. The purpose of this exercise is to give you a brief and unique opportunity to experience being part of a minority group.

Pick a situation to observe or better yet, participate in, where you are in the minority either due to race, gender, age, economic situation or other. Then write about that experience.

Some examples of activities that would be appropriate for this exercise are:

1. If white, go to an all black church service, not just a church of a different faith.

2. If not poor, go to a facility for the homeless and help out for the evening.

3. If you have enough food to eat yourself, help out for one meal at a soup kitchen or visit unidentified and see how it feels to be thought to be poor.

4. If you have never received AFDC, sit quietly in an intake waiting room where applications are taken for AFDC.

5. Visit a gathering of an unfamiliar ethnic group, e.g. Native Americans, Latinos, Asians.

6. If you are not handicapped intellectually or physically, observe at a center like Nisonger where clients are.

7. If you are male, attend a meeting involving only women (maybe at a women's shelter).
8. Or other situations that you think of that would be meaningful for you. Be sure to check with your professor to make sure the situation meets the requirements for this assignment.

A note of caution is offered; do not be careless. If you go to an unfamiliar and unsafe place, take a friend with you. Let people know when you are going, where you are going, and when you are expected to return. If you are going to an agency, let at least one staff person there know why you are there and abide by any rules they have.

You then will be expected to write a brief (no more than 5 pages) response paper on this experience. No library work will be necessary. Your grade will be based on the following:

1. Brief description of the experience (who, when, where, what).

2. What did you think about the experience?

3. What did you feel about the experience?

4. What did you learn from the experience?

5. If you had to live the rest of your life as a member of the minority group you observed, how do you think your life would be different?
"Sherlock Holmes Discovers the Welfare Recipient!"

For this exercise, you will have to become a detective. It will be your task to find the welfare recipients in your own family. If your first thought was; "There aren't any in my family." Wait, reconsider the facts. Do you get aid from the government in order to attend college? Are there any farmers in your family receiving subsidies? Do the children in your family attend free public school? Are there any veterans in your family who quality for VA loans or medical care at VA hospitals? Are any of your grandparents receiving Social Security? If any of these situations exist in your family, you have discovered a welfare recipient.

Obviously for this assignment the broadest definition of social welfare is being used. Social welfare will be defined as: all governmental (federal, state and local) interventions that are intended to enhance or maintain social functioning of human beings.

We will have a contest to see which student can find the most recipients in their family. Go back three generations. Interview as many family members as you can. It will be helpful to draw a generational map (see handout). Then provide a list of all the recipients, and the type of aid they receive. Also record the reactions of your family members as you inform them of your task and the fact that they are "welfare recipients." Do not accept their denials of benefits. Dig for information - follow up leads. Find out all the ways your family have been helped by "social welfare" programs.

Your grade will be based on your generational map, your list of aid provided, description of your family members' reaction and an implementation of the learning that has taken place for you due to this search. Your paper should be typed and limited to no more than five (5) pages.
Social Work 220
Social Problem Worksheet

The social problem is ____________________________

1. What factor(s) have been identified as cause(s) of this social problem (list both individual and societal factors).

2. What are the value assumptions underlying this social problem?

3. What possible solutions have been proposed to resolve this social problem? Give both individual and societal responses (victim blaming and system blaming).

4. Now, what solution do you propose and why? Demonstrate that you have critically analyzed this issue.
PLEASE NOTE:

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

270, Embedded Figure Exam
APPENDIX J

CORRELATION
Table 24
Correlation Between Nonsignificant Control Variables and Posttest and Grade

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REFERENCES
References


Sells, R. (1986). Handout given in class on college teaching, The Ohio State University, Spring Quarter.


