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A Comparison Of Two Approaches Of Symbolic Modeling And Self -Efficacy

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A COMPARISON OF TWO APPROACHES OF SYMBOLIC MODELING AND SELF-EFFICACY

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by

Roy Hamilton

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APPROVAL SHEET

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ABSTRACT

The effect of video and written modeling on self-efficacy of 70 master's degree students enrolled in their first techniques course was investigated. The ability to understand and use reflection of content, feeling, and meaning was presented to the experimental group through videotaped instruction and examples and the control group through written instruction and examples. Facts about reflecting skills, which included information and three vignettes, demonstrated the use of the skills. Through two pilot studies, the Reflecting Skills Questionnaire (RSQ) developed for this study showed convergent validity with the Counseling Self-Estimate Inventory (COSE). Participants' indication of self-efficacy for the reflection of content, feeling, and meaning was assessed by the RSQ. A *t* - test was computed to determine whether video or written treatment had an effect on the self efficacy of counselors in training. Using a two-tailed *t* - test for independent groups, no significant difference ($p > .05$) was found. An analysis of covariance was used to examine the contribution of demographic variables on the results. None of the demographic variables of interactions between variables contributed significantly.

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INTRODUCTION

Statement of the Problem

Methods used to teach a new skill in counseling techniques may involve having students observe a video of someone else performing the skill and/or having the student read about how to perform it. Although teaching procedures may incorporate a combination of reading and observing, some rely primarily on one method. Economic trends suggest that counseling programs follow the practice which adheres to the most effective method of teaching based on the least cost. Empirical studies analyzing the effectiveness of teaching methods have typically examined participant performance following the application of a particular method. Though this type of study may provide a measure of effectiveness, it does not take into account how a teaching method may affect the learner's continued growth in the area that was taught.

Bandura's (1977) model of cognitive skill acquisition stated that people possess a self-system which affords them control over their thoughts, feelings and actions. The

system also provides a reference function for perceiving, evaluating and regulating behaviors resultant from the interplay between the external environment and the self-system (Pajares, 1996). One's most central belief concerns the capacity to exercise control over events. Human behavior can be seen as regulated by forethought, integrating perceptions of abilities to enact behaviors which will achieve goals (Bandura, 1989). Perceptions of abilities are dynamic in that they are the result of ongoing cognitive, behavioral and communication processes. Experiences that provide information about the ability of an individual can greatly enhance the likelihood that similar behaviors will be utilized in the future. People use their self-system to learn about their capacities through previous behavior, vicarious experience, verbal persuasion and inferences from psychological states experienced when anticipating or enacting a behavior (Bandura, 1986).

The most salient form of information about our abilities is behavioral enactment. If a behavior is performed successfully, then one expects to be able to perform the behavior successfully again. This expectation is also referred to as a self-belief. Self-beliefs are strengthened through observational learning or vicarious experience such as observing a model or through symbols such as reading. Observational learning occurs when observers display new patterns of behavior that prior to modeling had a zero

probability of occurrence even with motivational inducements in effect. Modeling in this framework refers to an individual whose actions, verbalizations and expressions are attended to by the observer and serve as prompts for future modeling (Schunk, 1987). When individuals learn vicariously, they convince themselves they are able to achieve improvement in a task in which they see others improve.

Models build self-beliefs of competence by conveying to the observer strategies that are effective for managing different situations. Vicarious consequences foster outcome expectations concerning which behaviors are likely to be rewarded and which may be punished. Observing models perform activities that are threatening or prohibited without negative consequences can lead observers to perform the behavior themselves, whereas observing a model punished for certain activities may inhibit the observers responding.

Behavioral modeling can also impart skills and behavioral subcomponents needed to execute a behavior, as well as by demonstrating the cognitive strategies that produce and guide behavior. Observing competent models perform actions that result in success conveys information to observers about the sequence of actions one should use to succeed (Bandura, 1986). Self-beliefs are also built through social comparison. When objective standards of behavior are unclear or unavailable observers evaluate themselves through comparisons with others, and the most accurate self-

evaluations derive from comparisons with those who are similar in the ability or characteristics being evaluated (Festinger, 1954).

Similarity to models is an important source of information of determining behavioral suitability and formulating outcome expectations. The more alike observers are to models, the greater is the probability that similar actions by the observers are socially appropriate and will produce similar results. Observing similar others perform successfully or fail after employing sustained effort raises or lowers the observers' judgments of their own capabilities. By observing modeled behaviors people compose outcome expectations. Observational learning is an idea that is formed about the behavior that is necessary to perform a task and one's ability to perform it that is gained through observation. This may result in a strengthening or weakening of behavioral inhibitions.

Four subprocesses govern observational learning: attention, retention, production and motivation. Attention is enhanced by presenting models that are of interest to the observer. Retention is augmented if the modeled information is related to the characteristics of the performance, and the information processing strategies that are employed by the model are understood by the viewer. For example retention can be improved when models explain the rules they use to guide their behavior and when they divide complex behaviors

into their component parts. Production involves translating visual and symbolic understandings of modeled events into actual cognitive or behavioral rehearsal. Motivation is enhanced when a valued positive outcome resulted from the observed behavior. People are more likely to perform behaviors when they feel they will be successful than when they expect to fail or be punished regardless of whether the information was gleaned directly or vicariously (Bandura, 1986). Modeled behavior is more effective if (a) there are clear outcomes, (b) there is some similarity between the model and the observer, and (c) a variety of other observed individuals are able to demonstrate mastery of the observed behavior (Bandura, 1977).

In addition to performing a behavior or experiencing it vicariously people can be persuaded to believe they are able to do things. When people are in an unknown situation they are more likely to rely on information that is provided by someone who is perceived as more knowledgeable than themselves. This information can cause increased persistence and the enactment of behaviors that would not have been engaged in otherwise. On the other hand signs of stress, tension, fatigue, aches and pains provide cues of incapacity and will tend to inhibit the production of actions that are believed to cause the cues of incapacity (Wood, & Bandura, 1989). When individuals believe they are able to perform

specific behaviors that will enable them to achieve valued goals, they are experiencing self-efficacy.

Bandura proposed that self-efficacy, a cognitive variable, operates in learning situations and mediates all behavior change (Bandura, 1977). Efficacy is viewed as "the conviction that one can successfully execute the behavior required to produce outcomes" (Bandura, 1977, p. 193). Efficacy expectations determine whether coping behavior will be initiated, how much effort will be expended, and how long effort will be sustained in the face of obstacles and aversive experiences. The more one expects to be able to master a behavior the more effort will be put into the behavior's successful execution (Bandura, Adams, & Beyer, 1977).

Although self-efficacy can be increased through reading and observation, comparisons of these approaches have focused on their influence on performance and not self-efficacy (Froehle, Robinson, & Kurpius, 1983; Robinson, Frohle, & Kurpius, 1979a, 1979b; Robinson, Kurpius, & Frohle, 1981; Salomon, 1981; Stone, 1975). Investigation to determine whether there is a difference in the level or degree of self-efficacy is needed. The following research question was, therefore, proposed: What is the effect of vicarious video and written experiences on the self-efficacy of counselors-in-training's ability to understand and use reflecting skills?

Rationale

Given the expense and time devoted to the training of counselors-in-training, determining the most effective methods is worthy of exploration. A study which compares the effect of vicarious video and written experiences on the self-efficacy of counselors-in-training's understanding and use of reflecting skills could be of value to instructors and educational institutions involved with counselor education.

Assumptions

The following assumptions are applied in this study:

1. Participants responded to items on the instrument candidly and accurately.

2. The instrument developed for this study provided an accurate measure of counselor self-efficacy for reflecting skills.

3. The videotaped vignettes adequately approximated counseling sessions and the ratings of the instrument were meaningful.

4. Doctoral students in counseling psychology consider themselves more efficacious in their use of reflecting skills than do counselors-in-training.

5. Counselors-in-training and doctoral students have no difficulty reading and understanding text that is written at the 8.1 Flesch Grade Level.

Definition of Terms

The following operational definitions are provided to facilitate a better understanding of the terms used in this study:

1. Vicarious reinforcement: Observing that a behavior that succeeds for others increases the tendency of the observer to behave in similar ways (Bandura, 1977).

2. Self-efficacy: A conviction that one can successfully execute the behavior required to produce certain outcomes (Bandura, 1977, p. 79).

3. Counselor-in-training: An individual enrolled in a master's level counseling program.

Delimitations

The study was delimited to counselors-in-training who had completed less than two semesters of their graduate program and were enrolled in a counseling techniques course. The vicarious experience was limited to a video of one lecture followed by three vignettes or their transcripts. Findings from this study were, therefore, delimited to a population of counseling/clinical master's level students participating in a learning experience involving a one-contact paradigm.

Chapter 2

REVIEW OF RELATED RESEARCH

The review of related literature is divided into three subsections: the influence of vicarious experiences on learning, the relationship between self-efficacy and performance, and the relationship between video and written experiences.

Influence of Vicarious Experiences on Learning

Schunk (1986) reported that vicarious influences affect cognitive skill learning, and are an important source of self-efficacy information. Lopez, Lent, Brown & Gore (1977) tested path models of academic interest and performance that were derived from social learning theory. This study measured objective math ability, perceived sources of efficacy information, outcome expectations, self-efficacy as related to the course and grades. Results indicated that in addition to direct experience, vicarious experiences such as participants' rating of statements such as, "People I look up to like are good at math," lead to self-efficacy

understandings in the participants. Vicarious influences can include modeled actions that people observe, and information that observers gain about those actions in other ways, such as reading or listening. For example, students who observe a peer learning a task are likely to conclude they could learn it as well (Bandura, 1981; Schunk 1984, 1985). Vicarious modeling can also limit the degree to which one feels able to learn something new. Brown and Inouye (1978) informed college students they were either as competent or more competent than other college students who were observed having difficulty solving anagrams. Participants who were informed they were equally competent judged their self-efficacy to be significantly lower than those informed they were more competent than the model.

Modeling can also influence how people will approach a task. Experiments that allowed observers to witness a model persisting in a frustrating task before succeeding were more likely to persist and succeed than those who witnessed non-persistent models (Zimmerman & Blotner, 1979). Ladouceur (1983) attempted to demonstrate that the thought processes of a model could be used by an observer to increase the observer's feelings of self-efficacy. Participants in this experiment were dog and cat phobics. The models employed participant modeling in which they demonstrated a task and invited the participants to perform the task in a graduated fashion. When the participants still experienced

difficulties they were trained to verbalize their thoughts. After training, when a participant who was experiencing difficulties verbalized a negative self-statement the therapist modeled more adaptive thinking and encouraged subjects to do the same. It was reported that this led to participants exhibiting increased interactions with the feared animal.

Another form of cognitive modeling was examined by Gorrell (1993). This experiment attempted to add credence to the idea that modeled learning is enhanced if the observer understands the information processing strategies used by the model. This study compared direct instruction and cognitive modeling in which the instructor systematically revealed his or her thoughts and reasoning for a task. For example an instructor could explain how his own thinking moved from one idea to another as a solution was produced. A comparison of explicit rules where the instructor printed out a list of rules that could be used to arrive at a solution and implicit rules in which the instructor presented his thought processes resulted in more students being effective when they were exposed to the implicit rules. This approach to cognitive modeling was also employed by Gorrell and Capron (1988). In this study teachers were provided with a video which used either direct instruction or cognitive modeling. Cognitive modeling in this study involved having the model reveal her

thought processes during a task. This was reported to be a superior form of instruction.

Cognitive modeling can also be systematized into a lesson by attaching learning points closely to the behavioral performance (Mann & Decker, 1984). For example, a videotape displaying modeled behaviors can be interrupted at each point of the learning process so that emphasis can be placed on the modeled behaviors. This method was used in assertiveness training and compared with the use of a video that did not emphasize the learning points. Results were reported to indicate that the use of learning points was superior to video modeling. Cognitive modeling appears to be effective even when models are not used. Kazdin (1979) had clients imagine rather than observe a model engage in assertive behaviors they wanted to develop. When the experimenter suggested that the participants imagine alternate ways the imagined scene could go, there were reported increases in assertive behaviors that were transferred to behaviors in role playing.

A model's approach to a task can also influence an observer's approach when the model expresses low self-efficacy. Zimmerman and Ringle (1981) had groups of observers view either confident or pessimistic persistent models, or confident or pessimistic low persistent models. The results were reported to indicate that model persistence had the greatest influence on the observers' persistence when

they were presented with similar problems. Similar findings were also reported by Pajares (1996) in a review of studies involving modeling and self-efficacy in academic settings. In this review, modeling was associated with increased persistence, self-efficacy and accurate performance.

The effectiveness of modeling can further be improved by an observer's perception of the model's social power. Brewer and Wann (1998) had participants attempt a puzzle task after observing models who were described as having characteristics associated with either legitimate, expert or referent power, or who received no descriptions. The expert model was described as having an exceptionally high IQ for spatial tasks, the legitimate model was described as being a tenured professor at a University, and the referent model was described as warm, cautious, intelligent, skillful and industrious. Results were reported to confirm the superiority of a model's perceived social power over controls in teaching a puzzle task and there was no difference between the experimental groups.

The transfer of modeled behavior can also improve when the observer perceives a similarity between the him or herself and the model. Similarity is most useful when individuals (a) lack familiarity with the task that is to be performed and have little information on which to base efficacy judgments or (b) possess doubts about performing well (Schunk & Hanson, 1989). Since ability related

behaviors are susceptible to peer influence a flawlessly modeled demonstration may not promote self-efficacy as well as a demonstration in which there is much perceived similarity. Support for this idea was evidenced by the use of athletic and non-athletic models with nonathletic observers (George, Feltz, & Chase, 1992). In this experiment non-athletic participants watched a video of either a same or different gendered athletic or non-athletic model perform a task of muscular endurance. Participants who viewed the nonathletic model demonstrated higher levels of self-efficacy compared with those who viewed the other groups. This was interpreted to indicate that model ability is a more salient cue than model sex for non-athletic for unskilled observers. Further support was provided by Schunk and Hanson (1985) who reported that children who observed a peer model solve subtraction problems learned at a higher rate than children who observed an adult model performong the same operations.

Another way to insure a similarity between the observer and model is for the observer to be her or his own model. Self-modeling refers to behavioral change that stems from observing oneself on media that portray only targeted behaviors. Observing oneself perform well also increases the observer's self-efficacy for continued learning and induces them to expend effort and persist at the task (Bandura, 1986). Schunk and Hanson (1989) demonstrated this in a series of experiments. In the first experiment children

observed either a peer solve fraction problems or viewed tapes of themselves solving the problems. There were no reported differences between the groups. In the second experiment students observed themselves solving either difficult or easy problems. Both groups in this study improved achievement and self-efficacy. In their third experiment children were taped while they were learning to solve problems or after they had learned to solve the problems. Both methods were more effective than controls but were not different from each other.

Other experiments using self-modeling have experienced mixed results. Winfrey and Weeks (1993) had one group observe their performance on a balance beam along with their training while the other group received training only. There was no reported difference between the groups; however, the modeling group was able to make more accurate judgments concerning their performance. In addition it was noted that there was only one modeling tape so the observers had no opportunity to observe themselves improve during the six-week training program and that all participants received regular feedback from their coaches throughout their training. Fichten and Wright (1983) reported that self modeling also does not appear to be an effective way to convey information in family therapy. In this experiment happy and distressed couples were videotaped individually and together. Their conversations were rated according to behaviors that would be

productive or counterproductive for their relationship. Individuals and couples were then allowed to view their tapes and receive a written evaluation of the behaviors that were presented on the videotape. No change in behavior or marital adjustment was reported for any of the treatments.

An important factor in observational learning is the model's success or failure (Bandura, 1981). Observing a model succeed who uses a strategy that the observer thinks he or she could apply should raise the observer's self-efficacy. This was demonstrated by Schunk (1983), who divided a classroom into two groups. One group was told the typical number of problems that could be solved by students; the other group was not given such information. Each group was then divided with one group being given a number of problems as their goal. The other group was given no goal. The group that received the comparative information and who had a goal, judged their self-efficacy to be significantly higher than the other groups. Concomitantly, the group with the highest efficacy also demonstrated the highest level of skill development. Results were interpreted to mean that not only is comparative information necessary for increased self-efficacy, but the observer needs to relate the observed behavior to goal-directed behavior.

The success or failure of a model can also be effective for conveying information if the model is perceived symbolically. Weiland (1981) compared the level that

participants would imitate and could recall behaviors that were modeled on one of three written modeling sequences. It was reported that imitation was more likely to occur when there was a positive vicarious consequence and recall was more likely when there were either positive or negative consequences. The authors noted that these results are similar to results that are attributed to live models. Similar results were reported by Speigler (1976). In this study college students read a story in which models received either positive, negative or neutral consequences for their behaviors. After they read the story participants were asked what they would have done in a similar situation and what they remembered of the story. Participants indicated that they would imitate the actions of the model who experienced positive consequences and remembered details of the story with either positive or negative outcomes; however, recall was greatest for those who read the story in which the character experienced negative consequences.

Symbolic modeling also appears to be an effective method for preparing children to undergo medical procedures. King, Hamilton, and Gregory (1983) cited 14 studies in which film and video were used to provide desensitization, sensory information, behavior modification, coping skill training and stress inoculation for children about to undergo a medical procedure such as a trip to the dentist or a tonsillectomy. It was reported that film and video modeling enables children

to feel sufficiently efficacious because they can identify with the performance accomplishments of the model and have received verbal persuasion that has convinced them that they can perform adequately. Results were reported to indicate that children who had experienced vicarious learning prior to a medical procedure were less likely to demonstrate anxiety and engage in negative behavior during treatment.

Though vicarious modeling tends to increase performance, behavior is most likely to be influenced through participant modeling. In this approach observers actually perform the behaviors that are to be learned in a graduated fashion. In so doing the participants experience the most influential source of efficacy information, that of personal mastery. A study that compared the effectiveness of participant modeling with live or video modeling was conducted to see how effective participant modeling would be in teaching participants a high avoidance task, a springboard dive, compared with other forms of modeling (Feltz, Landers & Raeder, 1979). In this experiment participants who were not exposed to participant modeling observed a live or video model, received an explanation of the modeled behavior but had no opportunity to perform the behavior. Results were reported to support participant modeling in which the modeled behaviors are explained, demonstrated and then experienced by the participants so that they could have success experiences, as more effective than live or symbolic modeling. The

effectiveness of participant modeling has also been compared with cognitive modeling (Leone, Minor & Baltimore, 1983). In this study snake-phobics either engaged in participant modeling, discussed their beliefs about snakes and had their thoughts questioned (constrained thought) or received no treatment. Both of the treatment groups exhibited more approach behaviors toward snakes and those who received participant modeling training demonstrated more approach behaviors than those who experienced constrained thought. Participant modeling has also been demonstrated to be effective in increasing the self-efficacy of snake phobics (Bandura, Reese & Adams, 1982). In this study participants were first shown and guided through activities that the participants found most fearful. Through this approach mastery experiences led to increased self-efficacy and a lowered perception of fear accompanied by the performance of previously feared activities. Participant modeling was also reported to be effective with other forms of high avoidance tasks such as rappelling. Brody, Hatfield and Spalding (1988) had participants either learn rappelling through participant modeling or through demonstration. Consistent with other experiments involving participant modeling this group experienced greater increases in self-efficacy regarding rappelling. In addition, support for the notion that state anxiety is inversely related to feelings of efficacy was also noted in that those who experienced

participant modeling also experienced less state anxiety after treatment. The experimenters also noted that participants who had higher self-efficacy for rappelling after treatment were more likely to say they would attempt other high risk activities and felt more able to cope with stressful situations.

Relationship Between Self-Efficacy and Performance

Bandura (1989) examined some of the thought processes that are associated with higher feelings of efficacy. He asserted that since the major function of thought is to enable people to predict the occurrence of events and formulate a means of control over daily events, people with higher perceived self-efficacy will visualize success scenarios that provide guides to performance. Success scenarios are also likely to contribute to motivation and persistence since efficacious individuals are unlikely to slacken their effort when faced with difficulties. Those who persist are more likely to accomplish their goals. Along with a visualization of success scenarios, those with higher self-efficacy are less likely to be put off by threat because they do not envision apprehensive cognitions which lead to feelings of coping inefficacy. Because people with higher levels of self-efficacy are more likely to envision success scenarios and discard self-beliefs that could hinder their ability to accomplish a goal, efficacious individuals are

more likely to set goals for themselves. Tuckman and Sexton (1992) reported that people who believe in their abilities outperform those who do not and tend to exceed their own expectations; they also demonstrate more motivation and are less likely to be dissuaded by individual or group evaluations.

Research conducted to demonstrate a relationship between self-efficacy and performance has yielded highly consistent results. Lent, Brown, and Larkin (1984) assessed the level and strength of self-efficacy of participants in a career/educational planning course. They reported "both the level and strength of self-efficacy for educational requirements were generally related to academic outcome" (p. 359). It was also reported that students with a higher level of self-efficacy demonstrated a higher level of persistence in the pursuit of their goals.

The relationship between higher levels of self-efficacy and increased performance was also reported by Bouffard-Bouchard, Parent and Larivee (1991) who reported that increased performance among students with greater self-efficacy was not a result of intelligence. In this study the experimenters measured the performance of students with similar cognitive ability but with different levels of self-efficacy. Higher efficacy students were more persistent, used more time to solve difficult problems and were more likely to achieve correct answers. Students reporting lower

levels of efficacy were more likely to reject correct hypotheses and spent less time on the problems. The results were interpreted to indicate that self-perceptions mediate between actual capabilities and the proper display of those capabilities. The idea that self-efficacy in school subjects is associated with self-regulatory activities that are related to the acquisition of cognitive skills was also supported by Pajares's (1996) report that mathematics self-efficacy was more predictive of interest than previous achievement in mathematics. Those with higher self-efficacy in mathematics were more likely to rework missed problems, and persist through difficulties. Schunk (1981) also reported a positive relationship between self-efficacy, persistence and performance. In this study students who received instruction designed to increase their self-efficacy were more likely than those with lower self-efficacy to persist longer and achieve more success on arithmetic tests than their counterparts with less self-efficacy and persistence. Higher amounts of self-efficacy have also been associated with increased writing performance (Pajares & Johnson 1996); student course grades (Wood & Locke, 1987); performance on computers (Hill, Smith & Mann, 1987), ability to deal more effectively with phobias and feared activities (Bandura & Adams, 1977; Bandura, Reede & Adams, 1982; Barrios, Somervill, Henke & Merritt, 1981; Bourque & Ladouceur, 1980; Feltz, Landers & Raeder, 1979; King,

Hamilton & Gregory 1983; Ladouceur, 1983; Winfrey & Weeks, 1993), assertive behavior (Kazdin, 1982; Pentz, 1982) and teacher performance (Taylor, Locke, Lee & Gist, 1984).

Stajkovic and Luthans (1998) performed a meta-analysis to examine if the relationship between self-efficacy and performance could also be demonstrated in a naturalistic environment. This analysis examined 114 studies and was conducted to address the argument that the successful completion of a task in a naturalistic setting requires much more complex behaviors than are assessed in laboratory experiments. Some of this complexity was reported to include limited available resources, time constraints, negative consequences for wrong actions, and a greater delay between the enactment of a behavior and its consequences. Results were reported to indicate that regardless of task complexity, self-efficacy was a better predictor of work-related performance than many of the constructs that are currently used in organizational research. Results were also reported to indicate a negative correlation between task complexity and the predictive power of self-efficacy on performance. Similar results were reported by Harrison, Rainer, Hockwarter and Thompson (1997). This study investigated the relationship between self-efficacy for the operation of computer programs and performance among American university employees. Results were reported to indicate that job

performance as related to the operation of computer programs was related to self-efficacy.

Researchers have also been able to demonstrate how the manipulation of self-efficacy affects self-regulation. Bandura and Schunk (1981) demonstrated that achieving goals influences self-efficacy and that increased self-efficacy motivated subjects to increase their levels of achievement. In this experiment all subjects had demonstrated conspicuous deficits in arithmetic. All subjects were given a self-learning arithmetic project consisting of 42 pages. Group 1 was asked to consider doing six pages a day, group 2 was asked to consider completing 42 pages in seven days, group 3 was told to try to complete as many as possible, the control group was given no goals. The group that was given the proximal goals reported higher amounts of self-efficacy and outperformed the other groups. Results were also interpreted to add credence to the idea that people develop interests in activities in which they have a favorable involvement. This is consistent with self-efficacy theory which maintains that achievement is a motivating factor. Motivation in this context stems from the idea that most activities that are engaged in for their own sake originally had little interest for the those who perform the activities and that a preference for the activities developed as people continued to have successful experiences in the activity.

The examination of the relationship between self-efficacy and performance has also added credence to other components of self-efficacy theory. Gold, Hodge, Peterson and Gianni (1989) surveyed successful college athletes and reported that they rated themselves as more efficacious than less successful athletes. The strategies of the coaches of the more successful athletes were more likely to involve the use of performance based techniques for learning, modeling confidence, reattributing anxiety as a state of readiness and verbal persuasion than the strategies of coaches of less successful athletes. This coincides with the sources of efficacy information that were discussed earlier. Similar results were reported among college students who demonstrated a greater level of self-efficacy and success in mathematics (Matsui, Matsui & Ohnishi, 1990). Students who were efficacious were more successful in mathematics than non efficacious students and reported that they had experienced a higher amount of past performance accomplishments than those with lower mathematics self-efficacy. Students with higher mathematics self-efficacy also reported more opportunities for modeling through family or friends who were successful in mathematics, received more encouragement from others and experienced lower levels of emotional arousal when engaging in activities associated with mathematics than those with lower amounts of mathematics self-efficacy. Mathematics self-efficacy is also more predictive of mathematics interest

than mathematics achievement or outcome expectations. Those with higher efficacy beliefs are reported to demonstrate more persistence and effort when working mathematics problems. They were also more likely to complete more problems correctly and rework missed problems than students with lower mathematics self-efficacy (Pajares, 1996).

Past performance has also been associated as influencing the development of a feeling that one is capable of learning. This has been called self-efficacy for academic achievement (Zimmerman, Bandura & Martinez-Pons, 1992). This study used questionnaires to determine what influenced students to set academic goals for themselves. Results were reported to indicate that past performance was the largest predictor of the goals that students would set for themselves. This was interpreted to indicate how beliefs in self-efficacy influence self-regulated learning since the students' goals were directly related to the amount of self-efficacy that the students reported. It also was reported to demonstrate that the mechanism for self regulation was that the assumption of self-efficacy led to efficacy expectations which influenced outcome expectations.

The experiences of successful athletes and mathematics students suggested the types of experiences that are likely to provide people with feelings of self-efficacy. Several experiments have attempted to manipulate the efficacy people perceived by controlling the experiences associated with the

installation of self-efficacy. Eden & Aviram (1993) exposed a group of unemployed participants to mastery experiences, modeling, anxiety reduction training, and verbal persuasion concerning appropriate job search techniques. Results were reported to indicate that those who initially experienced low self-efficacy reported higher levels of self-efficacy following treatment and a significant improvement in their ability to find work over controls. Those who initially reported high levels of self-efficacy did not experience a significant change in their feelings of efficacy, nor did they exhibit an increase in their successes in finding a job. This article did not indicate whether there was a preexisting discrepancy between the amount of success that was experienced by those with higher levels of self-efficacy, therefore a comparison of job-finding success among those with higher levels of self-efficacy and those with lower levels before treatment was not available. A manipulation of the relationship between self-efficacy and performance was also conducted by Cole and Hopkins (1995). In this experiment participants were given a performance test then asked to fill out an efficacy questionnaire. While the efficacy questionnaire was being filled out, an experimenter who was introduced as an expert offered suggestions concerning how the participant should fill out the questionnaire. Those who performed well were encouraged to rate themselves lower than their initial estimation and those

who performed at a lower rate of performance were encouraged to rate themselves at a higher rate than their initial estimation. After the manipulation by the experimenter those with the poorer performance rated themselves as having more self-efficacy than those who performed the task at a higher level. The results were reported to indicate the inadequacy of self-efficacy questionnaires to measure perceived self-efficacy. This article did not discuss the possibility that the "expert's" intervention could have constituted feedback from an actual experience therefore leading those who performed at a higher level to interpret their performance as being more flawed than it was and conversely leading those who performed at a lower level to interpret their performance as more accomplished than it was.

The importance of experiential feedback was used to explain the differences in the results that were obtained in a study and its replication. In the initial study students of teachers who rated themselves as highly efficacious rated their level of efficacy after completing a performance test (Keyser & Barling, 1981). It was reported that regardless of the child's actual performance those exposed to an efficacious model rated themselves as having a higher amount of self-efficacy than those with a less efficacious model. These results were interpreted to indicate that modeling and not performance accomplishments are more salient in influencing children's feelings of self-efficacy. When this

study was replicated, the children were given feedback concerning how well they had performed on the performance test (Barling & Snipelisky, 1983). When children were presented with their actual performance, their performance accomplishments were a more important predictor of their feelings of efficacy than their exposure to an efficacious model.

Efficacy has also been manipulated by providing subjects with information that could improve their performance. Schunk (1981) reported that students who received instruction that involved examples, strategies and corrective feedback had higher self-efficacy, persisted longer and achieved more success than students who received more traditional instruction.

Cervone and Peak (1986) manipulated self-efficacy by providing subjects with an ambiguous task, solving anagrams, and telling them what their performance should be. Those who were given the largest number rated themselves as most efficacious and spent more time and effort on the task. The experimenters reported that the relationship between self-efficacy and performance could be understood because of self-efficacy's influence on persistence by noting that effort, strategy development, and perseverance lead to achievement and competence. Karl and Oleary-Kelly (1993) reported that self-efficacy and performance can also be improved by letting the subjects know if they produced the right or wrong answer.

Several studies have considered the thought processes that preserve or facilitate feelings of self-efficacy. Vrugt (1994) reported that people with higher self-efficacy tend to identify a peer who they can out-perform when they experience performance difficulties. This was termed downward comparison and was thought to be used to preserve one's feelings of competence. Another way to preserve a feeling of efficacy is to attribute performance in ways that will preserve and enhance feelings of efficacy. Schunk (1984) reported that the influence of previous performance on self-efficacy is mediated by the attributions people make about the causes of their performance. Silver, Mitchell and Gist (1995) had subjects with high and low self-efficacy answer GMAT questions. Those with higher self-efficacy attributed poor performance to bad luck, an external factor, while those with lower self-efficacy attributed poor performance to lack of ability. Similar findings have been reported by Gist and Mitchell (1992), and Watt and Martin (1994).

Though the perseverance associated with feelings of efficacy typically leads to improved performance, and the attributions that efficacious people make tend to protect feelings of efficacy from the negative effects of poor performance, performance and self-efficacy can be enhanced if people are confronted with both a task and a manageable threat associated with the task (Bandura, 1989). This characteristic of Social Cognitive Theory was examined by D.

N. Stone (1994). In this experiment subjects who were manipulated into feelings of overconfidence did not exert or achieve the levels of performance as those who were manipulated into a mildly low level of self-efficacy. The experimenter interpreted this to demonstrate that self-efficacy judgments made without prior experience tend to reflect overconfidence which can lead to complacency and few incentives for achievement. This also demonstrated that people will not necessarily display persistence and achievement when faced with an unmanageable task. In a study of overconfidence that measured self-efficacy beliefs and behavior, Sexton and Tuckman (1991) reported that when evaluating new behaviors people tend to overestimate their efficacy, therefore, the observation of behavior can be a better predictor of future performance than efficacy measures in such circumstances. Similar results were reported in a study using counselors-in-training (Johnson, Baker, Kopala, Kiselca, & Thompson 1989). In this study, students rated the strength and level of their counseling self-efficacy before and following training in a prepracticum class. Results showed no relationship between posttraining efficacy and performance when the students participated in their practicum experience.

Relationship Between Video and Written Experiences

Research has attempted to determine the most efficacious way to deliver information. Miltenberger and Veltum (1988) compared the effectiveness of two programs to teach behavioral assessment. In this experiment after all participants achieved a baseline level of proficiency, one group received written instructions, audiotaped and written modeling. Audiotaped modeling in this study consisted of three audiotaped interviews depicting appropriate interviewing techniques and verbatim scripts. The other group received only written instructions. A comparison of the groups indicated that the group that used the audiotapes learned the skills that are required in an assessment interview at a higher level than those who received written materials alone. These results were reported to indicate that this data runs counter to other data which reported there is no difference between these two media. This article did not discuss the possibility that more information was available to the audio group than the written group in that the audio group received the written and audiotaped instructions along with scripts, and those receiving written information only received the written instructions. A comparison of written and audio media to teach process skills such as reflecting and showing empathy and outcome skills such as medication histories, problem identification and behavioral assessment was conducted by Veltum and

Miltenberger (1989). In this investigation all participants received either a written transcript, an audiotaped vignette and transcript, or self-directed feedback. Results were reported to indicate that performance increased for process skills following written and again with audio training. There were no reported differences for outcome related responses between written instruction and audio presentations. G. L. Stone (1975) compared the utility of "low fidelity" instruction methods (audiotapes and written manuals) and "high fidelity" methods (videotapes, lectures, and practice) and reported that the high-fidelity model was more effective than either the low-fidelity model or practice.

A comparison of the effectiveness of either written lecture and discussion, written and videotaped lecture, or written lecture and modeled vignette to instruct psychiatric aides in effective relationships in a psychiatric setting was reported to result in a greater improvement for participants who received a written lecture and viewed a vignette (Cook, Kunce & Sleater, 1974). The use of models and written information was also utilized in Mann and Decker's (1984) study which reported that learning is more likely to occur if learning points are employed. A learning point is a fact of cognition that is salient to the subject that is being taught. This study compared the effectiveness of interrupting a modeled presentation to emphasize a learning

point along with a handout containing written learning points and written learning points alone. Those that viewed a model and received written learning points were reported to retain more information and were able to generalize what they had learned more effectively.

Another study compared the effectiveness of either a written presentation, lecture, videotaped modeling, or modeling with role play to teach parents techniques for applying time-out with their children (Nay, 1975). All treatments were reported to be superior to no treatment in conveying information, and videotape modeling and role play were superior to written and lecture formats. Similar results were obtained by Flanagan, Adams & Forehand (1979). In this study parents of young children were also instructed in time-out procedure using written instruction, lecture, videotaped modeling and role-play. Following an analogue assessment, participants in all treatment methods were reported to perform better than controls and role playing was more effective than lecturing. When parents were evaluated in their own homes, however, role play and modeling proved to be more effective for transferring performance competence.

Peters, Cormier & Cormier (1978) reported results that are inconsistent with those reported above. This study compared the acquisition of focusing skills through written, video, role-play practice, peer feedback, and role-play remediation. Results were reported to indicate that there

was no difference between these groups. The writers noted that their results ran counter to social learning theory; however, no pre and post self-efficacy measures were taken to measure the effectiveness of their interventions.

Salomon (1981) measured how efficacious children felt about television and reading. Though the children rated themselves as more efficacious with television they were able to demonstrate more cognitive processing with information they read. This could indicate that the relationship between one's preference for video instruction and one's resultant performance is tenuous. Chaiken and Eagly (1983) reported that the communicator and media influence how information is received. In this study likable and unlikable communicators delivered a message that was designed to be persuasive through either written, audiotaped, or videotaped format. The likable communicator was more persuasive in videotaped and audiotaped conditions and the unlikable communicator was more persuasive in the written modality only. A similar experiment within the same article reported that the attractive communicator was persuasive using all forms of communication and the unattractive communicator was effective using only written media. There were no differences between the attractive and unattractive communicator's persuasiveness when they utilized written communication. Concomitantly, written communication was associated with a greater amount of opinion change among the participants. These results were

interpreted to indicate that the participants engaged in more processing of communicator cues during the video and audio presentations. It was further postulated that the nonverbal impact of communicator characteristics may draw attention away from the content of the communication and thereby exerts a disproportionate influence on the impact of the communication. It was concluded that the immediate impact of a persuasive message can be maximized by using an electronic medium; however, a relatively enduring change in opinions is more likely when a written modality is used. The utility of using video modeling with written information to teach relationship skills was reported in Fichten and Wright's (1983) study of self-modeling among happy and distressed couples. This experiment utilized video self-modeling and written evaluations of the couple's behaviors to train the participants to identify productive and counterproductive behaviors. In this experiment no effect was reported as manifest from the treatment.

Attempts to determine the superiority of video or written modeling have been inconclusive. Stewart and Jessell (1986) provided participants with video or written modeling which simulated an initial counseling session depicting desirable counselor and counselee behavior. Results were reported to indicate that both internally and externally-oriented clients who viewed the videotape reported a higher level of client-counselor relationship; however, no differences were measured

for the level of self-exploration that was engaged in by the clients. This was interpreted to indicate that videotaped precounseling training tends to enhance a client's perception of the client-counselor relationship to a greater extent than written precounseling training though the extent of self-exploration that the client's engage in is not differentially enhanced by either of these media.

The superiority of video over written information for conveying the content of conversations was reported by Archer and Akert (1977). In this study participants viewed either a conversation in a naturalistic setting or read a transcript. The superiority of video as measured by the participants' accuracy in understanding the conversation was attributed to the video watchers' attention to the paralanguage of those having the conversation. The superiority of video over written information was also reported for the conveyance of psychodrama techniques (Bashman & Treadwell, 1995). Stalonas, Kean & Foy (1979) compared live written and videotaped presentations for conveying information to institutionalized alcoholics. Results were reported to indicate that videotape was a more effective medium for conveying information. It was hypothesized that one reason for these results could be that the participants in this study received hours of lectures daily; therefore, video may have commanded more attention due to its novelty.

The superiority of video over written was reported by in a review of 33 studies which evaluated the effectiveness of video as a patient information tool to teach lifestyle or medical treatment information as well (Nielsen & Sheppard, 1988). In this review it was reported that only 11 of the 33 studies employed an experimental design. Among the studies that employed an experimental design video was reported to be better than no treatment, was as effective as any other method of presentation and was more effective than written information. This article did not mention if the comparisons between video and written presentations involved written transcripts of the material in the videos or if the written material was designed to convey the same information but was worded differently from the videos. Results counter to those discussed above were reported by O'Dell, Krug, Patterson & Faustman (1980). This experiment attempted to see if there was a difference in the influence different media would have on the ability of parents to learn to use time-out with their children. Participants either received no treatment, were given a written manual that was to be read for 20 minutes and taken home, viewed a 20-minute training film and received a manual to take home, participated in role play with a trainer and a child who had been coached in the performance of difficult behaviors. Judges then viewed the parents' interactions with their own children at home. There were no

reported differences in the groups that received training and all treatment groups performed better than controls.

The superiority of written material that was intended to convey information similar to information that is in a video was reported by Hackett, Enns and Zetzer (1992). This study compared the reactions of women to feminist counseling and therapy. Participants were exposed to videotaped vignettes and written transcripts which included background information about the client and therapist. Therapists used either a nonsexist, liberal or radical feminist approach during the vignettes and were rated according to their attractiveness as a counselor by the participants. Results were reported to indicate that participants who viewed the written material were exposed to more contextual information and that contextual information may be more valuable than media in determining a counselor's attractiveness.

When participants have been exposed to verbatim transcripts of the information on a video, differences between video and written media have been less pronounced; however, the relationship between video, written and other media is less certain. Butler (1986) compared the effectiveness of an experimenter reading instructions, a video with the same content and an audio tape plus written instruction. The instructions involved learning complex procedures to complete the test answer form. It was reported

that there were no differences between the groups and all groups experienced an increase in performance.

Several studies have reported that, though there are no differences between the performance of groups exposed to either video or written modeling, these two media are superior to audiotaped instruction. Gibbs (1981) examined the use of either video, written or audiotape to teach participants direct, indirect, and nonconventional indirect requests. Participants who received their instruction by audiotape were reported to demonstrate less recognition and memory of these concepts than the other two groups. Equivalent information was reported in a study designed to see what form of communication would result in participants retaining the most accurate information (Perry & Boyd, 1974). Participants received information either through written, video or audio modalities. Results were reported to indicate that participants who received their information through written or video modalities had more accurate and detailed information than those who received their information through audiotape. The experimenters postulated that these results were obtained because videos provide more contextual clues and written information can be reread if some of the information is unclear. O'Dell, et al. (1982) compared the effectiveness of written, audiotape, videotape and live modeling to teach parents reinforcement skills. Results were reported to indicate that all modalities resulted in

learning, however videotape, live modeling and written training methods were superior to audiotape and were equally effective. The utility of lecture, written materials and videotape was examined in Kuna's (1975) comparison of groups who were either controls, received a lecture, lecture and written materials, and lecture, written materials and video presentation. Results were reported to indicate that lecture was more effective than no treatment and lecture and written was more effective than lecture alone; however, there was no difference between the written and the written and video group. The experimenter understood this to be influenced by the literacy level of his participants since the participants were all graduate students.

The idea that video and written methods of conveying information are of equivalent utility has been reported in various studies. O'Tool (1979) compared the effects of learning through written, written plus practice, video, video plus practice and no information. Results were reported that there were no differences between the information only groups and controls. There were, however, significant differences between the information and practice groups and controls. There were no differences reported between the video plus practice and the written plus practice groups. Calhoun, Cann, Selby and Magee (1981) had observers either read or view a video of an account of an emotionally expressive or emotionally controlled woman reporting a rape. It was

reported that regardless of the medium the emotionally expressive woman was given more credibility. These results were interpreted to indicate that the medium of the information is not as important for conveying information as the information's congruence with socially expected ways of expression. Similarly the medium of information was found not to be pertinent when conveying some types of medical information. McMullen & Rosen (1979) reported that self-administered procedures taught through written or videotaped materials containing similar content were more effective than no information but were not different from each other in the treatment of primary orgasmic dysfunction. Stone and Stein (1978) reported that though the medium may not be pertinent for the conveyance of information that can be applied, time is very important. In this study participants received information that was developed to facilitate reflection skills. The formats were a five-or-20-minute video or their transcripts. Results were reported to indicate that though all groups but the group that read the five-minute transcript did better on a written test than controls, only the groups that viewed the 20-minute video or its transcript were able to demonstrate improvement during an actual interview.

Robinson, Kurpius, and Froehle (1981) also used both video and written modeling to teach counseling techniques, and reported that both methods were significantly more effective than no treatment but no difference was noted

between the two techniques. Three other studies (Froehle, Robinson, & Kurpius, 1983; Robinson et al. 1979a, 1979b) failed to demonstrate any difference in the performance of counselor education students exposed to video and written methods of instruction. The first two of these studies reported that skill performance following a written or video model was not significantly different and that participants who experienced a written model performed better if they practiced. There was no reported difference in performance among those who experienced video modeling and those who experienced video modeling and practice. The second of these studies compared the gender of the model on the video with performance, as well as comparing video and written models. It was reported that neither the model's gender, or the medium of the model was associated with a difference in participants' performance. Since the results of research have failed to demonstrate a clear advantage to using either video or written modes of instruction, some have questioned the economic wisdom of obtaining expensive video teaching materials when less expensive written materials would appear to produce the same results (Robinson, et al. 1979; Robinson, et al. 1981).

The research that has been reviewed suggests that higher self-efficacy is related to greater amounts of perseverance, which is associated with enhanced performance. Research that has reported inconsistencies between self-efficacy and

performance has involved the manipulation of a subject's reported levels of efficacy, manipulation of the subject's expected performance to unrealistic levels, and self-efficacy measures of complex behaviors in which the participants have no actual experience. An important component of self-efficacy theory is that efficacy expectations are not only mediated by experience but determine how much effort individuals will employ and the length of their persistence when faced with obstacles and aversive experiences. The stronger a person's perceived self-efficacy, the more actively he or she will persist. Those who persist in relatively safe but subjectively threatening activities typically gain corrective experiences that reinforce their efficacy and increase their performance, given that they have the necessary capabilities (Bandura, 1977). With this in mind, the degree to which a modeling experience could improve a participant's self-efficacy would be an important factor in determining its effectiveness.

If written and video instruction produce the same level of performance but do not increase students' level of self-efficacy to the same degree, then over time performance levels of those with less self-efficacy would be expected to fall short of that attained by students who persist and gain corrective experiences. This could demonstrate the superiority of one educational format over the other. Because the relationship between written and video

instruction and self-efficacy is unknown, it is a legitimate area for investigation.

Chapter 3

SAMPLE, INSTRUMENTS, AND PROCEDURES

This chapter presents the null hypothesis, research design, procedures for data collection and analysis, pilot, sample, instruments, and limitations of the study.

Null Hypothesis

The following null hypothesis was tested in this study: there is no significant difference between the effect of vicarious video and written experiences on the self-efficacy of counselors-in-training's ability to understand and use reflecting skills. By convention an alpha level of .05 has been used to determine if sample means are significantly different (Gravetter & Wallnau, 1992), therefore a significance level of .05 was selected for the rejection of the null hypothesis in this study.

Research Design

For purposes of hypothesis testing, the RSQ score (used to measure self-efficacy) of two groups was compared using a

treatment-control posttest design, in which one group experienced videotaped instruction and examples while the other group experienced written instruction and examples. Descriptive data concerning characteristics of participants demographic and personal information were collected using the Sign-Up Sheet and Consent Form.

Procedures

Counseling techniques classes as intact groups were assigned to a video group or reading group experimental conditions. Assignment of video or reading groups was initially done alternately with video being chosen for the first group by flipping a coin. Factors, such as a class's lack of available video equipment, or the need to balance the number of participants between the video and reading groups, made modifications in the alternate assignment of the classes necessary.

The process of participant selection and data collection from 85 counselors-in-training occurred over a five-month period. Five of the 27 universities contacted by telephone agreed to participate in this study. The initial contact at all universities involved the experimenter providing his name, contact information, purpose of the call, and a request for contact information for the individual who could decide if the experiment could be conducted at that university. Once the person who could decide if the experiment could be

conducted was contacted, she or he was informed of the nature of the study, that all participants should come from their first master's level course that teaches counseling techniques, and that the administration of the study could be conducted by a proctor or the experimenter. Illinois State University supplied a proctor; all other data were gathered by the experimenter. Groups were assigned to this study if the following conditions had been met: (a) there was agreement from the institution and the instructor; (b) the course was taken by students who had completed less than two semesters of the program; (c) the course was in progress or to be offered during the semester following the request for participants.

Data from two participants were excluded because of their failure to complete all items of the instruments. Data from 13 participants were discarded to achieve equivalence of age, gender, and ethnicity between the video and written symbolic modeling groups. When it was necessary to discard a portion of a group to achieve demographic equivalence, consecutive numbers were assigned to all members of the group and these numbers were assigned consecutively to the numbers on a page in a random numbers set (Rand, 1955). The page was selected by opening the book without looking and pointing to a number, the middle three digits of the number that was pointed to became the page used in this study. The data assigned to the highest number(s) on the set were discarded.

Each participant underwent one treatment condition and subsequently completed the RSQ. Treatment in all groups consisted of participants receiving information about responding skills. One group received information through a videotape, while the other group read a transcript of the videotape. The video modeling and written symbolic modeling groups were equivalent for age, gender and ethnicity.

Vicarious Experience: Reflecting Skills Modeling

Vicarious experiences were conveyed through printed and videotaped media. The script for these presentations was derived from Responding Skills (Tamagini & Kinnie, 1986). A transcript was made of the video, and was edited so that the same dialogue could be used in either printed or spoken form. The level of reading difficulty for these scripts was determined at a Flesh Grade Level of 8.1 as measured by the Microsoft Word 5.1 software program.

Seven actors portrayed the roles in this study: one expert to convey information; three therapists, and three counselees. So that there would be similarity between the models and the observers, the actors portraying the therapists were of the same general age and appearance and wore attire common to the participants of the study. The actors were able to view the original tapes so they could approximate the affect that was portrayed on the original. They also had the opportunity to rehearse before the actual

taping. The written form consisted of a transcript of the dialogue used in the tapes.

Data Collection Procedures

The collection of data followed standardized procedures (see Appendix G). Participants were naive as to the nature of the study and were told that they would be involved in research to study aspects of counselor education. Participants volunteered by affixing their signatures to a Sign-Up Sheet and Consent Form (see Appendix H) which contained the conditions of the experiment and a request for demographic information. Demographic information (age, gender, and ethnicity) was gathered so that groups could be paired based on the age, gender and ethnicity of the participants. A packet which contained the Sign-Up Sheet and Consent Form, Reflecting Skills Questionnaire and Information About Reflecting Skills was given to members of the Reading Group. Participants in the Video Group received a packet which contained the Sign-Up Sheet and Consent Form, and the Reflecting Skills Questionnaire.

Data Analysis

The difference between a *t* distribution and a normal distribution becomes negligible when a sample of more than 30 individuals is used (Gravetter & Wallnau, 1992). Therefore,

a group size of 40 represented 10 more than the minimum per group that would be preferred for the statistical analysis of this study. The additional 10 members per group were added so that if it was necessary to discard members' responses in order to achieve demographic equivalence between the groups or because the RSQ was improperly completed, there would be a sufficient sample size. A *t* - test statistic for independent samples was computed to determine whether the video or written treatment had an effect on the self-efficacy of counselors-in-training's ability to understand and use reflecting skills.

Analysis of covariance was used to examine the effects of gender, ethnicity and age, and differences that may have existed in the groups used in this study on the total results.

Pilot Studies

First Pilot

The first pilot was conducted to ascertain the utility of the efficacy measure and treatment. A danger common to efficacy measures is that they may not offer levels of efficacy that are sufficiently difficult (Bandura, personal communication, April 15, 1996). When this occurs, the measurement of efficacy levels tends to "top out" and the scale can no longer measure an increase in self-efficacy.

The Reflecting Skills Questionnaire was initially administered to five counselors-in-training to determine whether questions were understandable and relevant to the population participating in the investigation. As suggested, the words that differentiated the levels of efficacy were highlighted so that they could be more easily identified. To assure that levels of difficulty on the measure proposed for use in this study offered a sufficient level of challenge, the measure was also administered to five doctoral students in counseling psychology. It was assumed that this population considered themselves more efficacious in their use of reflecting skills than counselors-in-training. The participants with more advanced levels of training did not "top out," nor did students with less education and experience.

The administration of the pilot studies followed standardized procedures (see Appendix C). Participants completed a Sign-Up Sheet and Consent Form for Pilot 1 (see Appendix D) which contained the conditions of the experiment and to which participants supplied information regarding age, gender, and ethnicity. This section of the pilot was conducted with two parts, one counselors-in-training, the other psychologists-in-training.

Results from the first pilot revealed that the counselors-in-training had an average score of 6.49 out of 8 (n = 5) and the psychologists-in-training had an average

score of 6.67 (n = 5). These results confirmed that the RSQ did not result in the respondents' "topping out." A post hoc analysis revealed that counselors-in-training (M = 136.4, SD = 29.72) not to be statistically different from the psychologists-in-training on this measure as determined by a two-tailed *t* - test for Independent Samples (M = 140, SD = 23.38), t (8) = .21, p > .05. A Levene's Test for Equality of Variances was not significant (F = .05, p = .82).

Second Pilot

In the second pilot study a pretest-posttest design was used to confirm that the treatment did influence participants' level of self-efficacy. Participants completed a Sign-Up Sheet and Consent Form for Pilot 2 (see Appendix E). Treatment consisted of having participants read a written transcript which discussed reflective listening for reflection of content, feeling, and meaning and three vignettes which demonstrated the use of these skills (see Appendix F). Participants in this phase of the pilot study had completed a course in counseling techniques. The purpose for using participants with more experience than the typical participant in the main study, was to address the concern that previous experience may negate the effect of treatment. Following the posttest, participants were asked whether they thought the treatment increased their efficacy for reflecting skills, and whether they had any suggestions for

modifications to the treatment that could improve its effectiveness. No substantive suggestions were made.

The second pilot confirmed that the treatment influenced the participants' scores on the RSQ. It was anticipated that the treatment would increase the participants' mean scores on the RSQ, so a one-tailed *t* - test for paired samples was conducted with the pre and post-treatment groups. The scores post-treatment (M = 9.4, SD = 15.98) (t (9) = 1.86, $p < .05$) indicate that there was a significant increase in their mean scores on the RSQ.

Participants

Seventy counselors-in-training enrolled in their first masters level counseling techniques course from Indiana State University, University of Louisville, Eastern Illinois University, Illinois State University and George Mason University counseling or counseling psychology programs were the participants. Participants included 28 females and 7 males in the video group and 31 females and 4 males in the written group. Table 1 (page 55) provides the number of participants that were in each age range by their group membership. The video group was comprised of 4 African Americans, 1 Asian and 30 Caucasians and the written group was comprised of 2 African-Americans, 1 Asian and 32 Caucasians. Table 2 (page 56) shows the distribution of

Table 1.

Age ranges by group

Age Range	Video	Written
21 - 25	16	17
26 - 30	6	6
31 - 35	5	3
36 - 40	4	4
41 - 45	2	3
46 - 50	2	2

participants based on the University they attended and the group in which they participated.

Instrumentation

Counseling Self-Estimate Inventory (COSE)

The COSE (Larson, et al. 1992), a measure of global counselor efficacy with established psychometric properties, was developed by applying self-efficacy theory to the counseling process. This was accomplished by creating a measure of counselors-in-trainings' belief in their ability to perform successfully in counseling situations such as: microskills, process, difficult client behaviors, cultural competence, and

Table 2.

Participants' University by Group

University	Video	Written
East Illinois Univ.	16	
George Mason Univ.		15
Illinois State Univ.		8
Indiana State Univ.	10	12
Univ. of Kentucky	9	

awareness of values. Combined internal consistency of the COSE was reported to be .93; the internal consistency for the Microskills section was reported as .88. Convergent validity for the COSE is indicated by the reported finding that people who score higher on the COSE also score as having higher self-concepts as reported on the Tennessee Self Concept Scale (TSCS) (Fitts, 1965, 1988); lower state and trait anxiety as reported on the State-Trait Anxiety Inventory (Speilberger, 1983); perceived themselves as more effective problem-solvers as determined by The Problem Solving Inventory (Heppner, 1988). Discriminate validity for the COSE was reported to be indicated by low correlations with defensiveness and faking as measured by the Social Desirability Scale (Crown & Marlow, 1964) and the TSCS. There were also low correlations with Graduate Record Examination (Educational Testing Service,

1988) scores and undergraduate GPA. Results on the COSE also do not appear to be related to any personality type as reported by the Myers-Briggs Type Indicator (Myers, 1962; Myers & McCaulley, 1985).

Reflecting Skills Questionnaire

Efficacy was assessed using the RSQ which was developed specifically for this study (see Appendix A). Self-efficacy theory maintains that people's belief in their understanding of the behavior that is necessary to achieve a goal and belief in their ability to successfully execute the behavior that will achieve a goal, is domain specific and may not generalize to other domains. For example, one may believe that he or she can play tennis competently; however, the same person may not feel competent at soccer or computer programming. Therefore, measures of self-efficacy must be developed that are specific to the domain in which the efficacy is being measured (Bandura, personal communication, April 15, 1996). Evidence of construct validity for this instrument was derived from self-efficacy theory in that the RSQ was developed to be domain-specific and asks participants to evaluate their belief in their ability to understand the behaviors that are necessary to perform reflecting skills and their belief in their ability to perform those behaviors.

The questions on the RSQ were intended to model an increasing level of understanding and implementation of the

counseling microskills that were addressed in the treatment: reflection of content; reflection of feeling; reflection of meaning. The levels of understanding and implementation that were assessed were a basic understanding of the microskill (understanding the behavior that is necessary to achieve a desired goal), rudimentary usage of the microskill, communication, accurate implementation of the microskill, timely and appropriate usage of the microskill (ability to execute the behavior that is necessary to achieve a goal). Appendix B shows how this format was used to form questions on the RSQ.

The salient section of the COSE for this study was microskills. To determine if the RSQ and COSE were asking for similar information, four experts reviewed items from the section of the COSE that reflected the use of microskills that were comparable to those examined in this experiment. The experts indicated which items on the RSQ were asking for information that is similar to information that is requested on the COSE. These items were included in the RSQ to provide a means of assessing convergent validity for the RSQ and increased the original length of the RSQ from 15 to 21 items.

The results of the matches made by the experts are displayed in Table 3 (page 59). This shows that though at least one expert perceived an equivalence between all items on the RSQ and the COSE, a majority of the experts perceived equivalence on nine of the 15 questions.

Table 3.

Number of Expert Matches of Questions from the COSE with RSQ

Questions on the original RSQ	Questions on the RSQ taken from the COSE					
	16	17	18	19	20	21
1		4				
2		1		2		
3			2	2	1	
4			2	3	1	1
5	3		1	1	1	
6		3	1			
7		1	1	1		
8			2	2	2	
9			2	3		1
10	1		2	2	1	
11		4		1		
12		3		1		
13			3	1	2	
14			2	2	2	1
15	3		2	2	1	

A Pearson Correlation was performed for each item from the COSE that was identified by at least three experts as matching an item on the RSQ. Results from these correlations add credence to the idea that the items that were chosen by

the experts were similar. Table 4 (page 61) shows the results of the Pearson correlations.

Evidence of convergent validity was also assessed by measuring the relationship between the RSQ and the items from the COSE that were used in this experiment. This relationship was significant ($r = .87$, $p < .01$). The internal consistency of the RSQ was .9523 (N of Cases = 70, N of items = 21) as measured using a Cronbach coefficient alpha.

Limitations

The results of this study are limited by the following factors:

1. The sample in this study consisted of 59 of the 70 participants being of Caucasian women between 21 and 25 years old.

2. The sample in this study consisted of counselors-in-training who were enrolled in their first counseling techniques course. This population typically has not yet performed the role of counselor in actual counseling sessions with clients. It is not known if there is a relationship between a counselor's experience with clients and the influence of video or written vicarious experiences on a counselor's self-efficacy for performing reflecting skills. Therefore, generalizability of the results of this study to populations with more counseling experience should be made with caution.

Table 4.

Pearson Correlation between Items from the COSE that were Matched as Equivalent with RSQ Items by Majority of Experts

Matched item	r value	p
16 & 5	.71	< .01
16 & 15	.70	< .01
17 & 1	.67	< .01
17 & 6	.63	< .01
17 & 11	.70	< .01
17 & 7	.61	< .01
17 & 12	.54	< .01
18 & 13	.53	< .01
19 & 4	.67	< .01
19 & 9	.53	< .01

3. The influence of the written form of Information about Reflecting Skills on self-efficacy was demonstrated with a small sample (n=10). A larger sample would add more credence to the Information about Reflecting Skill's ability to influence the self-efficacy of counselors-in-training's ability to understand and use reflecting skills.

Chapter 4

RESULTS

This quasi-experiment was designed to investigate the effect of vicarious video and written experiences on the self-efficacy of counselors-in-training's ability to understand and use reflecting skills. A *t* - test for independent samples was performed to compare the amount of self-efficacy that was demonstrated in the group that received video or written symbolic modeling. Table 5 (page 63) shows the comparison of these groups.

In order to determine if age, gender, ethnicity or school had a significant contribution to the results, an analysis of covariance was conducted. An analysis of covariance was chosen for because it can account for the influence of the nominal categories gender, ethnicity and school, and the continuous variable age on the total results and can also measure the influence of interactions between the categories on the total results. None of the factors had a significant influence on the results. Table 6 (page 64) shows the nominal categories,

Table 5.

A *t* - Test Analysis Between Symbolic Modeling Groups

Groups	Number Of Cases	Mean	Standard Deviation	*t* - value	df	Probability Level
Reading	35	132	18.78			
Video	35	135.26	19.16			
				-.72	68	> .05

Levene's Test for Equality of Variances (F = .416, p = .521).

subcategories and the number of participants in each subcategory that were used in the analysis. Table 7 (page 65) shows the test of between-subject effects of the independent variables on the results. A contribution of the independent variables on the outcome and the interaction between categories and outcome was not established. This adds credibility to the argument that the outcome of this study was not influenced by the demographic variables that comprised the sample. Analysis of covariance was also particularly useful for this study because intact groups were used for different treatments. Ferguson and Takane (1989) reported that analysis of covariance may be used to adjust for the differences that exist among groups on known variables. Though using an analysis of covariance did result in an increase in the level of significance that was found between the reading and video groups as compared with the use

Table 6.

Between-Subjects Factors

Category	Subcategory	N
RV	Reading	35
	Video	35
GEN	Male	11
	Female	50
ETH	African American	6
	Asian	2
	Caucasian	62
SCH	Indiana State University	22
	University of Louisville	9
	Eastern Illinois University	16
	Illinois State University	8
	George Mason University	15

of a *t* - test for independent samples (p = .475 as compared to p = .170), a statistical difference between the two treatments was not evident.

Table 7.

Tests of Between-Subjects Effects

Dependent Variable Total

Source	Type III Sum of Squares	df	Mean Square	F	Sig
Corrected Model	4676.14*	18	259.79	.66	.83
Intercept	70851.73	1	70851.73	180.83	.00
RV	760.50	1	760.50	1.94	.17
ETH	1099.66	2	549.83	1.40	.26
GEN	159.66	1	159.66	.05	.82
SCH	1616.82	4	404.21	1.03	.40
ETH - GEN	217.52	1	217.52	.56	.46
ETH - SCH	584.57	4	146.14	.37	.83
GEN - SCH	768.33	4	192.08	.49	.74
AGE	81.27	1	81.27	.21	.65
Error	19982.21	51	391.81		
Total	1274620.00	70			
Corrected Total	24658.34	69			

* R Squared = .19 (Adjusted R Squared = -.10)

Chapter 5

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to compare the effect of written and video modeling on the self-efficacy of counselors-in-training's ability to understand and use reflecting skills. The literature provides information concerning the relationship between video and written modeling and performance, and the relationship between self-efficacy and performance, but research was needed to compare the influence of video and written modeling on self-efficacy. The research question was: Is the self-efficacy of counselors-in-training's ability to understand and use reflecting skills different for those who read information about reflecting skills and those who view a video tape with the same content.

Participants were 70 masters degree counselors in training enrolled in a course teaching counseling techniques. Participants watched a video or read information about

reflecting skills and three vignettes which demonstrated reflecting content, feeling and meaning. The Reflecting Skills Questionnaire (RSQ), designed for the study was used to collect information about the counselors-in-training's ability to understand and use reflecting skills.
The null hypothesis tested by way of a *t* - test for independent samples. It was hypothesized that no significant difference in self efficacy exists between counselors-in-training who read about reflecting skills and those who view a videotape with the same content. Based on the results of the *t* - test statistic for independent samples, the null hypothesis ($t = -.72$, $p > .05$) was not rejected.

Conclusions

The conclusion drawn from the results of the study is based upon the data analysis and within the scope of the limitations and assumptions of the study. As would be expected, readers should be aware of the sample size, use of intact groups and the treatment consisting of a single learning experience.

A significant difference in the self-efficacy of counselors-in-training's ability to understand and use reflecting skills between those who read information about reflecting skills and those who view a video with the same content was not found. Lack of support for any difference indicates that, though self-efficacy can be enhanced by

written or video media, there is no differential influence on self-efficacy. Concomitantly, there was consistency across demographic variables.

The result of this study is consistent with studies that have reported that written and video media are of equivalent utility. Several studies (Robinson et al. 1981; Froehle et al. 1983; Robinson et al. 1979a, 1979b) reported that there is no difference between using video and written methods to teach counseling techniques. O'Tool (1979) reported that though there is no difference between the influence of written and video media on performance, there is a difference between groups who are exposed to video or written media and practice and those who do not practice after exposure. Calhoun, Cann, Shelby and Magee (1981) concluded that video and written media have no differential influence; however, by altering the presentation from a socially expected presentation of information to a socially unexpected presentation a difference in the information's influence can be observed. McMullen & Rosen (1979) reported that self-administered procedures taught through written or videotaped materials containing similar content were more effective than no information but were not different from each other in the treatment of primary orgasmic dysfunction. Flannagan et al. (1979) studied the relationship between video, written, lecture and role play and reported no difference in the effectiveness video and written presentations. Kuna (1975)

compared the effectiveness of groups receiving either lecture, lecture and written materials, and lecture, written materials and video presentation, and found no difference between the written and written and video groups. Studies which have compared the effectiveness of written and video modalities to teach parenting skills (O'Dell et al. 1980; O'Dell et al., 1982) have also reported that there was no difference between video and written modalities. A study designed to compare the effectiveness of video and written methods to teach communication skills (Gibbs, 1981) also reported that there was no difference between the two methods. Perry and Boyd (1974) reported that the information that is received through written and video methods is similar in its accuracy and detail and is superior to information that is obtained through audiotape.

These results are counter to studies that have reported video as superior to written information. Archer & Akert (1977) reported that participants had a better understanding of conversations in a naturalistic setting when they were seen on video as opposed to reading a transcript. Bashman & Tredwell (1995) reported that video was superior to written media for teaching psychodrama techniques. In a review of the literature designed to explore the effectiveness of video as a tool to convey medical or health information, Neilsen & Sheppard (1988) reported that video was more effective than written information. Stalonas, et al. 1979 studied the

effectiveness of written and video information on institutionalized alcoholics and reported that video information was more effective. A study which examined the influence of video and written counseling information on those about to enter counseling reported that video information did increase clients' positive perception of the counseling relationship but did not influence the content of counseling (Stewart & Jessell, 1986).

The result of this study also did not conform with Hacket et al. (1992) who compared the perceived attractiveness of counselors through video and written media. This study reported that written information was superior to video and this may be do to written media providing more contextual information than video media.

Implications

Bandura (1971) stated that models of equal information that are presented through different modes are equally effective in teaching new behaviors. This is consistent with the findings of this study which determined that both video and written media increase self-efficacy in a statistically identical manner. Though there have been numerous studies which examined the relationship between self-efficacy and performance, and other studies which compared the difference in performance when participants were exposed to video, written or other media, no studies have explored how

different media influence self-efficacy. The results in this study contribute to the literature on self-efficacy by demonstrating that within the context of Social Learning Theory content, and not the medium, is paramount for conveying information about counseling techniques to counselors-in-training.

By concluding that content is paramount for conveying information about counseling techniques to counselors-in-training, this study supports the assertion made by Froehle et al. (1983) that it may be not economically prudent for counseling programs to invest in the increased cost of video teaching materials when less expensive written materials would appear to produce the same results. Therefore written materials are as effective as other more expensive media.

Recommendations

Based on the results of this study, the following recommendations have been formulated:

1. Explore the attractiveness of the characters in the video. Chaiken and Eagly (1983) reported how the influence of information through different media can be affected by the information deliverer's likability. If the "expert" on the video was not perceived as likable by the participants then it could be argued that more information could have been received if the "expert" had been likable. It is therefore recommended that a study explore the relationship between the

likability of the characters in a video designed to teach reflecting skills, and the amount of self efficacy of counselors-in-training's understanding and usage of reflecting skills. If such a relationship exists, then repeating this experiment using the video designed to provide the greatest self-efficacy should be performed to rule out the possibility that the results in this study are an artifact of the likability of the actors in the video.

The following four recommendations are based on Bandura's (1986) assertion that two of the subprocesses that govern observational learning are attention and retention, and (1977) modeled behavior is more effective when there are clear outcomes and there is some similarity between the model and the observer.

2. Examine the observers' interest in the video and written models. If the two models had a different level of interest for the participants, then one could expect that the more interesting model would be more attended to and would be able to convey more information than the model that was attended to a lesser degree. If the model that was attended to a greater extent was only able to result in the observers increasing their self-efficacy in a similar amount as the model that was less attended to, then the results of this study could be an artifact of interest resultant from the editing of the script or the production of the video and not the type of modeling that was observed.

3. Compare the differences in the amount of self-efficacy that result from the use of two forms of video and written symbolic modeling in which the models interrupt their behavior to explain their thoughts. Retention is enhanced when observers understand the rules that the models used to guide their behavior. This can be accomplished when the models divide complex behaviors into their component parts. Research has compared the effectiveness of models interrupting their modeled behavior to explain their thought processes with models that provide observers with a lecture or written instructions containing the rules that guide the behaviors that are being taught (Gorrell, 1993; Gorrell & Capron, 1988; Mann & Decker, 1984). These comparisons have demonstrated the superiority of having models interrupt their modeled behavior to explain their thought processes over the use of lecture or handouts. The current experiment used a lecture which explained the rules that the models would use for their interventions but did not have the models interrupt their behavior. Since some studies have suggested that a different form of modeling than the one that was used in this study is more effective in influencing observers, the results obtained in this study may be a product of the observers receiving limited information through written and video instruction, and the differences between these two media could be noticeable if the observers are exposed to a more optimal learning experience.

4. Examine the effect of video and written experiences on the self-efficacy of counselors-in-training when the success of the model's intervention is made explicit. An important factor in observational learning is the model's success or failure. Observing a model succeed who uses a strategy that the observer thinks he or she could apply should raise the observer's self-efficacy. Though the present study presented a lecture and modeled vignettes, the success of the vignettes was not explicitly stated. Since the success of the models was implicit, it is possible that the treatment was not as effective as it could have been and under more optimal learning conditions the differences between video and written vicarious experiences on self-efficacy may be evident.

5. Examine the effect of video and written experiences on the self-efficacy of counselors-in-training who identify with the model. Observational modeling is most effective if there is some similarity between the model and the observer. Brown and Inouye (1978) reported that one way of increasing the degree to which observers identify with a model is to tell the observers that the models possess characteristics that are similar to the observer or are indicative of the model's possessing less ability than the observer. If the participants in this study were able to identify with the modeling that was presented in the written treatment to a greater extent than they identified with the models in the

video treatment, then the similarity of results between these two groups may be an artifact of the degree of identification that the participants experienced as opposed to the similarity in the way self-efficacy is transmitted through video and written materials. Providing the participants with a statement that the counselors in the vignettes have characteristics that are similar to the observers or possess less ability than the observers could also provide a way to explore whether the results of this study were resultant from the participants' having a different level of identification between the written and video groups.

6. Examine the effect of video and written experiences on the self-efficacy of counselors-in-training who identify the model as possessing social power. The effectiveness of observational learning also appears to be increased if the observers perceive that social power is one of the characteristics of the model (Brewer & Wann, 1998). The current study presented a lecturer and models; however, they were not given any identifying characteristics. By providing the participants with information that attaches social power to the speaker and models, a more optimal learning experience may be created thereby allowing a differential influence of video and written modeling to be manifest.

7. Examine the effect of video and written experiences on the self-efficacy of less literate populations. This study's finding that there was no difference between the

video and written groups may result from Kuna's (1975) understanding that the literacy level of graduate students moderates any differences between the information that may be gleaned from written or video presentations.

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APPENDIX A

Reflecting Skills Questionnaire

Do not put your name on this questionnaire

Please fill in the blank using the code provided. Use your best judgment about your abilities

1=0%-12%, 2=13%-24%, 3=25%-37%, 4-38%-50%, 5=51%-62%

6=63%-75%, 7=76%-88%, 8=89%-100%.

1. I am _____ confident that I know how to **formulate a hypothesis** to myself concerning the content of what my client has expressed.

2. I am _____ confident that I am able to **understand the content** of what my client is saying.

3. I am _____ confident that I am able to **communicate my understanding of the content** of what my client has said in a way that will be understandable to my client.

4. I am _____ confident that I am able to **reflect the actual content** of my client's statements in a way that is **accurate and understandable.**

5. I am _____ confident that I can accurately **reflect the content** of my client's statements in an **appropriate length of time** (neither interrupting or taking too long to respond).

6. I am _____ confident that I know how to **formulate a hypothesis** to myself concerning the **feelings** behind what my client has expressed.

7. I am _____ confident that I am able to **understand the feelings** behind what my client is saying.

8. I am _____ confident that I am able to **communicate my understanding of the feelings** behind what my client has said in a way that will be understandable to my client.

9. I am _____ confident that I am able to **reflect the actual feelings** behind my client's statements in a way that is **accurate and understandable.**

1=0%-12%, 2=13%-24%, 3=25%-37%, 4-38%-50%, 5=51%-62%

6=63%-75%, 7=76%-88%, 8=89-100%,

10. I am _____ confident that I can accurately **reflect the feelings** behind my client's statements in an **appropriate length of time** (neither interrupting or taking too long to respond).

11. I am _____ confident that I know how to **formulate a hypothesis** to myself **concerning the meaning** behind what my client has expressed.

12. I am _____ confident that I am able to **understand the meaning** behind what my client is saying.

13. I am _____ confident that I am able to **communicate my understanding of the meaning** behind what my client has said in a way that will be understandable to my client.

14. I am _____ confident that I am able to **reflect the meaning** behind my client's statements in a way that is **accurate and understandable.**

1=0%-12%, 2=13%-24%, 3=25%-37%, 4-38%-50%, 5=51%-62%

6=63%-75%, 7=76%-88%, 8=89-100%,

15. I am _____ confident that I can accurately **reflect the meaning** behind my client's statements in an **appropriate length of time** (neither interrupting or taking too long to respond).

16. I feel _____ confident that I will respond to the client in an appropriate length of time (neither interrupting the client or waiting too long to respond)

17. I am _____ confident that I will be able to conceptualize my clients problems.

18. I am _____ confident that I will respond appropriately to the client in view of what the client will express (e.g., my questions will be meaningful and not concerned with trivia and minutia)

19. I am _____ confident that the content of my responses i.e., reflection of feeling, clarification, and probing, will be consistent with and not discrepant from what the client is saying.

20. I feel _____ confident that I will appear competent and earn the respect of my client.

21. When using responses like reflection of feeling, active listening, clarification, probing, I am _____ confident I will be concise and to the point.

APPENDIX B

Implementation of levels of undertanding to questions concerning counseling microskills

Level of	Question
Basic understanding	I am _____ confident that I know how to formulate a hypothesis to myself concerning the content of what my client has expressed.
Rudimentary usage	I am _____ confident that I am able to understand the content of what my client is saying.
Communication	I am _____ confident that I am able to communicate my understanding of the content of what my client has said in a way that will be understandable to my client.
Accurate implementation	I am _____ confident that I am able to reflect the actual content of my client's statements in a way that is accurate and understandable.

Timely and appropriate usage	I am _____ confident that I can accurately reflect the content of my client's statements in an appropriate length of time (neither interrupting or taking too long to respond).

APPENDIX C

Administration Instructions

First pilot

1. Participants will be given a packet containing a Sign-up Sheet and Consent Form and the RSQ. They will be asked to keep the packets closed until instructed to open them by the administrator. The administrator will say, "Thank you for coming please open your packet, take out the papers and place them face up in front of you (administrator will demonstrate removing the papers from the envelope and placing them face up) please read the information on the Sign-up Sheet and Consent Form, if you choose to participate complete and sign the form but do not put your name on the second page." The administrator will give the participants a few minutes to complete the forms will then collect the front page of the Sign-up Sheet and Consent Form. After the forms are collected that administrator will hold up the Reflecting Skills Questionnaire in view of the participants and say, "This questionnaire will ask about your understanding of some of your present counseling skills. Each question has a blank space in which you are asked to respond using the code provided at the top of the page. Notice that each number corresponds with a percentage and you are being asked to fill in the number on the answer sheet. You probably will not be

able to say with certainty what percentage of confidence you have for each line item and you may find that you feel that your answer lies between the intervals that are provided. You are being asked to make your best judgment about your abilities. There is no typical answer profile for counseling students and your responses will not be used to evaluate your abilities. Please do not put your name on the answer sheet. This request is being made in order to protect the confidentiality of the participants in this study. When you are finished, please put the second page of the Sign-up Sheet and Consent Form and the Reflecting Skills Questionnaire back in the envelope. If you are ready you may begin filling out the questionnaire. Thank you for your time and cooperation."

Second pilot

Each participant will receive a packet containing a Sign-up Sheet and Consent Form, RSQ #1, Reflecting Skills Modeling Script, and Reflecting Skills Questionnaire #2, The Sign-Up Sheet and Consent Form, and Reflecting Skills Questionnaire will be filled out as described above. The administrator will then hold up the stapled pages titled Information about Reflecting Skills and say, "This will provide some information about reflecting skills; please read through this information only one time and turn it over so that it is face down when you have finished reading (the administrator will demonstrate turning the pages over while providing these

instructions) then sit quietly so that other members of the group can finish as well." After the group has finished reading about reflecting skills the administrator will collect the Information about Reflecting Skills and say, "Soon you will be asked to complete Reflecting Skills Questionnaire 2," and will repeat the instructions for the completion of the RSQ. After the participants have completed the RSQ they will be told to put all of their papers in their envelopes and thanked for their participation.

APPENDIX D

Sign-up Sheet and Consent Form

Pilot 1

Research on Counseling

This research project is designed to study aspects of counselor education in an effort to develop ways to make it more useful and effective to counseling students. If you agree to participate in this study, you will be asked to complete a brief form, and a questionnaire that will ask about some of your understandings about counseling. Your total investment of time will be about 15 minutes. Your identity will be kept strictly confidential, and you may withdraw from this study at any time without giving a reason. Data collected will be confidential, and will not be shared with your course instructor(s). Upon completion of this study, results will be available to you upon request. You may make this request by writing Roy Hamilton, School of Education, Rm. 1524, Indiana State University, Terre Haute, Indiana 47807. Please sign on the line below to indicate your agreement to participate and to help make counselor education more effective.

_____ _____

Name (please print)

Signature

_____ _____

University

Date

Do not put your name on this page

Please note: This information is requested by the investigator for use in analysis and reporting of the data.

_____	_____	_____
date	age	sex (M or F)

Have you taken more than one counseling techniques course?

yes no (circle one)

Ethnicity: (check one)

_____African American

_____Asian

_____Caucasian

_____Hispanic

_____Native American

APPENDIX E

Sign-up Sheet and Consent Form

Pilot 2

Research on Counseling

This research project is designed to study aspects of counselor education in an effort to develop ways to make it more useful and effective to counseling students. If you agree to participate in this study, you will be asked to complete a brief form, and a questionnaire that will ask about some of your understandings about counseling. Your total investment of time will be about 30 minutes. Your identity will be kept strictly confidential, and you may withdraw from this study at any time without giving a reason. Data collected will be confidential, and will not be shared with your course instructor(s). Upon completion of this study, results will be available to you upon request. You may make this request by writing Roy Hamilton, School of Education, Rm. 1524, Indiana State University, Terre Haute, Indiana 47807. Please sign on the line below to indicate your agreement to participate and to help make counselor education more effective.

_____	_____
Name (please print)	Signature
_____	_____
University	Date

Do not put your name on this page

Please note: This information is requested by the investigator for use in analysis and reporting of the data.

_____	_____	_____
date	age	sex (M or F)

Have you taken more than one counseling techniques course?

yes no (circle one)

Ethnicity: (check one)

_____African American

_____Asian

_____Caucasian

_____Hispanic

_____Native American

APPENDIX F

Information about Reflecting Skills

In counseling we wish to make contact with the client's inner experience. If we learn to respond accurately, we see the world through the client's eyes, we're able to understand why they do the things that they do. There are several things involved in learning to respond accurately, we break them down in this way: responding to content; responding to feeling; and complimenting the feeling response with a meaning response. Responding to content is critical, because it establishes the base for everything else. In some instances for example if you were teaching a group of teachers responding to content is absolutely essential. It's important to start by responding to content basically using some kind of format like "you said" or "your saying" and trying to capture the gist or expression of what the client has given you. Responding to feeling is to listen to that music behind the words. Listening not only to what the client is saying but how they are saying it. Basically what we're doing is repeating the content verbatim or as close to verbatim as we can to ourselves and we're reflecting upon it and we're asking ourselves, "gee if I had this experience,

that the client's expressing, how would that make me feel? What would I feel if I were in the client's shoes," and then using reflective format to communicate to the client "you feel" typically is a good way to do it. The format's not the critical thing, accuracy is the critical thing. The format is a good discipline to learn. So instead of saying "you said" to complete the content we're saying "you feel." To capture the feeling behind the content that was expressed, and finally to make a complete response, we try to compliment that feeling response with the meaning. Basically all that we do there is to take that content and provide the reason for the feeling, and we use a format like "you feel _____ because" and we provide the reason following the because. So we give a feeling expression and provide the reason for the feeling, and we call this meaning. What we're trying to do, this is really the critical nature of responding, is to be interchangeable with the expressions that the client is giving us, communicate to the client in exactly the same terms that the client is trying to communicate to us the content the feeling and the meaning, and we're trying to give the client a chance to check us out. By making this reflective response that we call responding to the client interchangeably we're giving the client a chance to check us out. Did we miss? Were we interchangeable, were we additive, if we missed were we subtractive? Most often when you're with a new client it's not a problem of being additive. So what

we're trying to do is to establish that base, just make those interchangeable responses, and we're trying to establish that base so the client can check us out, see that we're accurate, and we establish a base of communication for personalizing and understanding later.

Each of the following vignettes demonstrates the successful use of responding to content, feeling and meaning.

Vignette 1

Client: Well, we've tried to explain to them that at this point we appreciate everything they've tried to do, everything they want to do, but at this point what we really need is for people to have more patience, people to be more supportive, and not people to judge him. That'll come at a later time when he'll have to deal with that and he'll have to say something himself, but right now people are telling me instead of telling him, and it's sort of like going through a middle person. I wasn't even at the scene of the accident, I don't know exactly what happened, all the intricate details and all that and I think at this point I really don't need to hear things like that, I need to hear you know we'll be there is you need us, just call and I know they're trying really hard but if they could just sit back and listen to what they say, think about what they say before they say it, maybe, you know I don't think that they're trying to hurt us.

Counselor: So really you feel burdened and torn between the needs of your husband, on one the hand and the needs of these other people.

Client: right

Counselor: On the other hand.

Vignette 2

Client: See I'm kind of lost, because of what I said, I think it's because of that, I'm not sure that if it's because of that before my parents had set a goal for me, and now I have to decide on my own, that may be a reason but, it may not be the whole reason. That's why I am looking for ways to...so I have people to help me decide and feel good about my decision. So in the future I don't say "well what I've done I should not have done, and what I followed I shouldn't have followed

Counselor: You're a little afraid of making a decision that sort of mess things up

Client: Right yes maybe I'm afraid of assuming responsibilities.

Vignette 3

Client: I have a five year-old little girl, and up until recently, ever since she was born up until very recently she hasn't-very seldom slept in her own bed through the whole

night. A few months ago we decided this ought to be stopped. We're working on it and she was ...of course it was a big change for her not to cry for mom during three o'clock in the morning and somebody would run, and of course I had done this was automatic for many years. Just pick her up and bring her to my bed and two seconds later she would be fast asleep. If I brought her back to her bed we're at it again only a few minutes later. It was just easier to just leave her there go a few hours without sleep, and of course they just take over your whole bed, um and I'd wake up in the morning feeling half beat up, but she was fine. So us just bringing her in just reinforced her feeling more comfortable during the night and coming in. So we decided that this is going to stop, and we talked about it and made some decisions that she could cry all night and scream and yell, but I was not going to go. I didn't stick to that. I could only hear her crying for a while then you just fall finagled and you just pick her up and bring her in. Christmas it was decided that if Santa was, Santa wouldn't come if she didn't sleep in her bed all night. I was just hoping that she would sleep in her bed because otherwise I would have to stick to my promises, and I didn't want to really do that. Um, however, she really did well up until Christmas. Then Christmas came, Santa came and that was the end of her sleeping. We picked up again and her birthday was coming, it was you won't have a birthday party unless you sleep in your bed all night. She did, she'd go

off for one night here one night there, most of the time she would sleep in her bed and carry right through, and she did well till about two weeks ago, and then completely turned around would not go, would not sleep, I mean it seemed like nothing would work.

Counselor: It had to be very frustrating for you because every time you made some progress...boom you'd lose it.

Client: That's right That's where you're back to square one again. Now it's like now what can I do this time to make it work. Um She goes to a daycare all day while I work and the teachers are very helpful and supportive, so I've talked with them about this. Any time she would get a good report in the morning they'd be thrilled and she'd get prizes from them and of course from us at home and the reinforcement was always there, so when this would happen it was just like what can I do to make it work.

Counselor: When there are these lapses it leaves you feeling kind of helpless.

Client: Right that's exactly what it was. Totally uh-huh everything was just crushed again, now where do I go and what can I pick up to make this be effective again, and what can I say, what can I do.

Counselor: There are moments where you're almost desperate for something that will work.

Client: Yes, very true.

APPENDIX G

Standardized Procedures

Reading Group

Participants will receive a packet containing a Sign-up Sheet and Consent Form for Main Study, Reflecting Skills Modeling Script, and a RSQ. They will be asked to keep the packets closed until instructed to open them by the administrator. The administrator will say, "Thank you for coming please open your packet, take out the papers and place them face up in front of you (administrator will demonstrate removing the papers from the envelope and placing them face up) please read the information on the Sign-up Sheet and Consent Form, if you choose to participate complete and sign the form but do not put your name on the second page." The administrator will give the participants a few minutes to complete the forms will then collect the front page of the Sign-up Sheet and Consent Form. The administrator will then hold up the stapled pages titled Reflecting Skills Information and say, "This will provide some information about reflecting skills; please read through this information only one time and turn it over so that it is face down when you have finished reading (the administrator will demonstrate turning the pages over while providing these instructions) then sit quietly so that other members of the group can finish as well." After the group has finished reading about

reflecting skills the administrator will collect the Information about Reflecting Skills and say, "Soon you will be asked to complete the Reflecting Skills Questionnaire." The administrator will hold up the Reflecting Skills Questionnaire in view of the participants and say, "This questionnaire will ask about your understanding of some of your present counseling skills. Each question has a blank space in which you are asked to respond using the code provided at the top of the page. Notice that each number corresponds with a percentage and you are being asked to fill in the number on the answer sheet. You probably will not be able to say with certainty what percentage of confidence you have for each line item and you may find that you feel that your answer lies between the intervals that are provided. You are being asked to make your best judgment about your abilities. There is no typical answer profile for counseling students and your responses will not be used to evaluate your abilities. Please do not put your name on the answer sheet. This request is being made in order to protect the confidentiality of the participants in this study. When you are finished, please put the second page of the Sign-up Sheet and Consent Form and the Reflecting Skills Questionnaire back in the envelope. If you are ready you may begin filling out the questionnaire. Thank you for your time and cooperation."

Video Group

Each participant will receive a packet containing a Sign-up Sheet and Consent Form for Main Study and a RSQ. The Sign-Up Sheet and Consent Form, will be filled out as described above. The administrator will then prepare to show the group the videotape and will say, "This will provide some information about reflecting skills; please watch it while sitting quietly so that others can watch it as well." After the group had viewed the video the administrator will say "Soon you will be asked to complete the Reflecting Skills Questionnaire" and will repeat the instructions for the completion of the RSQ.

APPENDIX H

Sign-up Sheet and Consent Form

Research on Counseling

This research project is designed to study aspects of counselor education in an effort to develop ways to make it more useful and effective to counseling students. If you agree to participate in this study, you will be asked to complete a brief form, and a questionnaire that will ask about some of your understandings about counseling. Your total investment of time will be about 30 minutes. Your identity will be kept strictly confidential, and you may withdraw from this study at any time without giving a reason. Data collected will be confidential, and will not be shared with your course instructor(s). Upon completion of this study, results will be available to you upon request. You may make this request by writing Roy Hamilton, School of Education, Rm. 1524, Indiana State University, Terre Haute, Indiana 47807. Please sign on the line below to indicate your agreement to participate and to help make counselor education more effective.

Name (please print)	Signature
University	Date