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Client And Counselor Learning Style And Its Effect On Client Perceptions

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CLIENT AND COUNSELOR LEARNING STYLE AND ITS EFFECT ON CLIENT PERCEPTIONS

A Dissertation

Presented to

The School of Graduate Studies

Department of Counseling

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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by

Wendy Jo Hunsucker

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APPROVAL SHEET

The dissertation of Wendy Jo Hunsucker, Contribution to the School of Graduate Studies, Indiana State University, Series III, Number 698, under the title Client and Counselor Learning Style and Its Effect on Client Perceptions is approved as partial fulfillment of the requirements for the Doctor of Philosophy Degree.

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ABSTRACT

This study was an investigation of the effect of client and counselor learning style congruence, similarity, and incongruence on how the client perceives the counselor with regard to expertness, attractiveness, and trustworthiness. The effect of taking the measure at two points in time during the counseling process was also examined.

Participants were 90 clients and 14 counselors from the student counseling centers of midwestern universities. A total of 30 client-counselor dyads was utilized in each of the following groups: Group 1 (congruent learning styles), Group 2 (similar learning styles), and Group 3 (incongruent learning styles). Client participants rated their perceptions of their counselors following intake and the third session.

The data from this study were analyzed using a 3 (degree of learning style congruence) x 2 (time of measure) MANOVA with repeated measures. A subsequent pairwise analysis of the dyad groups was conducted using three 2 x 2 MANOVAs with repeated measures. Significant multivariate effects were followed by univariate analyses of variance. One 3 x 2 ANOVA with repeated measures was computed with respect to each of the dependent measures. Significant univariate effects were followed by main effect analysis using the Newman-Keuls method.

Both main effects and the interaction effect were significant in the main analysis of this study. In pairwise analysis, congruent versus incongruent dyads and similar versus incongruent dyads were significantly different with respect to both main effects and their interaction. Congruent versus similar dyads were significant with respect to main effects only. Univariate analyses revealed a significant difference between groups with regard to perceived expertness and trustwortiness. Also, there was a significant difference in client perceptions among all clients as a function of time of measure. Results, implications for practice, and recommendations for future research are discussed.

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Chapter 1

INTRODUCTION

Statement of the Problem

Existing studies pertaining to learning styles, as they relate to the counseling process, represent an application of research findings from the field of education to the field of counseling. Research on learning styles originated in the field of education, with an emphasis on how knowledge of student learning styles could aid teachers in facilitating more effective learning in their students. Most of the research which emerged in this regard (Conwell, Helgeson, & Wachewiak, 1987; Dunn & Griggs, 1988; Kane, 1984) indicated that teachers should learn to assess student learning styles and individualize their teaching plans to accommodate the learning style preferences of their students. Related research demonstrated that doing so resulted in improvement in academic achievement (Cafferty, 1980), student attitudes (Perrin, 1984) and student behavior (Tannenbaum, 1981).

Kane (1984) noted, despite attempts made by educators and administrators to design enhancement programs to improve the performance of school students, that not all students

benefit from these efforts. He hypothesized that this may be due to contrasting strategies of the givers and receivers of the information. Therefore, Kane proposed that it is most effective for educators to facilitate students' identification of their learning style and to utilize learner strengths to modify ineffective learning behavior. He further charged that educators need to develop greater flexibility in order to incorporate contrasting strategies into their teaching methods.

Dunn and Griggs (1988) challenged educators to identify student learning styles and redesign instruction in response to individual learning strengths. Specifically, the authors contended that the educational system is ineffective because it fails to respond to the variety of means by which students retain information and skills. Learning style, as described by these authors, determines the context in which a student concentrates best, senses through which s/he learns most effectively and even the time of day during which learning will be most effective. Dunn and Griggs suggested that responsiveness to all of these variables contributes to higher student test scores, improved attitudes toward school, and reduced incidence of discipline problems.

In another study from the field of education, Conwell et al. (1987) examined the effect of matching learners' cognitive styles with science learning activities on science knowledge and attitudes. The teachers used in this study were placed in either a group to participate in science

activities matched to the Sensing-Feeling (Myers-Briggs, 1962) learning preference or one in which science activities were matched to the Intuitive-Thinking (Myers-Briggs, 1962) type. Findings from this study suggested that it is possible to tailor the content of science activities to be well-received by those of a particular cognitive style.

Numerous studies pertaining to counseling and learning styles represent an application of the aforementioned educational implications to counseling. Griggs (1981; 1988) forwarded a model of diagnosing client learning style and accommodating it in counseling through the use of various counseling techniques. Her model for counseling for individual learning style is parallel to the aforementioned notion of teaching to individual learning style. She identified the learning style elements relevant to counseling as need for structure, mode of processing, sociological preferences, and level of motivation (Griggs, 1981). This researcher has conceptualized client resistance as possibly being attributable to lack of accommodation of learning style preferences in counseling. To encourage counselors to match counseling techniques to client learning style preferences, Griggs has presented particular techniques which accommodate particular learning style characteristics.

In a follow-up article on counseling for individual learning styles, Griggs (1985) presented an eclectic approach designed to accommodate individual differences in learning style. She stated that knowledge of student learning styles

could facilitate the diagnostic process in school counseling. The Learning Style Inventory (LSI; Dunn, Dunn, & Price, 1978), designed for use with students in grades 3 through 12, was recommended for use by school counselors to diagnose learning style and prescribe appropriate, accommodating curricular learning interventions and counseling strategies.

McCarthy, Shaw, and Schmenck (1986) investigated client cognitive activites during counseling. Their research focused on verbal behavior to determine whether stylistic differences in client information processing activities were related to verbal behavior during counseling sessions. These researchers demonstrated that clients possess dispositions to engage in certain information processing activities. However, they noted a need for further research in counseling to address the question of whether clients should be matched with counselors sharing similar cognitive styles.

Empirical research in supervision related to learning styles is more limited than in education or counseling. Results of a study conducted by Handley (1982) revealed that counselor trainee ratings of satisfaction with supervision were related to cognitive similarity with the supervisor on an index of the MBTI (Myers-Briggs, 1962). His results suggest that knowledge of cognitive styles may facilitate greater understanding of how to relate more effectively with trainees and may indicate how satisfied the supervisor and trainee are likely to be with supervision.

Ing (1990) presented ideas about how to accommodate various supervisee learning styles in the supervision of child care workers. This study details what type of supervisory techniques are most effective in accommodating various learning modes in child care workers. Parallel to the suggestions emerging from research in education, Ing suggested individualization of the supervisor's approach to accommodate the learning style of the child care worker.

Available empirical evidence regarding learning styles, as they relate to the educational process, is abundant. Available empirical evidence regarding learning styles, as they relate to the counseling process, represents an application of research findings from the field of education to the field of counseling. Given that the student-teacher dyad is not the same as the client-counselor dyad, further empirical investigation in this area appears warranted. That is, an investigation is warranted into the assumption of the notion that congruence in client-counselor learning styles is preferable to incongruence.

Purpose of the Study

The purpose of this study was to explore the assumption that congruence in client-counselor learning styles is perferable to incongruence. While studies exist which pertain to learning styles in counseling, they represent an application of research findings from the field of education to the field of counseling. This study differed from much of the aforementioned research in that there was an

investigation into the assumption that the educational implications are applicable to counseling.

Despite its importance, there appears to be relatively little research on the effects of matching or not matching client and counselor learning styles. What is abundant is literature related to accommodating client learning style in counseling through various techniques (Griggs, 1981) or counselor style shifts (Ivey & Goncalves, 1988). Subsequent to conducting a research study investigating client cognitive activities during counseling, McCarthy et al. (1986) noted a need for further inquiry into whether clients and counselors should be matched by learning style. In a similar vein, Martin (1986) wrote that questions remain as to whether clients should necessarily be matched with counselors with similar learning styles. The present study was designed to explore this area of inquiry.

A potential impediment to the counseling process is client resistance. Griggs (1981) has studied learning style as it applies to the counseling process and has conceptualized client resistance as possibly being attributable to lack of accommodation of learning style preferences. This possibility further justifies increased inquiry in the area of client-counselor learning style congruence.

If congruence between client and counselor learning styles results in more positive client perceptions of the counselor, then an effort to match clients and counselors in

this manner is justified. If, however, congruence between client and counselor learning styles does not result in more positive client perceptions of the counselor, then it may not be justifiable to match clients and counselors in this manner.

Hypotheses

This study was designed to address three principle questions: 1) whether favorable perceptions of counselors by clients are a function of the degree of congruence between client and counselor learning styles; 2) whether favorable perceptions of counselors by clients are a function of the point in the counseling relationship at which the measure is taken; and 3) whether favorable perceptions of counselors by clients are a function of the interaction between the degree of congruence of client and counselor learning style and the point in the relationship at which the measure is taken. With respect to these areas of investigation, the following null hypotheses were tested:

1) Clients' perceptions of counselors do not differ as a function of the degree of congruence (i.e., congruence, similarity, incongruence) of the client learning style with the counselor's learning style.
2) Clients' perceptions of counselors do not differ as a function of when the measure is taken (i.e., following the first or third session).
3) Clients' perceptions of counselors do not differ as a function of an interaction between the degree of

congruence (i.e., congruence, similarity, incongruence) of counselor and client learning style and when the measure is taken (i.e., following the first or third session).

Theoretical Background

This study is based on Kolb's (1985) model of learning styles and Barak and LaCrosse's (1975) conceptualization of client perceptions of counselors. In this section, pertinent theoretical literature related to both of these areas is reviewed. Empirical literature related to these areas is reviewed in Chapter 2.

Learning Style

Literature pertaining to learning styles presents a variety of ways in which learning styles can be conceptualized and measured. Some of the instrumentation most frequently used for this purpose includes the MBTI (Myers-Briggs, 1962), the Productivity Environment Preference Survey (Dunn, Dunn, & Price, 1982), the LSI (grades 3 through 12) (Dunn, Dunn, & Price, 1978) and the Learning Style Inventory (LSI; Kolb, 1985). The present study is based, in part, on Kolb's (1984) conceptualization of learning modes and learning style.

Kolb (1984) proposed a model of learning styles based on his formulation of experiential learning theory. Theoretically, learning styles are purported to be relatively stable attributes or preferences utilized by individuals to

organize and process information for problem solving (Kolb, 1984; Messick, 1976). In his conceptualization of learning styles, Kolb has integrated the works of Dewey (1938), who focused on the role of experience in learning; Lewin (1951), who focused on the active learner; and Piaget (1954, 1980), who viewed intelligence as resulting from the interaction of the person and the environment.

According to Kolb (1984), the experiential learning movement is attributable to Dewey's (1938) educational philosophy. This philosophy describes the critical role of experience in learning and makes explicit the developmental nature of learning. Dewey's model originally presented stages similar to the four stages of Kolb's learning cycle. That is, his conceptualization of impulse, observation, knowledge and judgment essentially correlates with Kolb's stages of concrete experience, reflective observation, abstract conceptualization, and active experimentation. Finally, Dewey was the first learning theorist to propose a cyclic learning process.

Another tradition of experiential learning theory is group dynamics research, which was initiated by Lewin (1951). The Lewinian model of experiential learning emphasizes the conflict between concrete experience and abstract concepts and between observation and action. Although Lewin recognized the transactional nature of the objective and subjective elements of experience, he purported that behavior is a function of the person and the environment (i.e.,

B=f(P,E)). He also explained that specialization of learning style characterizes early adulthood. Kolb (1984) supported this notion in his description of specialization preceding integration in adult development.

The third tradition of experiential learning theory is based on the works of Piaget (1954; 1980). In brief, Piaget's (1954) theory of cognitive development describes how intelligence is shaped by experience. His theory encompasses the dimensions of experience, concept, reflection and action, which form the continua for the development of adult thought (Kolb, 1984). Parallel to the models forwarded by Dewey (1938) and Lewin (1951), Piaget suggested that the learning process is a cycle of interaction. He further recognized the effects of the domination of assimilation over accommodation and accommodation over assimilation. Kolb's accommodator and assimilator learning styles are derived from Piaget's definition of intelligence.

Clearly, experiential learning theory offers a view of learning that substantially differs from that of behavioral learning theories. Kolb's (1984) conceptualization of learning is termed "experiential" for two reasons. The first is because of its basis in the aforementioned intellectual origins of Dewey (1938), Lewin (1951) and Piaget (1954; 1980). The second reason is its emphasis on the role of experience in the learning process.

In Kolb's (1984) model of experiential learning and learning style, four basic modes of learning have been

identified. Each of these modes represents a process of learning that is a unique combination of perceiving and processing information. The four learning modes delineated by Kolb are concrete experience, abstract conceptualization, active experimentation, and reflective observation. The concrete experience mode represents a "hands on" experience base to learning that relies on direct involvement, feeling-based judgments, and intuition. Abstract conceptualization represents an analytical conceptual approach to learning which relies on logical and sequential evaluation and thinking as opposed to doing. The active experimentation mode describes learners who prefer to learn by trial-and-error and risk-taking. Finally, reflective observation represents a tentative, observational approach to learning which emphasizes processing and understanding.

Kolb's (1985) model combines these four learning modes to create the four dominant learning styles of converger, diverger, assimilator, and accommodator. These learning styles indicate the learner's degree of reliance upon each of the aforementioned learning modes. The converger represents the learner skilled at finding practical uses for ideas and theories and who prefers technical over interpersonal tasks. The diverger represents the learner who approaches learning situations through observation, imagination, and "brainstorming." The assimilator is most interested in abstract ideas and concepts and skilled at integrating information into a concise, logical form. The accommodator

learns most effectively from action-oriented, "hands-on" experience and relies more on "gut" feelings than logic (Kolb, 1985). In order to be effective, learners then require four different abilities. In addition, Kolb deems important the extent to which the learner emphasizes abstractness over concreteness and action over reflection.

Client Perceptions

Since at least the 1960's, client perceptions of the counselor's behavior have been investigated in counseling psychology with regard to the effectiveness of the counseling interview. Heller and Sechrest (1966) recognized that client perceptions of the counselor may be influenced by counselor behavior indicative of expertness, credibility, trustworthiness, and attractiveness. Their research into this area stemmed from earlier research in social psychology conducted by Hovland, Janis, and Kelley (1953). These investigators forwarded the notion that a communicator's perceived credibility and attractiveness impacts his/her ability to induce attitude change in others. Certainly, these conclusions have implications for counseling psychologists.

In their conceptualization of client perceptions of counselors, Barak and LaCrosse (1975, 1980) have built upon these and other early studies in the fields of counseling and social psychology. One of the most influential studies conducted in this vein was Strong's (1968) analysis of counseling as an interpersonal influence process. Strong

proposed a link between counselor social influence and counseling outcomes. Specifically, he suggested that the most influential counselors are those perceived by the client as expert, attractive, and trustworthy. In 1970, he further noted that client perceptions are part of a process of causal attribution regarding counselor characteristics. Other researchers (Claiborn, 1979; Claiborn & Schmidt, 1977) have also illustrated the significance of how a client perceives his/her counselor.

Although many variables considered to mediate the interpersonal influence process have been studied by counseling psychologists, those studied most often are perceived counselor expertness, attractiveness, and trustworthiness (LaCrosse, 1980). These are the dimensions of client perception deemed most important by Barak and LaCrosse (1975, 1980). These authors conceptualize a positive relationship between perceived counselor expertness, attractiveness, and trustworthiness and a counselor's influence potential. They further propose that:

> It is axiomatic in counselor training that effective outcomes will occur if the counselor is perceived in certain ways. (p. 320)

In a major contribution to the study of client perceptions of counselors, Barak and LaCrosse (1975) operationalized the dimensions of perceived counselor expertness, attractiveness, and trustworthiness. Their development of the Counselor Rating Form (CRF; Barak & LaCrosse, 1975) forwarded their model of the components of

these dimensions. According to this instrument, the following are the characteristics of a counselor perceived as expert: alert, analytic, clear, confident, experienced, expert, informed, insightful, intelligent, logical, prepared, and skillful. The following are characteristics of a counselor perceived as attractive: agreeable, appreciative, attractive, casual, cheerful, close, compatible, enthusiastic, friendly, likeable, sociable, and warm. The following are characteristics of a counselor perceived as trustworthy: confidential, dependable, honest, open, reliable, respectful, responsible, selfless, sincere, straightforward, trustworthy, and unbiased.

Delimitations of the Study

The present study was delimited to:

1. male and female college students seeking counseling at student counseling centers of midwestern universities;
2. those domains of clients' perceptions of the counselor measured by the CRF (Barak & LaCrosse, 1975);
3. learning style as defined and measured by the LSI (Kolb, 1985).

Definitions of Terms

To facilitate a better understanding of the various terms used in the present study, operational definitions are provided below.

1. Learning style. An individual's relative emphasis on concrete experience, reflective observation, abstract conceptualization, and active experimentation in experiential learning. Depending upon the learner's degree of reliance upon each of these modes, s/he would represent one of four of the the following learning styles: accommodator, diverger, converger, or assimilator. Learning style is assessed by the Learning Style Inventory (LSI; Kolb, 1985).
2. Learning style congruence. The situation in which the clent and the counselor share the same learning style.
3. Learning style similarity. The situation in which the client and the counselor represent learning styles which are adjacent to each other on Kolb's (1985) learning style grid. These are assimilator - converger, assimilator - diverger, accommodator - converger, accommodator - diverger.
4. Learning style incongruence. The situation in which the client and the counselor represent learning styles which are polar on Kolb's (1985) learning style grid. These are converger - diverger and assimilator - accommodator.
5. Degree of congruence of learning styles. Whether the client and counselor learning styles are congruent, similar or incongruent.

6. Perceptions of the counselor. Perceptions of the counselor's attractiveness, perceptions of the counselor's expertness, and perceptions of the counselor's trustworthiness. These perceptions are measured by responses on the seven-point bipolar adjective scale of the Counselor Rating Form (CRF; Barak & LaCrosse, 1975).
7. Perceived counselor attractiveness. The client perception measured by the following 12 seven-point bipolar adjective scales: agreeable-disagreeable, appreciative-unappreciative, attractive-unattractive, casual-formal, cheerful-depressed, close-distant, compatible-incompatible, enthusiastic-indifferent, friendly-unfriendly, likeable-unlikeable, sociable-unsociable, warm-cold.
8. Perceived counselor expertness. The client perception measured by the following 12 seven-point bipolar adjective scales: alert-unalert, analytic-diffuse, clear-vague, confident-unsure, experienced-inexperienced, expert-inexpert, informed-ignorant, insightful-insightless, intelligent-stupid, logical-illogical, perpared-unprepared, skillful-unskillful.
9. Perceived counselor trustworthiness. The client perception measured by the following 12 seven-point bipolar adjective scales: confidential-revealing, dependable-undependable, honest-dishonest, open-closed, reliable-unreliable, respectful-

disrespectful, responsible-irresponsible, selfless-selfish, sincere-insincere, straightforward-deceitful, trustworthy-untrustworthy, unbiased-biased.

Chapter 2

REVIEW OF RELATED LITERATURE AND RESEARCH

The present study builds upon research pertaining to learning styles and client perceptions. Investigation in these areas is both extensive and broad. As such, this chapter is intended to serve as a presentation of the literature and studies most relevant to the present one, and not as an exhaustive review of the available literature. Because the present study draws on relevant literature from the fields of education and psychology, it is difficult to judge the equivalence of terminology from the two fields. A decision was made to include literature pertaining to both learning styles and cognitive styles and to consider these concepts functionally equivalent. This chapter is organized into the following sections: a) learning style literature from education, counseling, and supervision, and b) client perceptions of the counselor.

Learning Style

A review of research and literature in the area of learning styles reveals that this construct has historically

been defined in a number of different ways. In the educational field, it has been conceptualized as the style one employs in processing information (Kane, 1984). These styles are described as primarily holistic or detail-oriented. Frederico and Landis (1984) defined cognitive style as the trait-like manner in which a learner selects, encodes, stores, retrieves, decodes, and generates information. Stein, Hand, and Totten (1986) construed educational cognitive style as the manner in which a student acquires information, develops a meaning for the information and derives meaning from the environment. Conwell et al. (1987) defined cognitive style as one's preferred manner of perceiving and judging information, as assessed by the MBTI (Myers-Briggs, 1962). Miller (1987) suggested that cognitive style is comprised of perception, memory, and thought. In Saracho's (1988) view, a learner's cognitive style is either field-dependent or field-independent. Finally, Dunn and Griggs (1988) defined learning style as a biologically and developmentally imposed set of characteristics that suggest the context in which learners concentrate best, the level of motivation, and the primary senses utilized in learning.

Education

By observing the behavior of educators and learners, Kane (1984) determined that individuals utilize consistent strategies in both giving and receiving information. He also recognized that, despite attempts made by educators and administrators to design enhancement programs to improve the

performance of school students, not all students benefit from these efforts. He hypothesized that this may be due to contrasting strategies of the givers and receivers of the information. Specifically, Kane advanced the notion that individuals tend to employ learning styles which rely more upon either holistic strategies or detail-oriented strategies. He proposed that it is most effective for educators to facilitate students' identification of their learning style and to utilize learner strengths to modify ineffective learning behavior. According to this author, most succesful learners are flexible in their cognitive style, incorporating skills from both of the aforementioned categories of learning strategies. Conversely, the least successful learners are those who rigidly adhere to a specific cognitive style. In support of learning style accommodation, Kane charged that educators need to develop greater flexibility in order to incorporate contrasting strategies into their teaching methods.

In a similar vein, Dunn and Griggs (1988) presented concerns about the effectiveness of the educational system. While educational reform reports make suggestions for ways in which the educational system could improve student learning, the authors were not convinced these changes would be effective. Their position is that the educational system could prove more effective with a redirection toward responding to how individual students learn. Specifically, the authors contended that the educational system is

ineffective because it does not respond to the variety of means by which students retain information and skills.

Learning style, as described by Dunn and Griggs (1988) is a unique, biologically and developmentally imposed set of characteristics that suggests, among other things, the context in which an individual concentrates best and senses through which s/he learns most effectively. In addition, chronobiology, which refers to the time of day during which a learner learns most effectively, contributes to one's learning style. Dunn and Griggs suggested that responsiveness to all of these variables contributes to higher student test scores, improved attitudes toward school, and a reduced incidence of discipline problems. Similar to Kane's (1984) position, they challenged educators to identify student learning styles and redesign instruction in response to individual learning style strengths.

In a later study designed to address the aforementioned concerns about the educational system, Nelson, Dunn, Griggs, Primavera, Fitzpatrick, Bacilious, and Miller (1993) examined the problem of college student attrition. They criticized the academic approach to retention programs for focusing on remediation rather than individual learning style characteristics. Nelson et al. addressed the effect of differing levels of learning style intervention on the retention and achievement of college students. Participants were freshmen at a community college who were assigned to one of three groups that differed in the intensity of the

intervention. One group of students received no information regarding their learning style. In a second group, students' learning styles were assessed and explained to them during fall semester. In the third group, students' learning styles were assessed and explained to them in the fall, and in the spring, they received instructional information about how to use their learning style strengths to study.

Results of an ANOVA indicated significant main effects for academic achievement ($p<.001$) and level of exposure ($p<.004$). Significant interaction effects were also reported. The participants in the study who were provided with instructions for studying which were congruent with their individual learning style were retained at a higher rate (83.3%) than those in the control group (77%). These authors reported that:

> The gain in student retention seems related to students' positive feelings about possessing a tool which empowered them to improve their chances for success in college. (p. 368)

The findings of this study are consistent with the idea that individualized approaches based, in part, on learning styles, are important in education. Nelson et al. (1993) construe their results as providing further support for learning style being used as rationale for an effort toward academic achievement based on each student's unique traits.

In a related educational study, Frederico and Landis (1984) examined whether cognitive styles and abilities and aptitudes are dependent or independent. The specific objective of their study was to determine empirically the

nature and magnitude of the relationships among selected measures of cognitive styles, abilities, and aptitudes. They were also interested in exploring whether it is preferable to tailor instruction to potent cognitive processes or assign treatment to improve impotent processes.

The participants in this study were 201 naval recruits who were administered six tests to measure cognitive styles and six to measure abilities. Aptitudes had been previously assessed by the Armed Services Vocational Aptitude Battery (Department of Defense, 1986). Relationships among cognitive characteristics and between sets of measures of styles and abilities and styles and aptitudes were examined by product moment correlations and canonical analyses. A factor analysis was also computed.

The product moment correlation matrix revealed that all cognitive styles except reflection-impulsivity were significantly related to abilities and aptitudes. This analysis also demonstrated that many of the cognitive styles associated with abilities and aptitudes are involved in general problem solving. Canonical analyses revealed that the amount of shared variance between styles and abilities and styles and aptitudes was small, but significant (21%).

These results imply that cognitive styles are associated with abilities and aptitudes which are intrinsic to general problem solving. This study served to demonstrate the relative dependence of all cognitive styles except reflection-impulsivity on abilities and aptitudes inherent in

general problem solving. Furthermore, this study established the relative independence of reflection-impulsivity and field independent cognitive styles from technical or verbal ability. Frederico and Landis (1984) suggested that these and other findings should be considered with respect to adapting alternative teaching techniques to cognitive attributes of students in an effort to enhance performance and achievement. Therefore, this study also supports the notion of an individualized approach to teaching based, in part, on cognitive styles.

Conwell et al. (1987) investigated the effect of matching learners' cognitive styles with science learning activities on science knowledge and attitudes. With regard to the fact that some elementary school educators possess a negative attitude toward teaching science, these authors hypothesized that this may be attributable to the incongruence between science and the cognitive style of most elementary school teachers. For purposes of this study, cognitive style was defined as an individual's preferred manner of perceiving and judging information, as assessed by the MBTI (Myers-Briggs, 1962). Most scientists score high on the MBTI (Myers-Briggs, 1962) measures of intuition and thinking, whereas most elementary school educators score high on the opposite scales of sensing and feeling.

The participants in this study were 56 elementary teachers enrolled in classes at a university. Through random assignment, the teachers were placed in either a group to

participate in science activities matched to the Sensing-Feeling learning preference or a group in which the activities were matched to the Intuitive-Thinking type. The participants performed one such activity per week for nine weeks.

A univariate analysis of variance revealed no significant differences between the two groups in terms of knowledge of the material presented or attitude toward teaching science. However, a post hoc 2 x 2 x 9 MANOVA with repeated measures was performed on scores from the Attitude Toward Learning Activities scale. This analysis resulted in a significant treatment x type interaction ($F=3.83$, $p<.002$), indicating that cognitive style may impact reactions to certain specific learning activities. This study produced findings to suggest the possibility of tailoring the content of science activities to be well-received by those of a particular cognitive style. This serves, in part, as a response to Frederico and Landis's (1984) question regarding tailoring instruction to potent cognitive processes.

Stein et al. (1986) conducted an investigation of cognitive styles aimed at facilitating better communication. They studied the group cognitive styles of 71 library and 110 health science majors at a university to determine similarities and differences in communication skills. Results revealed a significant difference between the two groups, with library science students demonstrating a preference to learn and communicate with others in written

form and health science students exhibiting a preference to learn and communicate in a verbal manner. Differences between the two groups were also found in nonverval communication skills and reasoning patterns.

The authors of this study asserted that educators in both library science and health science need to increase the training of students in communication theory. Additionally, it was recommended that these educators also facilitate students' awareness of their preferred learning and communication styles and teach them how to deal effectively with individuals who differ from them in that respect.

Saracho (1988) reviewed several studies related to cognitive styles and young children's learning. She conceptualized individual cognitive differences in terms of field-dependent and field-independent modes of functioning. In general, field-dependent learners are described as passive and global in coping with the environment, whereas field-independent learners are active and analytical in this regard. In terms of the relationship between cognitive style and achievement, it has been found (Saracho, 1988) that field-dependent students demonstrate a preference for social sciences and that field-independent students prefer science and mathematics. Furthermore, field-dependent students best understand highly organized material and field-independent students can understand more loosely organized material.

Limited research has been conducted on the interaction of study techniques with cognitive style. Annis and Davis

(1978) conducted an investigation in which they determined that students encoding their own notes received higher scores on an exam. Students achieving the highest scores encoded their own notes and then utilized their notes and the lecturer's notes as an external device. These outcomes demonstrate a relationship between cognitive style and study techniques. In support of this relationship, Saracho (1988) noted that field-dependent learners find note-taking more challenging than do field-independent learners due to the demand to break down and analyze material. All of these findings have educational implications in terms of field-dependence and field-independence and its relationship to effective learning. Again, the suggestion is made that educators increase their awareness of individual student cognitive styles such as these and utilize this information to develop a more individualized approach to teaching.

Counseling

In the field of counseling, learning style has been defined in a variety of ways. Smith and Martinson (1971) described the impulsive learning style and constricted learning style. Griggs (1985) purported that learning style is the manner in which environmental, emotional, sociological, physical, and psychological stimuli affect one's ability to learn. McCarthy, Shaw, and Schmenck (1986) described cognitive style as including deep-elaborative and shallow-reiterative information processing styles. According to Ivey and Goncalves (1988), clients are sensorimotor,

concrete, formal operational, or dialectic with regard to cognitive development.

In an effort to determine just what effect counselor and client learning style has on the therapeutic relationship, Smith and Martinson (1971) examined two styles. These styles are the impulsive learner, who is changeable, quick thinking, and prefers unstructured learning situations; and the constricted learner, who is reserved and has a need for direction and structure from an external agent.

Students seeking counseling at a counseling center were classified as one of the above types of learners for purposes of this study. Each student was then paired with a counselor classified as one of the above types of learners. Each counselor interviewed two of each type of client and an analysis of interview interaction was performed at various points in the interview. Client learning style was not found to influence counselor leading behavior. Significant differences were found ($p<.01$) in directive behavior between impulsive and constricted counselors when both were interviewing impulsive clients. It was concluded that counselor and client learning styles influence interview behavior and that counselor educators should be aware of this in training counselors.

Client cognitive activities during counseling was the focus of an experiment conducted by McCarthy et al. (1986). Their research grew out of the suggestion by other researchers that concrete and abstract processors have

different information processing styles, which may result in differing levels of interpersonal communication. McCarthy et al. (1986) investigated the verbal behavior of clients during counseling sessions to determine whether it was related to stylistic differences in information processing activities. They hypothesized that counselors would be able to identify clients as deep elaborative or shallow reiterative processors based solely on client verbal behavior.

Chi square analyses revealed that counselors were able to correctly identify participants as deep elaborative or shallow reiterative processors based on verbal behavior during counseling. Counselors rated deep elaborative participants as significantly more clear, personal, and conclusion-oriented. Counselors felt that deep elaborative participants generated insightful interpretations of behavior and shallow reiterative participants presented narrowly defined concerns such as academic problems. These results contribute to findings that cognitive activities in counselors do affect counseling behavior. They also support the notion that clients have predispositions to engage in certain information processing activities.

In conclusion, McCarthy et al. (1986) state that questions remain as to whether clients should be matched with counselors whose cognitive styles are similar, and also about mediating effects of other variables. The suggestion was made for further investigation into the interaction between

information processing activities of counselors and clients across several sessions.

In literature geared toward school counselors, Griggs (1981) focused on the importance of diagnosis in the school counseling process. She forwarded the idea that knowledge of student learning styles can facilitate the diagnostic process in counseling. The Learning Style Inventory (LSI; Dunn, Dunn, and Price, 1975) has been utilized in diagnosing individual learning styles and prescribing curricular learning interventions in response to individual student needs. Griggs argues that the same paradigm can be applied to counseling interventions. That is, that the individual's learning style should determine the counseling techniques and strategies utilized. As a parallel to individualized instruction in education, Griggs developed several individualized counseling strategies which are experiential in nature. She also described the specific learning style patterns to which these strategies respond.

In a follow-up to this article, Griggs (1985) presented an eclectic learning style model which was designed to accommodate individual differences in learning style in the context of counseling. Griggs has identified the learning style elements relevant to counseling as need for structure, mode of processing, sociological preferences, perceptual strengths, and level of motivation. She suggested that clients with a high need for structure respond to the use of formal contracts, while those with a low need for structure

respond to open-ended approaches. Clients who are global processors respond to visual techniques, relaxation, and meditation. Analytic processors are more responsive to bibliocounseling, verbal technique, and rational-emotive interventions. Sociological stimuli distinguish among clients who prefer individual or group counseling. Griggs also suggested psychodrama and mime as alternative counseling interventions which may be used to accommodate clients with a low need for structure and a peer sociological preference. Art therapy is deemed suitable for cliets with a tactual perceptual preference and a low need for structure.

With regard to future research in this area, the author noted a need to isolate the learning style variables associated with the LSI (Dunn, Dunn, & Price, 1975) and determine their effect on counseling outcomes. In conclusion, Griggs (1985) stated that research is warranted into whether improved outcome results from accommodating learning style preferences through complementary counseling approaches.

In further support of counseling as an accommodating process, Ivey and Goncalves (1988) presented a model of developmental therapy based, in part, on Piaget's (1954) constructivism and formulation of development. The central assumptions of developmental therapy are as follows: a) it is possible to identify cognitive development levels in processes clients utilize; b) different methods of counseling may be utilized to match counseling methods with client

developmental level; and c) counseling should be utilized to intentionally produce movement within and across several levels of client development.

Using Piagetian (1954) developmental theory, the authors described sensorimotor, concrete, formal operational, and dialectic clients. Sensorimotor clients are sensory-based and have a limited capacity to describe inner states such as cognitions and feelings. Concrete clients are able to plan, carry out plans, and test results against hypotheses. Their models of causality are linear. Formal operational clients can extrapolate patterns of knowledge and self knowledge through experience and operations. At the dialectic operational level, the client is able to introduce active change in his/her patterns of knowledge and integrate constructs.

In light of these stages, Ivey and Goncalves (1988) propose a model of style-shift counseling intended to promote client development within and across stages. According to this model, the task of counseling is to assess client developmental level and match the therapeutic style with that level. First, the therapist is to expand the client's horizontal development, helping him/her develop all of the resources of the stage in which s/he is currently operating. Then, by shifting styles, the therapist is to move the client in the direction of all of the other levels of development.

Several therapeutic styles were presented, which are for use in style-shift counseling. Environmental structuring and

some forms of behavior modification were suggested for use with sensorimotor clients. Behavioral therapy and reality therapy were recommended for concrete operational clients. Existential therapy, cognitive therapy, and logotherapy were deemed appropriate for formal operational clients. Cognitive therapy, feminist therapy, and object relations therapy were suggested for dialectic operational clients.

Griggs and Dunn (1989) examined cross-cultural research on learning styles with respect to counseling implications. In particular, they investigated available research pertaining to learning style characteristics of different cultural groups to determine whether intergroup differences exist. Cazden and John (1971) found that Native Americans and Eskimos have strong visual perception, as opposed to auditory, tactual, or kinesthetic modalities. High kinesthetic perceptual strengths have been found among African-Americans (Jacobs, 1987). Lam-Phoon (1986) determined that Asians and Caucasians had statistically different learning styles. Specifically, Caucasians were found to be more conforming and remembered less well auditorially and visually than Asians. Ramirez and Price-Williams (1974) found that Mexican-Americans and African-Americans were more field-dependent than their Caucasian counterparts.

These between-group differences clearly demostrate that learning style is influenced by cultural differences. Griggs and Dunn (1989) warn the counselor to recognize the existing

patterns, but to remember that learning styles are individual rather than stereotypical group styles. They encourage assessment of learning style preferences and accommodation of the learning style strengths of individuals within various multicultural groups. For example, a counselor may accommodate a field dependent client through group counseling and mentoring. A field independent client, however, may be best accommodated through reframing, self-instruction, and covert modeling (Griggs & Dunn, 1989).

Supervision

As with research from education and counseling, learning style research related to supervision presents several definitions of learning style. Handley (1982) defined cognitive style according to the MBTI (Myers-Briggs, 1962). Ing (1990) considered learning style to be determined by a combination of the learning modes set forth by Kolb (1984), which are concrete experience, abstract conceptualization, active experiementation, and reflective observation.

In one of the relatively few research articles pertaining to learning styles and supervision, Handley (1982) reported on the relationship between supervisors' and counselor trainees' cognitive styles and the supervision process. Specifically, Handley hypothesized that these cognitive styles would impact the development and nature of the interpersonal relationship between the supervisor and the trainee. He investigated cognitive styles of supervisors and trainees in relation to ratings of the interpersonal nature

of the supervisory relationship, ratings of satisfaction with supervision, and evaluation of the trainees. For the purpose of this study, cognitive styles were assessed and described using the MBTI (Myers-Briggs, 1962). The dependent variables for the study were measured by the Barrett-Lennard Relationship Inventory (BLRI; Barrett-Lennard, 1962) and a counselor evaluation scale.

Results revealed that the more characteristics trainees possessed that were intuitive as opposed to sensing (as measured by the MBTI), the more supervisors reported responding to them with regard, empathy, and congruence (as measured by the BLRI). Supervisors reported greater satisfaction with intuitive trainees ($p<.05$); however, trainee satisfaction with supervision and ratings of the supervisor-trainee relationship were not related to the cognitive style of the supervisor. Finally, trainee ratings of overall satisfaction with supervision were related to cognitive similarity to the supervisor on the Sensing-Intuition index of the MBTI (Myers-Briggs, 1962).

Handley's (1982) results suggest that knowledge of cognitive styles may facilitate greater understanding of how to relate more effectively with trainees and may indicate how satisfied the supervisor and trainee are likely to be with supervision.

Another of the relatively few studies pertaining to supervision and learning styles was that of Ing (1990). Her

article focused on the application of learning style research to the supervision of child care workers. She hypothisized that by taking workers' learning styles into account, supervisors could individualize their work with staff and more effectively influence the performance of their workers. Ing's idea was based on the learning styles model set forth by Kolb (1984), which delineates the following four modes of learning: concrete experience, abstract conceptualization, active experimentation, and reflective observation. Kolb combined these learning modes to create the following learning styles: converger, diverger, accommodator, and assimilator.

Ing's (1990) study details what type of supervisory techniques are most effective in accommodating each of these learning styles in a child care worker. In supervising a converger, it is suggested that the supervisor utilize a cognitive, problem-solving approach in which the worker is allowed to work independently. A diverger is best accommodated with supervision that is feeling-oriented, provides immediate feedback, and allows for discussion. To most effectively supervise an accommodator, Ing suggests providing on-going feedback, problem-solving processes and one-to-one supervision. Finally, assimilators are best accommodated by supervision which allows the worker to reflect and observe practice and analyze and assimilate feedback.

Ing (1990) also discussed what type of supervisory style

supervisors representing each of the four learning styles are most likely to use. Supervisors with the converger learning style tend to be well organized and expect the same of their workers. Divergent supervisors utilize an unstructured, feeling-oriented approach and like group discussions. Supervisors with the accommodator learning style are facilitators who encourage workers to be active and apply their learning on the job. As a supervisor, the assimilator tends to be directive and expects workers to be organized in both thought and behavior.

According to Ing (1990), each worker and supervisor has a predominant learning style that impacts the supervisory process. Parallel to suggestions emerging from research in education, Ing suggested individualization of the supervisor's approach to accommodate the learning style of the child care worker. She purports that this will increase the quality of the supervision and the skill level of the child care worker.

Client Perceptions of the Counselor

Literature and research related to client perceptions of the counselor present a variety of conceptualizations of those variables considered to mediate the interpersonal influence process. Strong (1968) deemed important the dimensions of perceived counselor expertness, attractiveness, and trustworthiness. In support of this conceptualization, Barak and LaCrosse (1975) operationalized these dimensions of client perception. Bachelor (1995) described clients'

perception of the therapeutic alliance as nurturant, insight-oriented, and collaborative. Watkins, Savickas, Brizzi, and Manus (1990) studied the dimensions of perceived counselor self-involvement, self-disclosure, empathy, and openness. Freund, Russell, and Schweitzer (1991) and Morran, Kurpius, Brack, and Rozecki (1994) investigated perceived counselor expertness, attractiveness, and trustworthiness.

One of the most influential studies conducted regarding client perceptions of counselors was Strong's (1968) analysis of counseling as an interpersonal influence process. He proposed a link between counselor social influence and counseling outcomes. Specifically, he suggested that the most influential counselors are those perceived by the client as expert, attractive, and trustworthy. In 1970, he further noted that client perceptions are part of a causal attribution regarding counselor characteristics.

Several studies (Dell, 1973; Schmidt & Strong, 1971; Strong & Dixon, 1971) have demonstrated that the constructs of expertness, attractiveness, and trustworthiness may affect client perceptions of counselor behavior. However, Strong (1971) posed the question of whether these dimensions are perceived dependently or independently. In a later study, Barak and LaCrosse (1975) sought to answer this question.

Barak and LaCrosse (1975) investigated the hypothesized (Strong, 1968) existence of separate perceived dimensions of couselor expertness, attractiveness, and trustworthiness.

Participants in their study viewed films of counseling interviews given by Carl Rogers, Albert Ellis, and Frederick Perls. After viewing each film, participants rated each counselor on 36 bipolar adjective scales. This was done using the CRF (Barak & LaCrosse, 1975), which was developed for this research study. These ratings were factor analyzed separately for each counselor.

The results of this investigation provided support for Strong's (1968) prediction of the existence of three dimensions of perceived counselor behavior. Another contribution of this study was to justify the investigation of these dimensions as separate. It should be noted that Barak and LaCrosse (1975) found the factors of expertness and attractiveness to be distinct factors. However, it remained unclear following this investigation whether trustworthiness is not a separate factor from the other two or lacks clarity in its definition. Given that the dimension of trustworthiness was found to frequently load on the dimension of expertness, these results support the notion that trustworthiness and expertness are highly related or part of the dimension of credibility.

In an extension of this research, Barak and Dell (1977) conducted an investigation into differential perceptions of counselor behavior. The stimuli for the participants' ratings in the earlier Barak and LaCrosse (1975) study were highly-experienced, well-known counselors (i.e., Rogers, Ellis, and Perls) who are not typical of the couselors seen

by most clients. As such, this study was designed, in part, to determine whether the CRF (Barak & LaCrosse, 1975) could detect differences between and within less experienced counselors than those used in the earlier study. This study was also designed to examine the relationship between client perception of a counselor and the reported likelihood of self-referral to that counselor for each of a variety of problems.

Participants in this investigation viewed 10-minute videotaped segments of counseling interviews conducted by either a male counselor with no practicum experience or a male psychologist with a moderate amount of experience. The "client" in all of the tapes was a female presenting with the same counseling problem. After viewing the tape, the participants completed the CRF (Barak & LaCrosse, 1975) and a referral questionnaire. Results of an ANOVA revealed that the CRF differentiated among counselors ($p<.01$) and across dimensions for any one counselor ($p<.001$). Pearson product-moment correlations between CRF ratings and likelihood of self-referral were significantly positively correlated. That is, the higher the perceived levels of counselor expertness, attractiveness, and trustworthiness, the more likely was the reported willingness to refer oneself to the counselor for a variety of problems.

These findings support and enhance the findings of the Barak and LaCrosse (1975) study of which it was an extension. It is clear that the CRF (Barak & LaCrosse, 1975) is

sensitive to perceived differences among counselors on the dimensions of expertness, attractiveness, and trustworthiness, regardless of the experience level of the counselor. Another important contribution of this investigation is the demonstration of a significant positive relationship between these perceptions and reported willingness to self-refer to the counselor. This study did not, however, investigate whether this reported willingness was ultimately related to an actual self-referral and positive counseling outcomes.

This area of investigation was, in part, the focus of subsequent research conducted by LaCrosse (1980). He sought to investigate the predictive validity of the CRF (Barak & LaCrosse, 1975) and to test Strong's (1968) model of the impact of counselor social influence on counseling outcomes. Clients from an outpatient drug treatment program rated counselors on the CRF following their initial and final counseling sessions. The mean time lapse from initial to final counseling session was 109 days. Counseling outcome was measured using the Goal Attainment Scale (GAS; Kiresuk & Sherman, 1968) at precounseling and postcounseling.

Stepwise multiple regression and ANOVAs revealed that clients significantly increased their ratings of counselor expertness, attractiveness, and trustworthiness from precounseling to postcounseling. The CRF (Barak & LaCrosse, 1975) ratings at precounseling were moderately associated with postcounseling outcomes. A positive relationship was

also found between postcounseling CRF ratings and outcome. Of the three dimensions measured by the CRF, perceived expertness was most highly correlated with outcome. Also, clients who achieved higher outcome scores gave higher ratings to their counselors on the CRF.

According to LaCrosse (1980), these findings lend support to Strong's (1968) notion of the impact of counselor social influence on counseling outcomes. Initial perceptions of the counselor, particularly with regard to expertness, were demonstrated to be positively related to immediate postcounseling outcomes. He suggested that including measures of client need for counseling in related studies may enhance the prediction power of Strong's model.

In a study based on qualitative analysis, Bachelor (1995) examined clients' perceptions of the therapeutic alliance. Self-referred clients at a university counseling center were asked to describe "a good client-therapist relationship" prior to their initial counseling session. They were further instructed to complete two research questionnaires pertaining to perceptions of the therapeutic alliance. The questionnaires were completed prior to the fifth and following the twelfth counseling session. Clients' pre-counseling and post-counseling self-reported levels of psychological distress were assessed with the Symptoms Checklist (Ngyen, Attkisson, & Stenger, 1983) and the Global Rating Scale (Green, Gleser, Stone, & Seifert, 1975).

Through the use of a five-step content analytic procedure, three types of perceived therapeutic alliance were delineated. These three types are as follows: nurturant, insight-oriented, and collaborative. The nurturant alliance describes the client's experience of therapist facilitative attitudes. The insight-oriented alliance is characterized by improved client self-understanding. The collaborative alliance describes the client's active involvement in counseling.

Results of this study revealed that nurturant-type clients require trust and a friendly relationship with the counselor to promote self-disclosure. The counselor of this type of client is expected to be active and directive in the therapeutic process. The insight-type client values self-awareness and expects the counselor to provide clarification to the client's self-disclosure. This type of client is appreciative of counselor confrontation of client resistance. The collaborative-type client recognizes that the "work" of counseling is the responsibility of him/herself and the counselor. This type of client expects to participate in the identification of problems and creation of solutions. However, s/he also expects the counselor to demonstrate openness and provide feedback.

Based on these results, Bachelor (1995) concluded that clients are not to be viewed as a homogenous group with respect to perceptions of the therapeutic alliance. That is, clients perceive a positive therapeutic alliance differently

and value differently the various components of a therapeutic alliance. It should be noted, however, that the counselor characteristics of empathy, trustworthiness, respect, and being non-judgmental were valued across alliance types.

Upon observing that much research has been conducted on the process of personal-social counseling in the past few decades, Watkins et al. (1990) sought to investigate the process of vocational counseling. In particular, these investigators were interested in the effect of counselor response behavior on clients' impressions during vocational counseling. They designed their study to parallel similar investigations related to the personal-social counseling process.

Participants in this study were undergraduate psychology students who were assigned by sex to one of eight experimental conditions. The conditions, which were determined by counselor response style and sex, were as follows: (a) self-involving statements, male counselor; (b) self-disclosing statements, male counselor; (c) empathic statements, male counselor; (d) open questions, male counselor; (e) self-involving statements, female counselor; (f) self-disclosing statements, female counselor; (g) empathic statements, female counselor; and (h) open questions, female counselor. Participants were instructed to place themselves in the role of the client for purposes of this study. They then viewed the appropriate vocational

counseling videotape and completed the CRF (Barak & LaCrosse, 1975) and the Vocational Inventory.

A 2 (client sex) x 2 (counselor sex) x 4 (response type) MANOVA revealed that none of these variables significantly affected clients' impressions of the vocational counselor. The only significant interaction which emerged was upon analysis of the CRF (Barak & LaCrosse, 1975) subscales. A significant three-way interaction was found on the dependent variables of expertness, trustworthiness, and attractiveness ($p<.05$). Watkins et al. (1990), interpreted that:

> Male counselors who used self-involving statements when seeing a female client were perceived as more expert and trustworthy than male counselors who used self-disclosing statements when seeing a female client. (p. 141)

The findings of this exploratory vocational counseling study are not consistent with results of similar studies related to personal-social counseling which have revealed differences between response styles. The authors conclude that if their findings are supported by future vocational counseling research, counselors can be flexible in their responsive behavior during initial vocational counseling without significantly impacting client perceptions.

Freund et al. (1991) designed a study to examine whether lengthy delays between intake and initial counseling session impact the clients' perceptions of counselors and counseling outcomes. The participants in this field study were clients requesting services at a counselor training agency. Each client was provided with an intake interview

within one to seven days of initial contact with the agency. Clients were then scheduled for their first counseling session in the next available appointment time. Thus, length of delay between intake and first counseling session varied naturally. Following the sixth counseling session, all clients who had remained in counseling completed the CRF (Barak & LaCrosse, 1975). Those who had not returned after the initial intake session were interviewed over the phone regarding their reasons for not returning.

Correlational analysis revealed no significant relationship ($r=.04$, $p>.25$) between length of delay between sessions and total CRF (Barak & LaCrosse, 1975) score. Total CRF score was determined to be a significant predictor of counseling effectiveness. The results of this study demonstrate that lengthy delays between intake and initial counseling sessions do not negatively impact client perceptions of counselors.

Freund et al. (1991) suggested that an explanation for the nonsignificant results of this study may be Shueman's (1980) conceptualization regarding client perception. That is, a timely intake appointment may be therapeutic and result in the client's perception that something is being done about his/her problem. Therefore, the perceptions of the client are purported to play an active role in the social influence process of counseling.

Morran et al. (1994) studied the relationship of counselor hypothesis formation skill level to perceptions of

the counselor's effectiveness. Graduate counseling students served as both counselors and clients for purposes of this study. Each student was instructed to counsel a classmate for four counseling sessions. Following the second counseling session, each counselor completed the Clinical Hypothesis Exercise Form (CHEF) and each client completed the Counselor Rating Form - Short version (CRF-S; Corrigan & Schmidt, 1983).

Results indicated that four of the eight hypothesis measures included on the CHEF were significantly positively related to all CRF-S (Corrigan & Schmidt, 1983) measures (i.e., expertness, attractiveness, trustworthiness, and total). Specifically, these hypothesis measures included number of hypothesis units, hypothesis dimensions, overall quality, and number of questions. In addition, the number of support units demonstrated by the counselor was positively related to the CRF-S trustworthiness subcale. Forward stepwise multiple regression techniques revealed that the hypothesis dimensions scale of the CHEF was a significant predictor for the CRF-S expertness subscale, number of questions was a significant predictor for the CRF-S attractiveness subscale, and overall quality was a significant predictor for the CRF-S trustworthiness subscale.

These results suggest a relationship between counselor hypothesis skills and effectiveness. It was concluded that, for counseling students, higher level clinical hypothesis skills are related to more positive client perceptions of the

counselor. The investigators asserted that counselors who are able to formulate multidimensional clinical hypotheses and present options for testing these hypotheses will be perceived by clients as more effective in terms of social influence. A contribution of this study to the field of counseling psychology is the delineation of specific hypothesis formation skills which are related to counselor effectiveness. Morran et al. (1994) recommended that the validity of future related research may be improved by assessing counselor effectiveness from an additional perspective other than that of the client.

Chapter 3

SAMPLE, INSTRUMENTATION, AND PROCEDURES

Sample

Client participants consisted of 90 male and female college students seeking counseling at the student counseling centers of two midwestern state universities. Of the client participants, the age range was from 19 to 49, with a mean age of 28 years. The racial make up of the client sample was as follows: Caucasian (90%), African-American (6%), Asian (2%), and Hispanic (2%). Client participants were 12% freshmen, 15% sophomores, 13% juniors, 23% seniors, and 37% graduate students.

Counselor participants in the study consisted of 14 male and female counselors at the student counseling centers of the two universities. Of the counselor participants, the age range was from 27 to 58, with a mean age of 32 years. Over 90% of the counselor participants were Caucasian, with the remainder being African-American (10%). Of the counselors in the study, 10% had less than one year of counseling experience, 30% had two to four years of experience, 35% had

five to nine years of experience, 15% had ten to 20 years of experience, and 10% had more than 20 years of experience.

The client-counselor dyads were classified into one of the following three groups:

Group 1 (congruent): Counselor-client dyads in which the counselor and client share the same learning style.

Group 2 (similar): Counselor-client dyads in which the counselor and client represent learning styles which are adjacent to each other on Kolb's (1985) learning style grid.

Group 3 (incongruent): Counselor-client dyads in which the counselor and client represent learning styles which are polar on Kolb's (1985) learning style grid.

Equal numbered groups were maintained, with 30 client-counselor dyads in each of the aforementioned groups. Some of the original client participant data was eliminated due to these participants not completing the instrumentation in its entirety. Also, data were discarded from clients for whom more than six weeks elapsed between the intake session and session three.

Instrumentation

Demographic Data Sheet for Clients

The demographic data sheet for clients was developed to provide a description of the client portion of the sample. The following information was solicited with this data sheet:

age, marital status, gender, university status, academic major, grade point average, ethnicity/race, and referrral source. See Appendix A.

Demographic Data Sheet for Counselors

The demographic data sheet for counselors was developed to provide a description of the counselor portion of the sample. The following information was solicited with this data sheet: age, martial status, gender, highest degree completed, license held (if any), years of counseling experience, and ethnicity/race. See Appendix B.

Learning Style Inventory (LSI; Kolb, 1985)

The LSI (Kolb, 1985) purports to assess the individual's ability to learn from experience. It is comprised of 12 sentence completion items, with four possible choices to complete each sentence. These four choices represent the four learning modes. The LSI yields a total score for each learning mode. Manipulation of the scores purportedly results in a determination of whether the learner is an accommodator, a diverger, a converger, or an assimilator. This instrument was revised and renormed in 1985 with a sample of 1,446 adults between the ages of 18 and 60. It demonstrated very good internal consistency on all six scales (four learning modes and two combination scales) as measured by Chronbach's alpha (n=268), with a range of .73-.88. The combination scores show almost perfect additivity (1.0) as measured by Tukey's test. A comparison of the revised LSI

(Kolb, 1985) with the original LSI (Kolb, 1976) reveals that results from the two instruments are comparable (n=268). Correlations between the four learning mode scales and the two combination scales on the two instruments were found to range from .87 to .93 ($p<.001$). A split-half reliability estimate (six original LSI items and six new items) using the Spearman-Brown formula resulted in the following reliability coefficients: concrete experience=.81, reflective observation=.71, abstract conceptualization=.84, active experimentation=.83, abstract-concrete=.85, and active-reflective=.82.

Counselor Rating Form (CRF; Barak & LaCrosse, 1975)

The CRF (Barak & LaCrosse, 1975) purports to measure perceptions of counselor attractiveness, expertness, and trustworthiness and is comprised of 36 seven-point bipolar scales, with 12 items pertaining to each of the aforementioned domains. Possible scores for each dimension range from 12-84 points. The CRF reliability coefficients suggest that this instrument can reliably measure the three domains, regardless of a specific counselor x setting interaction. The internal consistencies of the CRF scales were assessed by the split-half reliability method as an estimate of their reliability, with each scale being divided into two halves of six items each. LaCrosse and Barak (1976) reported the following reliability coefficients for the scales across counselors: expertness=.874, attractiveness=.850, and trustworthiness=.908. The CRF

purportedly differentiates within and between counselors on the three dimensions (LaCrosse & Barak, 1976).

In investigating the relationship between client CRF (Barak & LaCrosse, 1975) scores and counseling outcomes, LaCrosse (1980) demonstrated support for the validity of the instrument. Stepwise multiple regression analysis produced a prediction equation using the CRF variables that accounted for 35.2% of outcome variance. LaCrosse (1980) also found total CRF precounseling scores to correlate moderately high with counseling outcomes ($r=.53$, $p<.001$). Expertness ratings correlated most highly with outcome ($r=.56$, $p<.001$), followed by attractiveness ratings ($r=.45$, $p<.01$), and ratings of trustworthiness ($r=.37$, $p<.01$). Relatively high statistical intercorrelations among the dimensions of attractiveness, expertness, and trustworthiness suggest that, despite the unique variance of each dimension (Barak & LaCrosse, 1975), there is a common component of perceived counselor behavior (LaCrosse & Barak, 1976).

Procedures

A total of 90 clients and 14 counselors provided data for this study. A total of 30 client-counselor dyads were utilized in each of the following groups: Group 1 (congruent learning styles), Group 2 (similar learning styles), and Group 3 (incongruent learning styles). Data from 110 clients were excluded from the study due to these clients not completing all the measures in their entirety or more than six weeks elapsing between intake and session three.

Assistance with data collection was required for this study due to practical considerations. The support staff at the two student counseling centers used as data collection sites assisted in offering the initial packet of materials to potential client participants. They also collected the materials from the client participants. The support staff involved in this process were provided with written and verbal instructions regarding the data collection procedures in which they would be directly involved (Appendix C).

Potential counselor participants were all counselors at the two student counseling centers used in this study. All counselors who agreed to participate were given a prepared packet of materials at the onset of the study. This packet included the following: (a) the Informed Consent Sheet for Counselors (Appendix D), (b) the Demographic Data Sheet for Counselors (Appendix B), and (c) the LSI (Kolb, 1985) (Appendix F).

Potential client participants were those students who presented for an intake at either of the two student counseling centers used in this study. When a client presented for an intake and had completed all initial intake paperwork, a member of the support staff asked him/her whether s/he wished to participate in the study. If the client declined, no packet was given out. If a client accepted, the prepared client packet of materials was handed out and completed while the client waited for his/her intake counselor. This packet of materials included the following:

(a) the Informed Consent Sheet for Clients (Appendix E), (b) the Demographic Data Sheet for Clients (Appendix A), and (c) the LSI (Kolb, 1985) (Appendix F). After completing these forms, the client returned them to a member of the support staff.

Once the client agreed to participate in the study, the support staff member attached two envelopes to the intake paperwork for the counselor. This served as a means of communicating to the counselor that this particular client was in the study. Following the initial intake session, the counselor gave the envelope marked CRF 1 to the client. The client was instructed to complete the enclosed CRF (Appendix G) and return it to the support staff. If the client was transferred to another counselor following intake, s/he was excluded from participation in the remainder of this study. If the client returned for two additional sessions following intake with the same counselor, s/he was given the envelope marked CRF 2 following this session. Again, the client was instructed to return the completed form to the support staff.

The rationale for taking the CRF (Barak & LaCrosse, 1975) measures at the aforementioned points in counseling was that data from the 1992-1993 Annual Report of one of the participating student counseling centers revealed that the modal, median, and mean number of sessions attended by clients at that site were 1, 2, and 4.8, respectively. This particular student counseling center served as a data collection site for this study and is known to be similar, in

terms of these statistics, to the other midwestern student counseling center which participated in the study. Thus, it was decided that the CRF posttest measure would be administered following session three to avoid excessive attrition related to the potential threat of experimental mortality. To control for the potential threats of history and maturation, the maximum length of time which could elapse from pretest to posttest was established as six weeks.

Hypotheses

The following are the null hypotheses tested in this study:

1. Clients' perceptions of counselors do not differ as a function of the degree of congruence (i.e., congruence, similarity, incongruence) of the client learning style with the counselor's learning style.
2. Clients' perceptions of counselors do not differ as a function of when the measure is taken (i.e., following the first or third session).
3. Clients' perceptions of counselors do not differ as a function of an interaction between the degree of congruence (i.e., congruence, similarity, incongruence) of client and counselor learning style and when the measure is taken (i.e., following the first or third session).

Research Design

This study was based on a quasi-experimental research design utilizing a pretest and posttest measure. After all participants in the study completed the LSI (Barak & LaCrosse, 1975), they were divided into three groups. Group 1 consisted of the client-counselor dyads in which the two learning styles were the same (congruent). Group 2 was comprised of those client-counselor dyads in which the two learning styles were similar, but not the same. Group 3 was made up of the client-counselor dyads in which the learning styles were opposites (incongruent). All client participants in all three groups completed the CRF (Barak & LaCrosse, 1975) at the conclusion of the first (pretest) and third (posttest) counseling sessions. The two independent variables in the study were degree of learning style congruence (congruent, similar, or incongruent) and time at which the measure of client perception was taken (after counseling session one and after counseling session three). The dependent variables in the study were perceived counselor expertness, attractiveness, and trustworthiness.

Statistical Treatment

This study utilized two preliminary statistical tests and appropriate post hoc analyses. To determine whether a multiple analysis of variance (MANOVA) was indicated for the main analysis of the study, the relationship between the three dependent measures of the study first had to be computed. There is some evidence (LaCrosse & Barak, 1976) to

suggest at least a moderate degree of statistical intercorrelation between the CRF (Barak & LaCrosse, 1975) domains of expertness, attractiveness, and trustworthiness. Separate scores for each of the three dimensions are often reported, however. In order to assess the degree of intercorrelation using data from the present study, a Pearson r correlation was computed. If perceived counselor expertness, attractiveness, and trustworthiness were found to be significantly ($p<.05$) correlated, a 3 x 2 MANOVA with repeated measures would be computed to detect the presence of main effects and/or an interaction effect. If, however, an intercorrelation was not discerned between the three domains, three 3 x 2 analyses of variance (ANOVAs) would be computed. That is, one 3 x 2 ANOVA with repeated measures would be computed with respect to perceived expertness, one with respect to perceived attractiveness, and one with respect to perceived trustworthiness. This process of determining the extent of the intercorrelation of the dependent measures prior to analysis of variance is recommended by Cooley and Lohnes (1971).

The data were computed using the Statistical Package for the Social Sciences computer program (SPSS; Norusis, 1982).

Limitations

The design and subsequent results of this study were limited by the following factors:

1. The instrumentation utilized in the study has inherent limitations in that it is based on self-

report.

2. The pretest-posttest format of the study utilizing the same instrument may have produced a sensitizing effect. That is, client participants may have become sensitized to the CRF (Barak & LaCrosse, 1975) after the first administration, which could have influenced subsequent responses.

Assumptions

The following were assumptions for the present study:

1. A representative sample of clients and counselors was obtained.
2. The participants provided responses on the instrumentation which accurately reflected their learning style and, for client participants, their perceptions of the counselor.
3. The participants understood the questions on the instrumentation.

Chapter 4

RESULTS

This study was designed to investigate client and counselor learning style and its effect on client perceptions. The investigator was also interested in exploring client perceptions at different points in the counseling process. To address this area, three hypotheses were proposed and tested based on data collected from 90 client-counselor dyads. The data were obtained by administering the LSI (Kolb, 1985) and the CRF (Barak & LaCrosse, 1975).

This chapter presents the results of the statistical analysis of data pertaining to the three research hypotheses. For purposes of this study, the alpha level for all statistical procedures was set at .05. The multivariate F was estimated by Wilks' test. The remainder of this chapter presents the results of the data analysis and discussion of the results.

Data Analyses

The results of the data analysis are presented and discussed for each main effect and the interaction effect.

Each null hypothesis is presented separately, along with the F value and decision to retain or reject the hypothesis. The research hypotheses were tested using a 3 x 2 MANOVA with repeated measures, containing one between-subjects variable (degree of learning style congruence) and one within-subjects variable (after session one vs. after session three). Prior to this procedure, it was determined that the three dependent variables (perceived counselor expertness, attractiveness, and trustworthiness) were significantly ($p<.05$) intercorrelated (Table 1; Table 2). In a post hoc analysis, three 2 x 2 MANOVAs with repeated measures were computed, comparing the groups of dyads two at a time. Significant multivariate effects were followed by univariate analyses of variance. Specifically, one 3 x 2 ANOVA with repeated measures was computed with respect to each of the dependent measures. Finally, significant univariate effects were followed by main effects analyses using the Newman-Keuls method.

Table 1.

Pearson r Analysis of Dependent Measures: Pretest

	N=90		
	EXP	ATT	TRST
EXP	1.00		
ATT	.74	1.00	
TRST	.89	.73	1.00

Table 2.

Pearson r Analysis of Dependent Measures: Posttest

	N=90		
	EXP	ATT	TRST
EXP	1.00		
ATT	.72	1.00	
TRST	.89	.70	1.00

The means and standard deviations for the client perceptions of the research population are presented in Table 3.

Table 3.

Means for Client Perceptions Across Learning Styles and Time

DYAD TYPE	CLIENT PERCEPTIONS	MEAN	SD
Congruent	Expertness - Pre	76.10	6.04
	Attractiveness - Pre	71.53	8.67
	Trustworthiness - Pre	76.23	5.67
	Expertness - Post	77.67	5.43
	Attractiveness - Post	72.47	8.93
	Trustworthiness - Post	78.37	5.07
Similar	Expertness - Pre	72.93	6.72
	Attractiveness - Pre	72.63	7.65
	Trustworthiness - Pre	74.47	6.76
	Expertness - Post	75.43	5.96
	Attractiveness - Post	74.53	8.98
	Trustworthiness - Post	76.07	6.23
Incongruent	Expertness - Pre	66.27	7.71
	Attractiveness - Pre	67.07	7.23
	Trustworthiness - Pre	68.00	7.58
	Expertness - Post	69.60	7.40
	Attractiveness - Post	69.97	8.14
	Trustworthiness - Post	72.33	8.03

Hypothesis 1: Clients' perceptions of counselors do not differ as a function of the degree of congruence (i.e., congruence, similarity, incongruence) of the client learning style with the counselor's learning style.

The main effect multivariate analysis of variance related to hypothesis 1 involves client and counselor learning style client and counselor perceptions. The analysis of this main effect demonstrated significant differences in perceptions made by clients as a function of

the degree of learning style congruence between the client and counselor. Thus, null hypothesis 1 was rejected. Table 4 contains the results of the MANOVA effect relevant to null hypothesis 1.

This analysis indicates that the perceptions of counselors made by clients differed meaningfully as a function of the degree of congruence between client and counselor learning styles. That is, greater congruence between client and counselor learning styles is associated with more favorable client perceptions.

Hypothesis 2: Clients' perceptions of counselors do not differ as a function of when the measure is taken (i.e., following the first or third session).

The main effect multivariate analysis of variance related to hypothesis 2 involves taking the measure following counseling session one versus session three and client perceptions. The analysis of this main effect demonstrated significant differences between perceptions made by clients post session one and post session three. Thus, null hypothesis 2 was rejected only for the effect of time. Table 4 contains the results of the MANOVA effect relevant to null hypothesis 2.

This analysis indicates that, regardless of dyad type, the perceptions of counselors made by clients differed meaningfully as a function of time of measure. That is, as time transpires between clients and counselors, client perceptions become more favorable.

Hypothesis 3: Clients' perceptions of counselors do not differ as a function of an interaction between the degree of congruence (i.e., congruence, similarity, incongruence) of counselor and client learning style and when the measure is taken (i.e., following the first or third session).

The interaction effect multivariate analysis of variance related to hypothesis 3 involves the interaction of the independent variables (degree of learning style congruence and time of measure) as measured by the dependent variables (perceived counselor expertness, attractiveness, and trustworthiness). The analysis demonstrated that the magnitude of the interaction of the main effects was significant. Thus, null hypothesis 3 was rejected. Table 4 presents the results of the MANOVA effect relevant to null hypothesis 3.

This analysis indicates that the effect of degree of learning style congruence and the effect of time of measure were dependent upon one another. That is, depending upon clients' dyad type (i.e., congruent, similar, incongruent), the MANOVA results indicated a significant difference in client perceptions of counselors as a function of time (i.e., following the first or third session). That is, greater congruence between client and counselor learning styles is associated with more favorable client perceptions, and this holds true as time transpires in the counseling relationship.

Table 4.

Multivariate Test of Significance: Null Hypotheses 1 - 3

Source of Variation	F value	p
Effect of Style	7.19	.000*
Effect of Time	32.42	.000*
Effect of Interaction	3.03	.008*

*p<.05

In a planned post-hoc analysis, the significant multivariate effects were followed by 2 x 2 MANOVAs with repeated measures. Three such MANOVAs were computed, analyzing the learning style dyads two at a time. Each of these MANOVAs had one between-subjects variable (degree of learning style congruence) and one within-subjects variable (after session one vs. after session three).

The results of the pairwise MANOVA related to congruent versus incongruent learning style dyads demonstrated significant differences between perceptions made by clients with respect to (a) degree of learning style, (b) time of measure, and (c) the interaction of these two factors. Table 5 contains the results of the MANOVA effects relevant to this analysis.

Table 5.

Multivariate Test of Significance: Congruent Versus Incongruent Learning Style Dyads

Source of Variation	F value	p
Effect of Style	13.40	.000*
Effect of Time	28.82	.000*
Effect of Interaction	5.50	.002*

*p<.05

This analysis indicates that the perceptions of counselors made by clients in congruent client-counselor dyads were meaningfully different from those made by clients in incongruent counselor-client dyads with respect to degree of learning style congrence, time of measure, and their interaction. That is, more favorable client perceptions were made by clients in congruent client-counselor learning style dyads as opposed to incongruent dyads. More favorable perceptions were also made by clients as more time transpired in the counseling relationship. Finally, more favorable client perceptions of counselors were associated with the combined impact of both of these variables.

The results of the pairwise MANOVA related to congruent versus similar learning style dyads demonstrated significant differences between perceptions made by clients with respect to (a) degree of learning style, and (b) time of measure. The effect for (c) the interaction of these two factors was

not found to be significant. Table 6 contains the results of the MANOVA effects relavant to this analysis.

Table 6.

Multivariate Test of Significance: Congruent Versus Similar Learning Style Dyads

Source of Variation	F value	p
Effect of Style	13.33	.026*
Effect of Time	17.16	.000*
Effect of Interaction	1.24	.305

*p<.05

This analysis indicates that the perceptions of counselors made by clients in congruent counselor-client learning style dyads were meaningfully different from those made by clients in similar counselor-client dyads as a function of degree of learning style congruence and time of measure. That is, more favorable client perceptions were made by clients in congruent client-counselor learning style dyads, as opposed to similar dyads, and more favorable perceptions were made as more time transpired in the counseling relationship. There was no significant difference in the interaction effect of these two factors.

The results of the pairwise MANOVA related to similar versus incongruent learning style dyads demonstrated significant differences between perceptions made by clients with respect to (a) degree of learning style, (b) time of

measure, and (c) the interaction of these two factors. Table 7 contains the results of the MANOVA effects relevant to this analysis.

Table 7.

Multivariate Test of Significance: Similar Versus Incongruent Learning Style Dyads

Source of Variation	F value	p
Effect of Style	4.62	.006*
Effect of Time	22.16	.000*
Effect of Interaction	3.16	.032*

*p<.05

This analysis indicates that the perceptions of counselors made by clients in similar client-counselor learning style dyads were meaningfully different from those made by clients in incongruent client-counselor dyads with respect to degree of learning style congruence, time of measure, and their interaction. That is, more favorable client perceptions were made by clients in similar counselor-client learning style dyads as opposed to incongruent dyads. More favorable client perceptions were also made as more time transpired in the counseling relationship. Finally, more favorable client perceptions of counselors were associated with the combined impact of both of these variables.

In an additional follow-up analysis, significant multivariate effects were followed by univariate analyses of

variance to determine the unique contribution of each of the dependent variables. Specifically, one 3 x 2 ANOVA with repeated measures was computed with respect to each dependent variable. Each of these ANOVAs had one between-subjects variable (degree of learning style congruence) and one within-subjects variable (after session one vs. after session three).

Results of the 3 x 2 ANOVA pertaining to perceived counselor expertness yielded significant effects related to degree of learning style congruence and time of measure. This indicates that clients perceived greater counselor expertness the greater the degree of client-counselor learning style congruence and as more time transpired in the counseling relationship. No significance was found for the interaction effect. Table 8 presents the results of this univariate analysis.

Table 8.

Univariate Test of Significance for Perceived Counselor Expertness

Source of Variation	F value	p
Effect of Style	15.42	.000*
Effect of Time	55.56	.000*
Effect of Interaction	2.38	.099

*p<.05

Results of the 3 x 2 ANOVA pertaining to perceived

counselor attractiveness yielded a significant main effect related to time of measure and a significant interaction effect. This indicates that clients perceived greater counselor attractiveness across time and as a combined function of degree of client-counselor learning style congruence and time transpired in the counseling relationship. No significant difference was found with respect to degree of learning style congruence. Table 9 presents the results of this univariate analysis.

Table 9.

Univariate Test of Significance for Perceived Counselor Attractiveness

Source of Variation	F value	p
Effect of Style	3.01	.054
Effect of Time	44.32	.000*
Effect of Interaction	3.91	.024*

*p<.05

Results of the 3 x 2 ANOVA pertaning to perceived counselor trustworthiness yielded significant effects related to degree of learning style congruence and time of measure as well as a significant interaction effect. This indicates that clients perceived greater counselor trustworthiness the greater the degree of counselor-client learning style congruence and as more time transpired in the counseling relationship. Furthermore, more favorable client perceptions

of counselors were associated with the combined impact of both of these variables. Table 10 presents the results of this univariate analysis.

Table 10.

Univariate Test of Significance for Perceived Counselor Trustworthiness

Source of Variation	F value	p
Effect of Style	9.73	.000*
Effect of Time	68.26	.000*
Effect of Interaction	6.61	.002*

*p<.05

In a post hoc analysis, significant univariate analyses were followed by main effects analysis using the Newman-Keuls method. Three Newman-Keuls tests were utilzed to clarify which means significantly differed from one another. Results of the Newman-Keuls test related to perceived counselor expertness yielded significant differences between all comparisons with the exception of the similar posttest versus the congruent pretest condition. This indicates that, with the aforementioned exception, all group comparisons related to perceived counselor expertness demonstrated significantly more favorable client perceptions related to greater client-counselor learning style congruence and as more time transpired in the counseling relationship. Table 11 presents the results of this analysis.

Table 11.

Newman-Keuls Test for Perceived Counselor Expertness

	Inc pre	Inc post	Sim pre	Sim post	Con pre	Con post
Inc pre		8.12*	16.27*	22.37*	23.98*	27.80*
Inc post			8.12*	14.22*	15.85*	19.68*
Sim pre				6.10*	7.73*	11.54*
Sim post					1.63	5.44*
Con pre						3.83*
Con post						

Results of the Newman-Keuls test related to perceived counselor attractiveness yielded significant differences between all comparisons with the exception of the congruent pretest versus the congruent posttest condition; the congruent pretest versus the similar pretest condition; and the congruent posttest versus the similar pretest condition. Table 12 presents the results of this analysis.

Table 12.

Newman-Keuls Test for Perceived Counselor Attractiveness

	Inc pre	Inc post	Con pre	Con post	Sim pre	Sim post
Inc pre		8.29*	12.77*	15.43*	15.91*	21.34*
Inc post			4.49*	7.14*	7.63*	13.06*
Con pre				2.66	3.14	8.57*
Con post					.49	5.91*
Sim pre						5.43*
Sim post						

This indicates that, with the aforementioned exceptions, all group comparisons related to perceived counselor attractiveness demonstrated significantly more favorable client perceptions related to greater client-counselor learning style congruence and as more time transpired in the counseling relationship. With respect to perceived attractiveness, no significant change over time was demonstrated by clients in congruent client-counselor dyads. Clients in similar and incongruent dyads did demonstrate more

favorable perceptions of counselor attractivess over time. This serves as evidence of an interaction effect.

Results of the Newman-Keuls tests related to perceived counselor trustworthiness yielded significant differences between all comparisons with the exception of the incongruent pretest versus the incongruent posttest condition; the incongruent posttest versus the similar pretest condition; the incongruent posttest versus the similar posttest condition; the incongruent posttest versus the congruent pretest condition; the incongruent posttest versus the congruent posttest condition; the similar pretest versus the similar posttest condition; the similar pretest versus the congruent pretest condition; the similar pretest versus the congruent posttest condition; the similar posttest versus the congruent pretest condition; the similar posttest versus the congruent posttest condition; and the congruent pretest versus the congruent posttest condition. This indicates that, with the aforementioned exceptions, all group comparisons related to perceived counselor trustworthiness demonstrated significantly more favorable client perceptions related to greater client-counselor learning style congruence and as more time transpired in the counseling relationship. Table 13 presents the results of this analysis.

Table 13.

Newman-Keuls Test for Perceived Counselor Trustworthiness

	Inc pre	Inc post	Sim pre	Sim post	Con pre	Con post
Inc pre		2.59	3.87*	4.83*	4.93*	6.21*
Inc post			1.28	2.23	2.33	3.61
Sim pre				.96	1.06	2.34
Sim post					1.00	1.38
Con pre						1.28
Con post						

In summary, a 3 x 2 MANOVA with repeated measures was used to test for effects of the degree of congruence in counselor and client learning style dyads on client perceptions of counselors as a function of style, time, and the interaction of these two factors. The two main effects and the interaction effect of the MANOVA proved to be significant. In a pairwise analysis of the client-counselor learning style dyads, congruent versus incongruent dyads and similar versus incongruent dyads proved to be significantly different with respect to both main effects and the

interaction. Congruent versus similar dyads were significant with respect to the main effects only. Univariate analyses indicated a significant difference between the groups of dyads with regard to perceived counselor expertness and perceived counselor trustworthiness. Also, there was a significant difference in perceived counselor expertness, trustworthiness, and attractiveness among all clients, regardless of dyad type, as a function of time of measure. This pattern of results indicates that the more congruent the client-counselor learning styles, the more favorable the client perceptions of counselor expertness, attractiveness, and trustworhtiness. Furthermore, client perceptions of counselor expertness, attractiveness, and trustworthiness become more favorable from counseling session one to counseling session three.

Discussion of Results

This section provides a discussion of the results from the analyses of variance associated with this study. The probable meaning of these results is also discussed. Each of the main effects is discussed separately, followed by a discussion of the interaction effect.

The overall purpose of this study was to explore the assumption that congruence in client-counselor learning styles is preferable to incongruence. A review of literature and research led this investigator to believe that findings from learning style research in the field of education may have prematurely been applied to the counseling setting.

That is, the assumption that congruence in client-counselor learning styles is preferable to incongruence seemed to have been made without empirical evidence. This investigator sought to examine the effects of client and counselor learning style congruence on client perceptions at different points in the counseling process. It was postulated that there would be differences between the three groups of learning style dyads with respect to client perceptions of counselor expertness, attractiveness, and trustworthiness.

The results of the present study indicated significant findings related to the variable of client-counselor learning style congruence. Specifically, it was determined that greater congruence in client-counselor dyadic learning styles is associated with more favorable client perceptions of counselor expertness, attractiveness, and trustworthiness. Furthermore, it was found that this is the case as time transpires in the counseling relationship. This finding is consistent with what theory predicts and with related research. In addition, it supports the suggested practice of matching or accommodating client learning style in counseling.

Learning style research in the field of education has clearly demonstrated the importance of assessment of student learning styles and individualization of teaching plans to accommodate them. It has been demonstrated that doing so results in improvement in academic achievement (Cafferty, 1980), student attitudes (Perrin, 1984), and student behavior

(Tannenbaum, 1981). Results of the present study support the notion that these educational findings are applicable to the counseling setting. One difference between the educational studies and the present study is that the counselors in the present study did not actively assess client learning styles and knowingly accommodate them, as the teachers did with students in the educational studies. Rather, for purposes of this study, the focus was on how the degree of learning style congruence between clients and counselors impacted client perceptions. However, results of the present study and educational studies all suggest a positive outcome related to learning style congruence or accommodation.

Learning style research in the field of counseling suggests that client learning style should determine the counseling techniques and strategies utilized (Griggs, 1981). In support of counseling as an accommodating process, Ivey and Gonclaves (1988) have proposed a model of style-shift counseling. Several researchers have demonstrated the need for the additional consideration of cross-cultural differences in learning styles (Jacobs, 1987; Lam-Phoon, 1986). The results of the present study support and enhance the findings of the aforementioned studies in that it was determined that greater degrees of client-counselor learning style congruence are associated with more favorable client perceptions. Again, while the present study did not include a manipulation of counselors knowingly accommodating client learning style, it did demonstrate positive outcomes

associated with congruence in client and counselor learning styles.

Learning style research related to supervision primarily parallels that related to education and counseling in terms of the implication that supervisee learning style should be assessed and accommodated by the supervisor. Handley (1982) further suggested that supervisee ratings of satisfaction with supervision were related to cognitive similarity to the supervisor on the Sensing-Intuition index of the MBTI (Myers-Briggs, 1962). This study is most similar to the present one in terms of the investigation of matching cognitive styles. The results of the present study support this notion of a postive outcome related to matching of client and counselor learning styles.

The results of the present study indicated significant findings related to the variable of time. Specifically, it was determined that as more interactional time transpires between client and counselor, more favorable client perceptions of counselor expertness, attractiveness, and trustworthiness emerge. Furthermore, it was determined that this holds true regardless of the degree of client-counselor learning style congruence. This pretest to posttest gain is a common finding in studies such as the present one and was an expected result.

One possible alternative explanation for the findings of this study pertains to the nature of the sample. Specifically, the distribution of learning styles among the

counselor participants in this study indicates that they primarily represented two learning styles: diverger and accommodator. The distribution of learning styles among the client participants in this study indicates that they primarily represented one learning style: diverger. Thus, the diverger learning style is over-represented in the present study's sample. This phenomenon allows for the possibility that the strong results of the present study could be an artifact of client and counselor dominant learning style type.

Another viable alternative explanation for the results of this study involves the variable of gender. This investigator did not control for gender variables other than to establish equal numbers of male and female client participants in each of the three groups. Normative data on the LSI (Kolb, 1985) indicate that learning style is affected by gender. Specifically, males are most often assimilators and females are most often divergers. The present study's counselor sample was comprised of five male and nine female counselors. The five male counselors had 18 male and 11 female clients. The nine female counselors had 27 male and 34 female clients. Most of the congruent learning style dyads were composed of same sex client-counselor pairings. Thus, the strong results of this study may be partially explained by gender, a factor for which this study did not control.

Another factor which may explain the findings of this

study is related to the homogenous sample used. That is, these results may be in part attributable to the fact that all client participants in the study were university students. The sample could be described as a relatively high-functioning clientele. Normative data for the LSI (Kolb, 1985) reveal differences in learning style types related to level of education. Specifically, individuals with a high school education or less tend to be divergers; individuals with some college tend to be divergers or accommodators; and college graduates tend to be accommodators. Therefore, the homogenous sample used in the present study may have contributed to the strong results.

In summary, while the significant results of the present study confirm the theory and research related to learning styles, the strength of the observed association should be tempered to the extent that sample bias played a role. That is, the strength of the results could be an artifact of sample bias in the form of learning style representation, gender, and level of education.

Chapter 5

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter contains the summary, conclusions, implications, and recommendations based on this investigation of client and counselor learning style and its effect on client perceptions. This chapter is organized in the following manner: (a) a summarized restatement of the problem and purpose of the study, the procedures used, and the research hypotheses tested; (b) a summary of the results related to testing the research hyotheses, as well as conclusions based on these results; (c) implications and practical applications of the research findings; and (d) suggestions for future investigation in the area of learning styles and client perception.

Summary

Statement of the Problem

Research on learning styles originated in the field of education, with an emphasis on how knowledge of student learning styles could aid teachers in facilitating more effective learning in their students. Most of the research

which emerged in this regard indicated that teachers should learn to assess student learning styles and individualize their teaching plans to accommodate the learning style preferences of their students. Related research demonstrated that doing so resulted in improvement in academic achievement, student attitudes and student behavior.

Numerous studies pertaining to counseling and learning styles represent an application of the aforementioned educational implications to counseling. One researcher forwarded a model of accommodating counseling interventions to be consistent with client learning style. Related research demonstrated that clients possess dispositions to engage in certain information processing activities; however, the need for further research in counseling to address the question of whether clients should be matched with counselors sharing similar cognitive styles has been noted.

Empirical research in supervision related to learning styles is more limited than in education or counseling. Results of one study revealed that counselor trainee ratings of satisfaction with supervision were related to cognitive similarity with the supervisor on an index of the Myers-Briggs Type Indicator (MBTI; Myers-Briggs, 1962). A model of supervision has been developed related to the accommodation of various supervisee learning styles in the supervision of child care workers.

This investigator sought to measure the effect of client and counselor learning style congruence, similarity, and incongruence on how the client perceives the counselor with regard to attractiveness, expertness, and trustworthiness. Also of interest was the effect of taking the measure at two different points in time during the counseling process. If congruence between client and counselor learning styles resulted in more positive client perception of the counselor, then an effort to match clients and counselors in this manner is justified. If, however, congruence between client and counselor learning styles does not result in more positive client perception of the counselor, then it may not be justifiable to match clients and counselors in this manner.

Procedures

A total of 90 clients and 14 counselors provided data for this study. A total of 30 client-counselor dyads were utilized in each of the following groups: Group 1 (congruent learning styles), Group 2 (similar learning styles), and Group 3 (incongruent learning styles). Data from 110 clients were excluded from the study due to these clients not completing all the measures in their entirety or more than six weeks elapsing between intake and the third session.

Assistance with data collection was required for this study due to practical considerations. The support staff at the two student counseling centers used as data collection sites assisted in offering the initial packet of materials to potential client participants. They also collected the

materials from the client participants. The support staff involved in this process were provided with written and verbal instructions regarding the data collection procedures in which they would be directly involved (Appendix C).

Potential counselor participants were all counselors at the two student counseling centers used in this study. All counselors who agreed to participate were given a prepared packet of materials at the onset of the study. This packet included the following: (a) the Informed Consent Sheet for Counselors (Appendix D), (b) the Demographic Data Sheet for Counselors (Appendix B), and (c) the LSI (Kolb, 1985) (Appendix F).

Potential client participants were those students who presented for an intake at either of the two student counseling centers used in this study. When a client presented for an intake and had completed all initial intake paperwork, a member of the support staff asked him/her whether s/he wished to participate in the study. If the client declined, no packet was given out. If a client accepted, the prepared client packet of materials was handed out and completed while the client waited for his/her intake counselor. This packet of materials included the following: (a) the Informed Consent Sheet for Clients (Appendix E), (b) the Demographic Data Sheet for Clients (Appendix A), and (c) the LSI (Barak & LaCrosse, 1975) (Appendix F). After completing these forms, the client returned them to a member of the support staff.

Once the client agreed to participate in the study, the support staff member attached two envelopes to the intake paperwork for the counselor. This served as a means of communicating to the counselor that this particular client was in the study. Following the initial intake session, the counselor gave the envelope marked CRF 1 to the client. The client was instructed to complete the enclosed CRF (Appendix G) and return it to the support staff. If the client was transferred to another counselor following intake, s/he was excluded from participation in the remainder of this study. If the client returned for two additional sessions following intake with the same counselor, s/he was given the envelope marked CRF 2 following this session. Again, the client was instructed to return the completed form to the support staff.

The rationale for taking the CRF (Barak & LaCrosse, 1975) measures at the aforementioned points in counseling was that data from the 1992-1993 Annual Report of one of the participating student counseling centers revealed that the modal, median, and mean number of sessions attended by clients at that site were 1, 2, and 4.8, respectively. This particular student counseling center served as a data collection site for this study and is known to be similar, in terms of these statistics, to the other midwestern student counseling center which participated in the study. Thus, it was decided that the CRF posttest measure would be administered following session three to avoid excessive attrition related to the potential threat of experimental

mortality. To control for the potential threats of history and maturation, the maximum length of time which could elapse from pretest to posttest was established as six weeks.

The data from this study were analyzed using a 3 x 2 MANOVA with repeated measures. In a follow-up analysis, three 2 x 2 MANOVAs with repeated measures were computed. Post hoc analysis consisted of three 3 x 2 ANOVAs with repeated measures. That is, one ANOVA was computed for each dependent measure. Main effect analysis was performed using the Newman-Keuls method. An alpha level of .05 was set for determining statistical significance.

Research Hypotheses

The present study was designed to explore the assumption that congruence in counselor-client learning styles is preferable to incongruence at different points in the counseling process. With respect to this area of investigation, the following null hypotheses were tested:

1. Clients' perceptions of counselors do not differ as a function of the degree of congruence (i.e., congruence, similarity, incongruence) of the client learning style with counselor's learning style.
2. Clients' perceptions of counselors do not differ as a function of when the measure is taken (i.e., following the first or third counseling session).
3. Clients' perceptions of counselors do not differ as

a function of an interaction between the degree of congruence (i.e, congruence, similarity, incongruence) of counselor and client learning style and when the measure is taken (i.e., following the first or third session).

A more detailed discussion of the results of all data analyses in this study was presented in Chapter 4.

Results and Conclusions

This section includes the results of the research hypotheses tested in this study. In addition, conclusions are presented which are based upon the data analyses reported in Chapter 4 and are within the scope of the limitations of the study noted in Chapter 3.

Null hypothesis 1 pertained to the degree of congruence of client-counselor learning style dyads and client perceptions. The analysis of this main effect demonstrated significant differences in perceptions made by clients as a function of this variable. Thus, null hypothesis 1 was rejected. This analysis indicates that the perceptions of counselors made by clients differed meaningfully as a function of the degree of congruence between client and counselor learning styles. That is, greater congruence between client and counselor learning styles is associated with more favorable client perceptions.

Null hypothesis 2 pertained to taking the measure following counseling session one versus session three and client perceptions. The analysis of this main effect

demonstrated significant differences between perceptions made by clients post session one and post session three. Thus, null hypothesis 2 was rejected only for the effect of time. This analysis indicates that, regardless of dyad type, the perceptions of counselors made by clients differed meaningfully as a function of time of measure. That is, as time transpires between clients and counselors, client perceptions become more favorable.

Null hypothesis 3 pertained to the interaction of the independent variables (degree of learning style congruence and time of measure) as measured by the dependent variables (perceived counselor expertness, attractiveness, and trustworthiness). This analysis demonstrated that the magnitude of the interaction of the main effects was significant. Thus, null hypothesis 3 was rejected. This analysis indicates that the effect of degree of learning style congruence and the effect of time of measure were dependent upon one another. That is, greater congruence between client and counselor learning styles is associated with more favorable client perceptions, and this holds true as time transpires in the counseling relationship.

An analysis comparing the learning style dyads two at a time indicated significant differences in perceptions made by clients in congruent versus incongruent dyads with respect to both main effects and the interaction effect. That is, more favorable client perceptions were made by clients in congruent client-counselor learning style dyads as opposed to

incongruent dyads. More favorable perceptions were also made by clients as more time transpired in the counseling relationship. Finally, more favorable client perceptions of counselors were associated with the combined impact of both of these variables. An analysis comparing similar versus incongruent dyads revealed significant differences for both main effects and the interaction effect. That is, more favorable client perceptions were made by clients in similar client-counselor learning style dyads as opposed to incongruent dyads. More favorable perceptions were also made by clients as more time transpired in the counseling relationship. Finally, more favorable client perceptions of counselors were associated with the combined impact of both of these variables. A comparison of congruent versus similar dyads revealed significant main effects, but no significance with respect to the interaction of these factors. This indicates that more favorable client perceptions were made by clients in congruent client-counselor learning style dyads, as opposed to similar dyads, and more favorable perceptions were made as more time transpired in the counseling relationship.

Since the MANOVA main and interaction effects proved to be significant, separate univariate analyses of variance were computed to determine the unique contribution of each of the dependent measures. With respect to perceived counselor expertness, significant main effects were demonstrated and no significant interaction effect was found. The analysis

pertaining to perceived counselor attractiveness revealed a significant effect related to time and a significant interaction effect, but no significant effect with regard to degree of learning style congruence. The analysis of perceived counselor trustworthiness yielded significant main effects and a significant interaction effect.

Main effect analysis using the Newman-Keuls method was computed as a follow-up to significant univariate analyses. The analysis related to perceived counselor expertness yielded significant differences between all comparisons with the exception of the similar posttest versus the congruent pretest condition. The analysis pertaining to perceived counselor attractiveness revealed significance between all comparisons with the exception of the congruent pretest versus the congruent posttest condition; the congruent pretest versus the similar pretest condition; and the congruent posttest versus the similar pretest condition. The analysis related to perceived counselor trustworthiness yielded significant differences between all comparisons with the exception of the incongruent pretest versus the incongruent posttest condition; the incongruent posttest versus the similar pretest condition; the incongruent posttest versus the similar posttest condition; the incongruent posttest versus the congruent pretest condition; the incongruent posttest versus the congruent posttest condition; the similar pretest versus the similar posttest condition; the similar pretest versus the congruent pretest

condition; the similar pretest versus the congruent posttest condition; the similar posttest versus the congruent pretest condition; the similar posttest versus the congruent posttest condition; and the congruent pretest versus the congruent posttest condition.

Based on the findings of this study, the following conclusions are made:

1. It is concluded that the clients' perceptions of counselors are related to the degree of congruence of their learning style with that of the counselor. As the client-counselor learning style dyads become more congruent, clients perceive counselors as more expert, attractive, and trustworthy.
2. It is concluded that the clients' perceptions of counselors are related to the point in the counseling process at which the measure is taken. As the counseling relationship progresses over time, clients perceive counselors as more expert, attractive, and trustworthy.
3. It is concluded that the degree of learning style congruence and time of measure interact with respect to clients' perceptions of counselors. Greater congruence in client-counselor learning style dyads is associated with more favorable client perceptions of counselor expertness, attractiveness, and trustworthiness from time one to time two.

4. It is concluded that perceived counselor expertness increases as a function of degree of client-counselor learning style congruence and time of measure. Perceived counselor attractiveness increases as a function of time of measure. Perceived counselor trustworthiness increases as a function of the degree of client-counselor learning style congruence, time of measure and their interaction.

Implications

This section serves as a presentation of the possible implications of the study. Additionally, the practical applications of the findings and conclusions are presented. The applications discussed primarily pertain to the areas of counseling and counselor training.

It is generally accepted within the field of education that educators should assess student learning styles and individualize teaching approaches to accommodate these styles. As described in previous chapters, it has been assumed in the field of counseling that this notion is also applicable to counselors and clients. The results of this study appear to support this assumption, as greater congruence in client-counselor learning style dyads was associated with more favorable perceptions of counselors. Furthermore, this phenomenon holds true as time elapses in the counseling relationship.

The results of the current study have implications for

clinical practice. The implication of the main analysis of this study is that counselors should match their learning style with that of the client if the counselor is interested in increasing the client's perception of the counselor's expertness, attractiveness, and trustworthiness. Because the current study did not include an investigation of outcome, it cannot be implied that matching styles in this manner is associated with more positive outcome.

In order to pursue congruence in client and counselor learning styles, counselors need to be aware of their own learning style and be knowledgable about learning styles in general. During training in counseling psychology, students should be encouraged to assess their learning style and consider its impact on their clinical practice.

As clinicians increasingly practice counseling psychology in the context of managed care, there is an emphasis on efficient service. The present study's findings have implications for practicing in this arena. Perhaps matching clients and counselors with regard to learning styles could be part of an effort to help clinicians establish rapport with clients as quickly as possible and be most efficient in their counseling. If future research related to matching client-counselor learning styles demonstrates more effective outcome, then it would be indicated for clinicians to routinely match or accommodate client learning style.

Recommendations

This final section offers the following recommendations for further research in the areas of counseling and counselor training.

1. As was noted in Chapter 4, the strong results associated with the present study may be an artifact of the dominant learning styles of the counselors and clients in the sample. Future researchers in this area may be better served by controlling for the different ways for client-counselor dyads to be similar and incongruent.
2. In the present study, the client participants were university students. As was discussed in Chapter 4, this homogenous sample may have contributed to the strong results of the study. Replication of the current study in a different clinical setting could help to test the generalizability of its findings.
3. This investigator examined only the impact of client and counselor learning style congruence on client perceptions of counselors. It would be useful for future researchers to expand the scope of the present study by following up with an investigation of counseling outcome.
4. Because the results of the current study may be partially attributable to gender, as noted in Chapter 4, future researchers should control for gender in the client and counselor samples.

5. To expand upon this investigation, future researchers should design studies to explore one or more of the following counselor characteristic variables thought to affect client perceptions: gender, age, theoretical orientation.

APPENDIXES

APPENDIX A

DEMOGRAPHIC DATA SHEET FOR CLIENTS

Please check the statements that describe you or fill in the blanks.

AGE: _____

MARITAL STATUS:
_____ Single
_____ Married
_____ Other committed rela.
_____ Divorced
_____ Separated
_____ Widowed

GENDER:
_____ Male
_____ Female

UNIVERSITY STATUS:
_____ Freshman
_____ Sophomore
_____ Junior
_____ Senior
_____ Graduate Student

Academic Major: _____ GPA: _____

ETHNICITY/RACE:
_____ Asian
_____ Black/African-American
_____ Caucasian
_____ Hispanic
_____ American Indian
_____ Other (please specify) _____

APPENDIX B

DEMOGRAPHIC DATA SHEET FOR COUNSELORS

Please check the statements that describe you or fill in the blanks.

AGE: ____

MARITAL STATUS:
____ Single
____ Married
____ Other committed rela.
____ Divorced
____ Separated
____ Widowed

GENDER:
____ Male
____ Female

HIGHEST DEGREE COMPLETED:
____ Bachelors
____ Masters
____ Doctorate
____ Post-Doctorate

LICENSE HELD, IF ANY: _____

EXPERIENCE PROVIDING COUNSELING:
____ less than 1 year
____ 2-4 years
____ 5-9 years
____ 10-20 years
____ more than 20 years

ETHNICITY/RACE:
____ Asian
____ Black/African-American
____ Caucasian
____ Hispanic
____ American Indian
____ Other (please specify)
_____

APPENDIX C

SUPPORT STAFF INSTRUCTION SHEET

1. Potential client participants for this study are those students who present for an intake at the counseling center.

2. When a client presents for an intake and has completed all counseling center intake paperwork, a member of the support staff should ask him/her whether s/he wishes to participate in the study.

3. It the client declines, no packet is given out. If the client accepts, the prepared client packet of materials should be given to him/her and completed while the client waits for his/her intake. This packet of materials includes the following: (a) the Informed Consent Sheet for Clients, (b) the Demographic Data Sheet for Clients, and (c) the LSI.

4. After completing these forms, the client should return them to a member of the support staff.

5. Once the client agrees to participate in the study, the support staff member should attach two envelopes to the intake paperwork of the counselor. This serves as a means of communicating to the counselor that this particular client is in the study.

6. Following the intake session, the counselor should give the envelope marked "CRF 1" to the client. The client should be instructed to complete the enclosed CRF and return it to the support staff.

7. If the client was transferred to another counselor following intake, s/he is excluded from participation in the remainder of this study.

8. If the client returns for two additional sessions following intake with the same counselor, s/he should be given the envelope marked "CRF 2" following this session. Again, the client should be instructed to return the completed form to a member of the support staff.

9. All forms which are being turned in to the support staff should be contained in one box to be given to the investigator at a later date.

APPENDIX D

INFORMED CONSENT STATEMENT FOR COUNSELORS

This study is part of the doctoral dissertation that is being completed by Wendy Hunsucker in partial fulfillment of the requirements for the degree Doctor of Philosophy. This investigation is being conducted in association with the Department of Counseling at Indiana State University. The Department of Counseling supports the practice of protection of participants in research. The following information is provided so that you can decide whether you wish to volunteer to participate. You are free to decline or withdraw from the study at any time and for any reason without penalty or prejudice.

The intent of this study is to investigate learning styles. Your participation in this study will take approximately 15 minutes. You will be asked to read and respond to one instrument. It is important that you respond to each item on the instrument. Your responses are very important to the success of this investigation.

Do not write your name on the instrument. To ensure confidentiality, each participant in the study will be assigned a number, which will appear on each form in your packet. Only the investigator will have access to the completed forms and these will be destroyed once the results are compiled.

If you should have any questions, please feel free to contact the principal investigator or the dissertation director. Your participation is appreciated.

****
****

Once you have read the above information and have decided to participate, please read the following statement, print your name, affix your signature, and complete today's date.

I, the undersigned, have read the above description of this study and voluntarily agree to participate in it. The study and my involvement in it have been clearly explained to me and any questions I had were answered to my satisfaction.

_____/ _____/ __/__/__
(Name) (Signature) (Date)

Principle Investigator:
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Terre Haute, IN 47809

Dissertation Director:
J. Laurence Passmore, Ph.D.
Professor of Counseling
Psychology
Department of Counseling
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Indiana State University
Terre Haute, IN 47809

APPENDIX E

INFORMED CONSENT STATEMENT FOR CLIENTS

This study is part of the doctoral dissertation that is being completed by Wendy Hunsucker in partial fulfillment of the requirements for the degree Doctor of Philosophy. This investigation is being conducted in association with the Department of Counseling at Indiana State University. The Department of Counseling supports the practice of protection of participants in research. The following information is provided so that you can decide whether you wish to volunteer to participate. You are free to decline or withdraw from the study at any time and for any reason without penalty or prejudice.

The intent of this study is to investigate learning styles. Your participation in this study will take a total of approximately 40 minutes. You will be asked to read and respond to two instruments. You will also be asked to respond to an instrument in three to five weeks. Whether or not you agree to participate in this study has no bearing on your right to receive counseling.

It is important that you respond to every item on each instrument. Your responses are very important to the success of this investigation. Do not write your name on either of the instruments. To ensure confidentiality, each participant in the study will be assigned a number, which will appear on each form in your packet. Only the investigator will have access to the completed forms and these will be destroyed once the results are compiled.

If you should have any questions, please feel free to contact the principal investigator or the dissertation director. Your participation is appreciated.

****
****

Once you have read the above information and have decided to participate, please read the following statement, print your name, affix your signature, and complete today's date.

I, the undersigned, have read the above description of this study and voluntarily agree to participate in it. The study and my involvement in it have been clearly explained to me and any questions I had were answered to my satisfaction.

_____/ _____/ __/__/__
(Name) (Signature) (Date)

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APPENDIX F

LSI

LEARNING-STYLE INVENTORY

McBER & COMPANY

Name: _____

Position: _____

Organization: _____

Date: _____

Inventory

McBer & Company
116 Huntington Avenue
Boston, Massachusetts 02116

Learning-Style Inventory: Instructions

The Learning-Style Inventory describes the way you learn and how you deal with ideas and day-to-day situations in your life. Below are 12 sentences with a choice of four endings. Rank the endings for each sentence according to how well you think each one fits with how *you* would go about learning something. Try to recall some recent situations where you had to learn something new, perhaps in your job. Then, using the spaces provided, rank a "4" for the sentence ending that describes how you learn *best*, down to a "1" for the sentence ending that seems *least* like the way you would learn. Be sure to rank all the endings for each sentence unit. Please do not make ties.

Example of completed sentence set:

When I learn:	4	I like to deal with my feelings	1	I like to watch and listen	2	I like to think about ideas	3	I like to be doing things

1.	When I learn:	___	I like to deal with my feelings	___	I like to watch and listen	___	I like to think about ideas	___	I like to be doing things
2.	I learn best when:	___	I trust my hunches and feelings	___	I listen and watch carefully	___	I rely on logical thinking	___	I work hard to get things done
3.	When I am learning:	___	I have strong feelings and reactions	___	I am quiet and reserved	___	I tend to reason things out	___	I am responsible about things
4.	I learn by:	___	feeling	___	watching	___	thinking	___	doing
5.	When I learn:	___	I am open to new experiences	___	I look at all sides of issues	___	I like to analyze things, break them down into their parts	___	I like to try things out
6.	When I am learning:	___	I am an intuitive person	___	I am an observing person	___	I am a logical person	___	I am an active person
7.	I learn best from:	___	personal relationships	___	observation	___	rational theories	___	a chance to try out and practice
8.	When I learn:	___	I feel personally involved in things	___	I take my time before acting	___	I like ideas and theories	___	I like to see results from my work
9.	I learn best when:	___	I rely on my feelings	___	I rely on my observations	___	I rely on my ideas	___	I can try things out for myself
10.	When I am learning:	___	I am an accepting person	___	I am a reserved person	___	I am a rational person	___	I am a responsible person
11.	When I learn:	___	I get involved	___	I like to observe	___	I evaluate things	___	I like to be active
12.	I learn best when:	___	I am receptive and open-minded	___	I am careful	___	I analyze ideas	___	I am practical

APPENDIX G

(Revised Form)

COUNSELOR RATING FORM

Listed below are several scales which contain word pairs at either end of the scale and seven spaces between the pairs. Please rate the counselor you just saw on each of the scales.

If you feel that the counselor very closely resembles the word at one end of the scale, place a check mark as follows:

fair ___ : ___ : ___ : ___ : ___ : ___ : _X_ unfair

OR

fair _X_ : ___ : ___ : ___ : ___ : ___ : ___ unfair

If you think that one end of the scale quite closely describes the counselor, then make your check mark as follows:

rough ___ : _X_ : ___ : ___ : ___ : ___ : ___ smooth

OR

rough ___ : ___ : ___ : ___ : ___ : _X_ : ___ smooth

If you feel that one end of the scale only slightly describes the counselor, then check the scale as follows:

active ___ : ___ : _X_ : ___ : ___ : ___ : ___ passive

OR

active ___ : ___ : ___ : ___ : _X_ : ___ : ___ passive

If both sides of the scale seem equally associated with your impression of the counselor or if the scale is irrelevant, then place a check mark in the middle space:

hard ___ : ___ : ___ : _X_ : ___ : ___ : ___ soft

Your first impression is the best answer.

PLEASE NOTE: PLACE CHECK MARKS IN THE MIDDLE OF THE SPACES

agreeable ___ : ___ : ___ : ___ : ___ : ___ : ___ : disagreeable

unalert ___ : ___ : ___ : ___ : ___ : ___ : ___ : alert

analytic ___ : ___ : ___ : ___ : ___ : ___ : ___ : diffuse

unappreciative ___ : ___ : ___ : ___ : ___ : ___ : ___ : appreciative

attractive ___ : ___ : ___ : ___ : ___ : ___ : ___ : unattractive

casual ___ : ___ : ___ : ___ : ___ : ___ : ___ : formal

cheerful ___ : ___ : ___ : ___ : ___ : ___ : ___ : depressed

vague ___ : ___ : ___ : ___ : ___ : ___ : ___ : clear

distant ___ : ___ : ___ : ___ : ___ : ___ : ___ : close

compatible ___ : ___ : ___ : ___ : ___ : ___ : ___ : incompatible

unsure ___ : ___ : ___ : ___ : ___ : ___ : ___ : confident

suspicious ___ : ___ : ___ : ___ : ___ : ___ : ___ : believable

undependable ___ : ___ : ___ : ___ : ___ : ___ : ___ : dependable

indifferent ___ : ___ : ___ : ___ : ___ : ___ : ___ : enthusiastic

inexperienced ___ : ___ : ___ : ___ : ___ : ___ : ___ : experienced

inexpert ___ : ___ : ___ : ___ : ___ : ___ : ___ : expert

unfriendly ___ : ___ : ___ : ___ : ___ : ___ : ___ : friendly

honest ___ : ___ : ___ : ___ : ___ : ___ : ___ : dishonest

informed ___ : ___ : ___ : ___ : ___ : ___ : ___ : ignorant

insightful ___ : ___ : ___ : ___ : ___ : ___ : ___ : insightless

stupid ___ : ___ : ___ : ___ : ___ : ___ : ___ : intelligent

unlikeable ___ : ___ : ___ : ___ : ___ : ___ : ___ : likeable

logical ___ : ___ : ___ : ___ : ___ : ___ : ___ : illogical

open ___ : ___ : ___ : ___ : ___ : ___ : ___ : closed

prepared ___ : ___ : ___ : ___ : ___ : ___ : ___ : unprepared

unreliable ___ : ___ : ___ : ___ : ___ : ___ : ___ : reliable

disrespectful ___ : ___ : ___ : ___ : ___ : ___ : ___ : respectful

irresponsible ___ : ___ : ___ : ___ : ___ : ___ : ___ : responsible

selfless ___ : ___ : ___ : ___ : ___ : ___ : ___ : selfish

sincere ___ : ___ : ___ : ___ : ___ : ___ : ___ : insincere

skillful ___ : ___ : ___ : ___ : ___ : ___ : ___ : unskillful

sociable ___ : ___ : ___ : ___ : ___ : ___ : ___ : unsociable

deceitful ___ : ___ : ___ : ___ : ___ : ___ : ___ : straightforward

trustworthy ___ : ___ : ___ : ___ : ___ : ___ : ___ : untrustworthy

genuine ___ : ___ : ___ : ___ : ___ : ___ : ___ : phony

warm ___ : ___ : ___ : ___ : ___ : ___ : ___ : cold

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