

**The Effect of a Workbook Intervention on
College Students' Reframes of Dysfunctional Career Thoughts:
Technical Report 37**

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Abstract

This technical report documents the results from a quasi-experimental evaluation of the efficacy of *Improving Your Career Thoughts: A Workbook for the Career Thoughts Inventory* on college students' acquisition of the skill of reframing dysfunctional career thoughts. Participants in this evaluation study were 86 undergraduate students enrolled in five sections of a career development course at a large southeastern university. A repeated measures ANOVA of effectiveness of reframed dysfunctional statements by initial level of dysfunctional career thinking and treatment status was conducted. A significant main effect and interaction between time and treatment status was found on an initial posttest measure. However, no effect or interaction was found for level of dysfunctional career thoughts on reframe effectiveness. At a two week, delayed posttest, a significant decay effect occurred for the treatment group. Furthermore, possible demand characteristics and treatment diffusion led to a significant improvement in the effectiveness of reframed thoughts of the control group.

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Most clients are unaware of the biases, misinformation, and distorted beliefs that they bring to career choice and that these presuppositions can lead to self-defeating and disabling experiences (Krumboltz, 1983). It is thought that these beliefs exist due to limited learning opportunities and act to limit additional learning (Krumboltz & Jackson, 1993). For example, Elliott (1995) noted that negative self-statements can impair a client's ability to utilize occupational information, lead to career indecision, and inappropriate choices.

Anecdotal and empirical evidence suggest the existence of such dysfunctional career beliefs and thoughts in both adolescence and adulthood. This phenomenon has been labeled by various professionals as *myths* (Dorn & Welch, 1985), *self-defeating assumptions* (Dryden, 1979), *dysfunctional career beliefs* (Krumboltz, 1990), and *dysfunctional cognitions* (Corbishley & Yost, 1989). Furthermore, Dorn and Welch (1985) found that high school students subscribed to various (nine of 13 postulated) career myths as measured by the *Survey of Career Attitudes*. Similarly, Krumboltz has standardized the *Career Beliefs Inventory* on a wide variety of groups, providing further evidence of dysfunctional beliefs and thoughts occurring independent of group membership (Krumboltz, 1994).

In response to the evidence of both the negative impact and commonness of dysfunctional thinking on career choice, the *Career Thoughts Inventory (CTI)* and a companion intervention *Improving Your Career Thoughts: A Workbook for the Career Thoughts Inventory* (Workbook) were developed (Sampson, et al., 1996a, 1996b). While the CTI has been used in research since its release (Vernick, 1999; Sampson, Reardon, Peterson, & Lenz, 2004), the associated Workbook has received little attention in the literature. Specifically, Gilbert (1996)

and Fontaine (2001) noted the lack of evidence in the CTI professional manual of the workbook's ability to correct dysfunctional career thinking or improve career problem-solving and decision-making skills. A search of the literature also revealed no formal, empirical evidence of its efficacy.

This gap in the literature may be a specific instance of a more general lack of evidence on the efficacy of cognitive-behaviorally based interventions in teaching the skill of cognitive reframing. Instruction in reframing, by which clients learn to alter their dysfunctional thoughts to more functional ones, is often an important part of cognitive restructuring treatments for depression and anxiety. However, much of the focus in the literature has been on outcome measures (e.g., degree of change in depression, anxiety, career decidedness, vocational identity, etc.) of treatment and not on the intervening learning outputs that occur.

Therefore, this evaluation study attempts to fill the gap in the literature on the efficacy of the CTI Workbook, specifically investigating the effect of a cognitive behaviorally-based workbook intervention on college students' skills to effectively reframe dysfunctional career thoughts. In the process, it is hoped that more general information on effective instruction related to cognitive reframing skills will also be gained. To achieve these goals, this paper will first briefly review the relevant theoretical and empirical literature and state the hypothesis of interest. Next, the method of investigation will be outlined, including a description of participants, instrumentation, and study design and procedure. Then, results will be presented and the paper will close with a discussion of study findings, their limitations, and resulting implications.

Review of the Literature

This section of the paper will review two theories underlying the CTI and Workbook; cognitive theory and cognitive information processing theory of career decision-making. Also

the literature on the efficacy of interventions associated with each theory will be summarized. Furthermore, a model for evaluating the effectiveness of reframed dysfunctional thoughts based in both clinical experience and the theoretical literature will be introduced.

Cognitive Theory and Related Interventions

Assumptions. A basic assumption of cognitive theory is that individuals use information processing to represent themselves and the world in cognitive organizational structures known as schemata (Bartlett, 1958). These schemata, which represent individuals' beliefs or assumptions about themselves and the world, yield the automatic thoughts of consciousness, which interact with affect and behavior. However, these thoughts can be vulnerable to systematic distortions which bias the processing of information from the environment (Beck, 1967; Beck, 1976; Beck, Emery, & Greenberg, 1979). Cognitive theory conceptualizes psychopathology (e.g., anxiety or depression) as a dysfunctional bias in the content, amount, or function of an individual's thoughts as well as the monitoring and control (metacognition) of those thoughts (Beck & Weishaar, 2000; Wells, 2000). Furthermore, cognitive theory generally accepts the important role of physiological factors (e.g., neurotransmitter levels) as well as dysfunctional cognition in contributing to vulnerability to psychopathology (Strunk, 2001).

Cognitive theory has led to the development of two related kinds of interventions: self-instruction training and cognitive restructuring. Self-instruction training focuses on the proactive learning of metacognitive skills necessary to perform a novel task (Meichenbaum, 1974). Cognitive restructuring focuses on actively changing the preexisting schema underlying automatic thoughts that may be inhibiting performance of a specific task (Kinnier & Krumboltz, 1986). It should be noted that the distinction between the two interventions may be somewhat artificial, given that the two may be used interchangeably by both counselor and client.

Self-Instruction Training. In response to the limitations of behavioral techniques and to foster learning that was more durable and generalizable, Meichenbaum (1977) developed a skills-oriented therapy in which learners were instructed in how to “talk to themselves” in preparing for a stressor, confront and handle the stressor, cope with the feeling of being overwhelmed, and reinforce progress by use of these self-statements. This cognitive-behavioral training followed a sequence similar to Luria’s *functional interiorization of language* process for children (Luria, 1962). The training consisted of cognitive modeling by an expert, then overt, external guidance by an expert while the learner performed the task, then overt, self-guidance by the learner, then faded, overt self-guidance by the learner, and finally covert self-guidance by the learner. “The focus was not to teach the child [learner] what to think but how to think” (Meichenbaum & Cameron, 1974, p. 410). In short, Meichenbaum developed a process by which metacognition could be taught.

Self-instruction training has been found to be effective with a wide variety of ages and problem domains. Through self-instruction training impulsive hyperactive children have developed greater self control and greater cognitive reflectivity (Meichenbaum & Goodman, 1971); in-patients with schizophrenia improved on measures of interview behavior, proverb and inkblot responses, and measures of attention (Meichenbaum & Cameron, 1974); and college undergraduates significantly increased flexibility and originality on measures of divergent thinking relative to a control group (Meichenbaum, 1975). Also, standard behavior therapy procedures augmented with self-instruction have produced greater treatment efficacy, more generalization, and greater persistence of treatment effects than behavior therapy alone (Meichenbaum & Cameron, 1974).

Furthermore, Dush, Hirt, and Schroeder (1983, 1989) conducted two meta-analyses of the efficacy literature on self-statement modification. Their first meta-analysis of 69 controlled studies demonstrated that self-instruction combined with other cognitive methodologies is an effective technique. A second meta-analysis of 48 controlled studies of the effects of self-statement modification in children was less conclusive. A more recent review of the literature concluded that studies on self-instruction were confounded by the presence of more than one treatment technique (e.g., progressive relaxation for treatment of anxiety) (Lange, Richard, Gest, de Vries, & Lodder, 1998).

Cognitive restructuring. Bandura (1977) has stated that one of the most effective ways to change cognitions is to change performance (behavior). Based on this premise, cognitive restructuring uses experience to create feedback loops, which challenge dysfunctional automatic thoughts and assumptions and increase positive feelings. The desired outcome of cognitive restructuring is increased self-control by enabling more accurate processing of information and interpretation of events. “The ultimate goal in cognitive restructuring interventions should be to teach clients the art of *auto cognitive restructuring*. Clients should be trained to recognize, examine, and modify or refute maladaptive cognitions whenever they emerge in the future” (Kinnier & Krumboltz, 1986, p. 314).

Cognitive restructuring has become popular in the self-help literature. Burns (1999) offers *The Feeling Good Handbook* which emphasizes ten forms of *twisted thinking* and ten methods of *untwisting* thinking. Also, Bourne (1990) has authored a workbook for mistaken beliefs associated with anxiety and phobia. This workbook employs affirmations (short, easily repeated positive statements that counter mistaken beliefs) that are used to habituate positive

thinking. Bourne suggests that the power of affirmation can be increased through repetition and injection of feeling.

Given the popularity of such interventions, it is fortunate that the empirical literature suggests that cognitive restructuring is effective in a wide variety of clinical applications. Such applications include the reduction of panic attacks (Salkovskis, Clark, & Hamel, 1991), mitigation of disruptions in public speaking associated with perfectionism (DiBartolo, Frost, Dixon, & Almodovar, 2001), and improvement in inmate institutional behaviors (Baro, 1999). As with self-instruction training, one of the difficulties in determining the efficacy of cognitive restructuring is that several techniques are often used concurrently during cognitive-behavioral therapy.

Jacobson and Dobson (2000) attempted to isolate the effect of the three major components of cognitive-behavioral therapy (activation of behavior, modification of automatic thoughts, and modification of core schemata) on therapeutic outcomes, as measured by several screening instruments including the Beck Depression Inventory at treatment, termination, and six month follow-up, for 150 outpatients with major depression. Despite adherence to treatment regimens, superior outcomes could not be attributed to either the modification of automatic thoughts or core schemata conditions over the behavioral activation condition. Thus, while cognitive restructuring may have been found to be effective for specific problem domains, the exact mechanisms that contribute to success may not always be clear.

Regardless of the active mechanism of cognitive therapy, an important factor in the effectiveness of self-instruction training and cognitive restructuring interventions may be the client's belief that they will work. Meichenbaum (1977) demonstrated that the difference between subjects who successfully tolerated a cold pressor test and those who did not was in

their belief that they could successfully use coping strategies rather than their actual use of self-statements and images. Thus, it may not be enough for a person to learn coping strategies. The individual must also possess the metacognitive awareness of their coping strategies, know when and how to use the strategies, and understand the potential, beneficial outcomes of their application.

In review, *self-instruction or self-statement training* is the proactive integration of metacognitive knowledge and process into instruction for a given performance task through a variety of techniques. With careful planning, counselors can help clients learn novel tasks and accompanying facilitative self-talk and then generalize this new knowledge to other performance situations. *Cognitive restructuring* is the effort to change a client's preexisting negative thoughts and dysfunctional schemata through experience. Various forms of cognitive restructuring have been widely circulated in the self-help literature. While successful in specific applications, the exact mechanism of action of cognitive restructuring is unclear because efficacy studies often combine behavioral with cognitive treatments. In general, cognitive theory can inform therapy that is preventative in nature (e.g., self-instruction training) or palliative (e.g., cognitive restructuring). Next, this paper will turn to the specific content domain of career choice and how cognitive theory and therapy can be combined with the CIP approach to assist clients with career choice.

The CIP Approach and the CTI Workbook

Assumptions. The *Cognitive Information Processing Approach to Career Problem Solving and Decision Making (CIP)* assumes that career choice involves complex problem solving, which can be vulnerable to dysfunctional cognitions (Sampson et al., 2004). These dysfunctional cognitions can interfere in the career choice process and impact career decidedness.

Indecisive individuals can be characterized by their high degree of anxiety, while undecided individuals may be developmentally immature. In both cases, engaging in learning experiences may help to modify preexisting schemata, thereby reducing dysfunctional cognitions and anxiety and enabling growth and movement.

Krumboltz (Krumboltz, 1976; Krumboltz, Mitchell, & Jones, 1976; Krumboltz & Jackson, 1993) noted the importance of using assessment not only for matching and evaluation purposes in career assessment, but also to promote learning in career decision making. Thus, assessment becomes the mediator between identifying values, interests, skills, and beliefs based upon past experiences and identifying needs that can be fulfilled by future learning. It is through learning that clients can begin to “unblock” their problem-solving attempts, develop new self-knowledge, and move toward fulfilling career goals.

In keeping with Krumboltz’s emphasis on learning, CIP identifies the content and process of career choice while emphasizing the important role of metacognitions (Peterson, Sampson, & Reardon, 1991; Peterson, Sampson, Lenz, & Reardon, 2002; Sampson et al., 2004). This approach is illustrated by two main constructs the *Pyramid of Information Processing Domains* and the *CASVE Cycle*.

The *Pyramid of Information Processing* is comprised of three content domains; knowledge, decision making, and executive processing. The *Knowledge Domain* is further divided into areas of self-knowledge (e.g., values, interests, skills, and employment preferences) and options knowledge (e.g., knowledge of specific options and a schema for organizing options). The *Decision-Making Domain* of the pyramid contains the *CASVE cycle*, the process component of CIP Theory. The *Executive Processing Domain* of the pyramid emphasizes the importance of

the metacognitive skills of self-awareness, monitoring and control, and self-talk in career problem solving and decision making.

The five step decision-making or CASVE cycle is defined as: 1) *Communication* (understanding internal and external cues), 2) *Analysis* (clarifying self, option, decision making, and metacognitive knowledge), 3) *Synthesis* (elaborating and crystallizing options), and 4) *Valuing* (arriving at a tentative primary and secondary choice after weighing the costs and benefits of and prioritizing each option relative to self, significant others, cultural group, and community/society at large), and 5) *Execution* (creating a plan for the pursuing the tentative choice). The cycle completes with a return to the *Communication* stage, where internal and external cues are checked to see if the problem (or gap) has been resolved. (Peterson et al., 1991; Reardon, Lenz, Sampson, & Peterson, 2000; Peterson et al., 2002; Sampson et al., 2004).

The intervention of focus in this study, the Career Thoughts Inventory and Workbook, is grounded in the CIP approach as each inventory item corresponds to one of the eight elements of the pyramid of decision-making domains and CASVE cycle. The inventory and workbook are also rooted in the tradition of cognitive theory and interventions, applying both self-statement instruction and cognitive restructuring. The CTI, workbook, and related literature will now be examined.

Career Thoughts Inventory and Workbook. The CTI, is a self-administered and objectively scored measure of content and degree of dysfunctional career thinking. The total score of the CTI has been found to be both reliable and valid for a college student sample. Sampson, et al. (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996) reported internal consistency coefficients for the total score scale ranging from .93 to .97. Stability for total scores was also adequate as measured by four-week test-retest stability ($r = .86$). The CTI items and

scales also possess content, construct, and criterion-related validity. The CTI has demonstrated convergent validity with several other instruments including the identity scale and occupational information and barriers items of the *My Vocational Situation* (MVS) questionnaire (Holland, Daiger, & Power, 1980) and the Neuroticism domain of the *NEO PI-R* (including Anxiety, Angry Hostility, Depression, Self-Consciousness, Impulsiveness, and Vulnerability) (NEO PI-R) (Costa & McCrae, 1992). Additional data on CTI factor scores and corresponding reliability and validity can be found in Sampson, et al. (1996).

The Improving your Career Thoughts Workbook (Workbook) is a therapeutic companion to the Career Thoughts inventory, which "...is intended to assist individuals in interpreting their CTI scores and in completing the cognitive restructuring, action planning, and learning necessary to effectively engage in exploratory, problem solving, and decision making behaviors" (Sampson, et al., 1996b, p. 15). Using the metaphor of a wall to represent dysfunctional thinking, the workbook offers four sections intended to help the individual to understand the relationship between dysfunctional thoughts and the need for additional supports. These sections help the client to: 1) *identify* the degree and content of their dysfunctional career thinking, 2) *challenge* such thinking, 3) *alter* their thoughts to be more adaptive, and 4) *create* a plan to act on new, more adaptive thoughts. This study attempted to isolate the effect of the second and third sections of the workbook, which employ stimulus statements (i.e., short paragraphs of counseling feedback) and a written response exercise to promote cognitive reframing. In order to accomplish this task, a model for evaluating the effectiveness or "quality" of individual participant's cognitive reframes was necessary.

A Model for Evaluating Reframe Effectiveness.

In an effort to operationally define reframe effectiveness, Carr (2003) conducted think aloud protocols with four expert, doctoral level career counselors. The task of these experts was to evaluate the efficacy of presented reframes of negative career thoughts and to relate both the reasoning behind and evidence for their judgments. A qualitative analysis of the resulting data yielded the model available in [Table 1](#). This model holds that more effective cognitive reframes are characterized by an internal locus of control, explicit detail, acknowledgement of affect, sensitivity to time, selection of positive words, accurate problem definition, and a structure parallel to that of the original negative thought. Space limitations prohibit a thorough discussion of the procedure used to construct this model. However, this information as well a review of the model's grounding in the theoretical and empirical literature is available (Carr, 2003)

Summary of Literature and Research Hypothesis

In summary, the CTI (a measure of dysfunctional career thinking), and the companion workbook (an intervention that applies both self statement modification and cognitive restructuring techniques) attempt to identify and alleviate dysfunctional career thoughts through the application of cognitive theory and the CIP approach to career decision making. While the CTI has been found to be a valid and reliable instrument, the efficacy of the Workbook has not been determined. However, interventions similar to the CTI Workbook have been found to be effective in a wide variety of clinical domains.

Furthermore, meta-analytic studies of the literature have noted that efforts to determine the efficacy of cognitive techniques have been stymied by the inclusion of both cognitive and behavioral elements in treatment. The literature also appears to have focused on the outcome of interventions (e.g., lowered anxiety and depression), not the actual learning outputs that may lead

to these outcomes. Finally, given past findings that dysfunctional thoughts may interfere with knowledge acquisition and schema modification, it follows that the initial level of dysfunctional career thinking may also impact the learning of the cognitive reframing skill. Thus, the primary purpose of this study was to determine the effectiveness of the CTI Workbook in imparting the skill of cognitive reframing to college students. Of additional interest was obtaining information about the process of instructing the skill of cognitive reframing and the efficacy of purely cognitively based techniques. In support of these research goals, it was hypothesized that there would be no significant interaction between experimental group status (i.e., treatment vs. control) and level of dysfunctional career thinking (e.g., high vs. low) over time and the college students' acquisition of the skill of reframing dysfunctional career thoughts as measured by reframe effectiveness.

Method

The study method will now be described including participant recruitment, instrumentation, study design and procedure, and rater training and scoring.

Participant Recruitment

Participants were recruited from students enrolled in five sections of a career development course at a major southeastern university. Each participant provided his or her informed consent ([Appendix A](#)) to participate in the evaluation project and was not required to participate in the evaluation as part of the class grade. Participants were informed that they were being asked to evaluate a workbook they might use later in the course. Students who did not wish to participate were asked to remain in class and use the time to read for class or complete class assignments. This request was made to maintain the confidentiality of their decision to not participate in the evaluation.

Descriptive data on participants' college, ethnicity, year in school, and sex can be viewed in [Table 2](#). As would be expected in a career development course, the sample was more undecided in their major than the undergraduate university population as a whole. Furthermore, a proportionally greater number of Social Science majors participated in the evaluation study than in the university at large (22% vs. 10%). The sample was also less diverse than the greater university population with over 81% of participants self-reporting as Caucasian versus 74% of the undergraduate university population. The majority (61%) of the sample was of either sophomore (30%) or senior (31%) class standing. Furthermore, the sample also included proportionally more women than the university population (66% vs. 56%). Finally, participants' ages ranged from 18 to 31 years with an average age of 20 years ($\sigma = 2.41$) as compared to an average age of 22.2 years for the university undergraduate population.

Instrumentation

A self-report Student Data Sheet ([Appendix B](#)) regularly collected by class instructors at the beginning of each semester was used to gather archival information on participant sex, ethnicity, intended major, number of credit hours enrolled, and satisfaction with first occupational choice. Participants' career decidedness level was also determined from the data sheet through the Occupational Alternatives Question (OAQ) (Slaney, 1980). This question asked participants to list all of the occupations they were considering and their first choice occupation. The OAQ was scored as 1 if a first occupational choice was listed with no alternatives; 2 if a first choice was listed with alternatives; 3 if no first was choice listed, just alternatives; and 4 if neither an occupational choice or alternatives were listed. Additional data on first time in college vs. transfer status and year in school was collected using a separate smaller, demographic form attached to the Student Data Sheet.

Both the 48-item *Career Thoughts Inventory* (CTI) and *Improving your Career Thoughts: A Workbook for the Career Thoughts Inventory* (Workbook) (Sampson, et al., 1996a, 1996b) described previously served as sources for the instruments created for this evaluation. For this study, the 48 items of the CTI were divided into a 32-item screening instrument, an eight-item pretest/treatment/posttest instrument packet, and an eight-item delayed posttest instrument ([Appendix C](#)). The first 32-item instrument was used to establish the level of dysfunctional career thoughts present among participants. The second instrument packet (based on items 33 through 41) was used to establish a baseline of the participants' skill at reframing dysfunctional career thoughts, and to provide training to the treatment group in challenging and altering dysfunctional thoughts. Two versions of this packet were created: 1) a control version without the instructions and reframe statements of the workbook; 2) a treatment version containing instructions and reframe stimulus statements from the actual CTI Workbook ([Appendix C](#)). For the control group, the simple instruction "Make these sentences more positive" was provided along with stimulus statements of general and neutral "advice" that participants might receive from non-practitioners. A third instrument comprised of CTI items 42 through 48 was used with both treatment and control to collect data on participant retention of the reframing skill two weeks after training ([Appendix C](#)).

Design and Procedure

A double blind, quasi-experimental design was applied during this study. Selection occurred by students enrolling in a career development class and then volunteering to participate in the evaluation study. As random assignment of individual participants was not practical, two of five course sections were randomly assigned to treatment status. Data were collected during the final 20 minutes of the class at three points in time over a 22-day period in the Spring of 2002.

At prearranged times ([Appendix D](#)), course instructors left the room and one of four confederates (2 Caucasian males and 2 Caucasian females), reading from scripts ([Appendix E](#)), employed the previously described instrumentation to collect data from participants. Both confederates and participants were blind to the hypotheses of the study and to their treatment or control status. Due to staff shortages, one confederate collected data from two different course sections of the control group. Each confederate collected data at all three times, with the exception of one who had to be replaced due to a scheduling conflict.

The first data collection was conducted during the second week of class. After establishing informed consent, the paper and pencil demographic form was completed and the 32-item screening instrument was administered using an optical scan form. The later forms were then scanned and imported in a database to obtain a median split and identify high scoring participants on the CTI (i.e., those individuals with higher levels of dysfunctional career thinking) for later data analysis.

One week later, confederates conducted the second data collection. Both treatment and control groups were first presented with brief reframing (i.e., “rewrite”) instructions. Next, items 33–40 of the CTI labeled as “Old Thought” were presented and participants were invited to cognitively restructure thoughts from participants labeled as “New Thought.” At this point the treatment group received actual reframing stimulus statements corresponding to items 33 to 40, while the control group received paragraphs of “plausible neutral advice” such as one might receive from a friend. Often this advice focused on an obscure feature of the original item. Participants were again provided an opportunity to reframe items 33-40 of the CTI.

Two weeks later, a third and final data collection was conducted. A brief prompt to reframe the eight provided dysfunctional thoughts, identical to those in the pretest during the

second data collection, was presented to both treatment and control groups. At the end of data collection, confederates announced to participants that the evaluation was complete and provided debriefing materials that explained the project's purpose and their membership in either the treatment or control group ([Appendix F](#)). In addition, each participant was provided with a complete 48-item *Career Thoughts Inventory* to complete as a regularly occurring course assignment. All participants later individually discussed their inventories with their instructors. Those students endorsing a high degree of dysfunctional career thinking on the 48-item inventory were assigned the complete *Career Thoughts Inventory Workbook* by their instructor.

Rater Training and Data Rating

Raw data resulting from this procedure were 2,064 reframes. These reframes were typed, verbatim (i.e., grammar and spelling mistakes included) into a Microsoft Access database for later evaluation and rating. Two primary raters (a female, masters student in career counseling and a male, doctoral student in counseling psychology) and a third “back-up” rater (a female, doctoral student in counseling psychology) volunteered to complete this task. Volunteers were Caucasian and ranged in age from 24 to 26 years. Each volunteer was trained to apply the model created by Carr (2003) to globally rate reframes as to their effectiveness in supporting career decision making ([Table 1](#)).

This training familiarized raters with the model and how to reliably apply it to reframed statements using an unbalanced, four point rating scale. On this scale, “less effective” reframes received a rating of -1 while “more effective” reframes received ratings of +2. Those reframes which were thought to have “no change,” for which the “task was not understood,” or the “item did not apply” to the participant received a rating of 0. Reframes in which partial, positive change was perceived to have occurred by the rater received a rating of +1. It was emphasized

throughout the training that “global judgments” of reframe effectiveness were desired and raters were discouraged from “adding” up criteria to arrive at their ratings.

Rater training was delivered via a web-based resource that allowed for identical delivery of content but flexibility in location and timing of instruction ([Appendix G](#)). Duration of training for each rater ranged from approximately 1.5 to 2 hours. First, raters were shown a CTI item paired with four possible reframes and asked to place each reframe according to the previously described four point scale. Next, for each of the four reframes, raters checked the model criteria they believed were applicable. Raters were then given feedback comparing their perceptions of applicable model criteria to those of the investigator. Each CTI item was then summarized by positioning the four reframes and their matching criteria from the model along the rating scale. After a brief stretch break, this procedure was repeated a second time for a different CTI item and reframes.

At the end of training, raters were shown a “learning review” which summarized the major points of the training. Raters were then asked to apply their learning by rating 24 practice reframes derived from incomplete data records previously culled from the larger dataset. As each rater finished training, a notification email was sent to the investigator who debriefed the rater about their experience and reviewed the summary data.

Analysis of this practice data using a weighted kappa (a measure of agreement with provision for scaled disagreement or partial credit) yielded modest reliability coefficients ([Table 3](#)) (Cohen, 1968). However, the level of agreement between rater 2 and rater 3 was notably less than that of rater 1 with either rater 2 or 3. Given the “tie breaker” role to be played by rater 3, this difference was considered acceptable. While interrater reliability was found to be modestly acceptable, a significant oversight by the investigator during training and subsequent data rating

process was the establishment of intrarater reliability. This could have been achieved by repeating the administration of practice items after an intervening period of time to account for memory.

To evaluate the reframed statements, raters used a similar Web-based application to rate each individual reframe according to the provided model ([Appendix H](#)). Each of the 2,064 reframes and its corresponding CTI item was presented in a random sequence, thus raters were blind to participants' identities, preexisting levels of dysfunctional career thoughts, and treatment status. After evaluating the reframe using the model and rating guidelines, which could be easily referenced on screen, raters used the four point Likert scale to rate the quality of the reframe. For any given reframe, if judgments by the two primary raters differed by more than one scale position, the third rater was asked to review the statement.

Given the schedules of the student raters, the rating process took approximately three months to complete. When the process was finished, ratings for each reframe were averaged by summing the raters' judgments and dividing by the number of raters required to arrive at a decision. Ratings for the eight items on each instrument administered at pretest, posttest, and posttest + two weeks were then averaged, creating three measures of the degree to which participants successfully applied the reframing skill over time.

Results

A repeated measures ANOVA with between-subjects factors was conducted to perform an omnibus test of the hypothesis. For this analysis, the within-subjects factor was the average effectiveness of career thoughts as determined by the rating panel. The between-subjects factors were assigned treatment status (e.g., treatment or control group) and initial level of dysfunctional career thinking (e.g., high or low) as measured by the screening version of the CTI. The

preliminary analyses required for executing this test will now be detailed, followed by a review of the findings from the omnibus, individual factor, and pair wise tests.

Preliminary Analyses

Rater Agreement. Out of the raters' 2,064 judgments of effectiveness of reframed dysfunctional thoughts, 1,367 (66%) were exact agreement and 548 (27%) were partial agreement. Raters disagreed on only 150 ratings (7%) or extremely disagreed (i.e., opposite ends of the scale) for only 5 ratings (.2%) thus requiring input from the third rater. The weighted Kappa coefficient for the entire sample for the two primary raters was .43 ($p < .001$) indicated a modest amount of agreement between the two primary raters.

As the dependent measure for this study was decided a priori to be the mean ratings of the judges, the average intraclass correlation was derived. This coefficient for a two-way mixed effect model (absolute agreement definition) was calculated to be .56 ($p < .0001$) (Shrout & Fleiss, 1979). The two-way mixed model was selected as each of the two primary judges saw all of the reframes, thus they were considered a fixed effect while the ratings of reframes were a random effect.

Equivalence of Groups. As nonequivalent cohort groups were employed in this study, tests were conducted to insure that treatment and control groups were equivalent in terms of known variables. Pairwise comparisons between treatment and control using Student Neuman-Keuls' (Kirk, 1982) revealed there were no significant differences ($p < .05$) with respect to age, sex, self reported credit hours, year in school, lower vs. upper division status, OAQ, satisfaction with choice, and transfer status ([Table 4](#)). Thus, any difference between the treatment and control groups occurred due to chance factors alone.

Normality of Distribution. An important assumption of repeated measures ANOVA is normality of the distribution of the dependent measure. Thus, Kolmogorov-Smirnov (K-S) tests (Roscoe, 1975) were conducted on the three measures of reframe effectiveness for the entire sample ($n = 86$) ([Table 5](#)). Distributions were not normally distributed at pretreatment and two weeks post treatment ($K-S = .108, 86, p = .015$ and $K-S = .118, 86, p = .005$ respectively). Inspection of descriptives for the pretest measure indicated a positively skewed and somewhat leptokurtic distribution, while the delayed posttest measure distribution was less positively skewed, but more leptokurtic. Scrutiny of data indicated that outliers existed three standard deviations above the mean at pretest and delayed posttest; thus, these two participants were removed from the analysis. Unfortunately, an additional K-S test indicated continued non-normality ($K-S = .098, 84, p = .045$ and $K-S = .114, 84, p = .009$) ([Table 6](#)). However, inspection of descriptives of this smaller sample's pretest and delayed measures measure indicated a reduction in skewness and kurtosis.

In an effort to continue to improve normality, square root and logarithmic transformations were applied to both dependent measures. These additional K-S tests indicated poorer fit to the normal curve after transformation ($p = .000$ to $p = .039$). When sample data were separated by treatment and control status, pretest and delayed posttest measures were found to be normally distributed ([Table 7](#) and [Table 8](#)). Given the failure of data transformation to improve normality, the improvement in skewness and kurtosis of the total sample with the elimination of the outliers, and a return to normality when the sample was divided into treatment and control groups, it was decided that the analysis of untransformed dependent measures from the smaller data set could continue. However, the outcomes of the ensuing ANOVAs would need to be interpreted with caution due to the possibility of a violation of normality.

Sphericity and Homogeneity of Variance. As measures are repeated they are considered by default to not be independent; thus, Mauchly's test of sphericity (Edwards, 1993) was performed to insure equal correlations among treatment pairs. Furthermore, Levene's test (Draper, 1998) for homogeneity of variance was consulted at appropriate times. No violations of these assumptions were indicated at anytime throughout the analysis and specific results are included in the following findings.

Findings

The repeated measures ANOVA multivariate test indicated that while time and the interaction of time and treatment status captured significant amounts of the variance in reframe effectiveness, initial level of dysfunctional career thinking did not ([Table 9](#)). Time of data collection accounted for 28.7% of the variance in effectiveness of reframed dysfunctional career thoughts ($F = 15.726, 2, p < .001$). The interaction between time and treatment status accounted for 19.2% of the variance in reframed dysfunctional career thoughts ($F = 9.273, 2, p < .001$). Initial level of dysfunctional career thinking, as measured by the CTI screener, was not found to capture significant variance when combined with time and/or treatment status (1.4% of variance, $F = .568, 2, p = .569$ and .7% of variance, $F = .280, 2, p = .757$ respectively). Furthermore, the assumption of equal correlations among treatment pairs of the dependent measure was met ($W = .989, X^2 = .835, 2, p = .659$).

As the variable of initial level of dysfunctional career thoughts did not demonstrate a statistically significant effect, it was removed from the analysis. This decision dictated the inclusion of an additional subject for which CTI screening data was missing. Thus, an additional repeated measures ANOVA with only treatment status as the between subjects variable and time as the within subjects variable was conducted on the entire sample ([Table 10](#)). This yielded

differences in the amount of variance accounted for by the independent variables. In this new analysis, time accounted for 29% of the variance in effectiveness of reframed dysfunctional career thoughts ($F = 16.546, 2, p < .001$) and the interaction between time and treatment status accounted for 18.2% of the variance in reframed dysfunctional career thoughts ($F = 9.016, 2, p < .001$). Again, the assumption of equal correlations among treatment pairs of the dependent measure was met ($W = .987, X^2 = 1.031, 2, p = .59$).

Additional testing using ANOVA's with Student-Neuman-Keuls control of family wise error confirmed the within subjects effect of time ($F = 16.726, p < .001$) and interaction of Time and Treatment status ($F = 9.655, p < .001$). Furthermore, post hoc contrasts between pretest and posttest and posttest and delayed posttest were also found to be significant ($p < .01$ or better) ([Table 11](#)).

Given the interaction found between Time and Group, individual post hoc tests of reframe effectiveness between groups at each time were conducted using Student-Neuman-Keuls ([Table 12](#)). Levene's test for equality of error variances across dependent measures was met for these tests (smallest $p > .145$). No significant differences were found between treatment and control groups at pretest or delayed posttest ($F = 0.94, 1, p = .760$ and $F = .382, 1, p = .538$ respectively). However, a significant difference in reframe effectiveness was found between treatment and control conditions on immediate post-test ($F = 12.371, 1, p = .001$). This difference was also found to be practically significant with a moderate effect size of .77.

Post hoc contrasts of reframe effectiveness within control and treatment groups across time are summarized in [Table 13](#) and [Table 14](#) respectively. Here, practically significant effect sizes of .51 and .73 ($p < .01$ or better) were found between posttest and delayed posttest and pretest and delayed posttest for the control group. However, the contrast between pretest and

posttest for the control group was not found to be statistically significant. For the treatment group, statistically and practically significant differences occurred among all times. A large initial effect size of 1.0 was found between pretest and posttest ($p < .001$). However, a negative effect size of $-.40$ was found between posttest and delayed posttest ($p = .021$) indicating a loss in the effectiveness of the treatment group's reframing skill. Thus, an overall effect size between pretest and delayed posttest of $.60$ was found ($p = .001$).

The findings of this study are summarized by [Figure 1](#). Control and treatment groups started at pretest with statistically equivalent positions, with control group generating reframes of slightly greater effectiveness than treatment group participants. An immediate, after treatment posttest indicated a statistically and practically significant difference in the quality of reframes generated by the treatment group versus the control group. Two weeks after treatment, the difference in groups diminished as quality of reframes generated by the control group again slightly exceeded those of the treatment group by a statistically insignificant amount. This was due to a significant decrease in effectiveness of reframes generated by the treatment group and a significant increase in the effectiveness of the control group's reframes.

Discussion

This discussion of the findings of this study will begin with an acknowledgement of possible limitations, continue with an interpretation of results, and conclude with potential implications for research and practice.

Limitations

This study has several limitations in the form of threats to both internal and external validity. One threat to internal validity is the possibility of *nonequivalence of groups*, due to the assignment of cohorts, instead of individual participants to treatment or control groups (Smith &

Glass, 1987). While a difference in these groups may have contributed to the treatment effect, tests of equivalency on variables thought to be related to the dependent variable (e.g., level of career decidedness) yielded no significant differences between groups. Thus, nonequivalence of groups is a possible, yet unlikely threat to this study's findings.

A second threat to internal validity is the possibility of *treatment diffusion* occurring after the posttest. While assigning treatment and control groups by cohort should have limited this possibility, results indicate significant movement of the control group between posttest and delayed posttest measures. This may be due in part to all participants (treatment and control) receiving approximately five clock hours of instruction in the CIP approach (the theoretical basis of the CTI items used in study) (Peterson, Sampson, & Reardon, 1991; Peterson, Sampson, Reardon, & Lenz, 1996; Sampson, Lenz, Reardon, & Peterson, 1999) during the two weeks intervening the measures. This instruction was delivered using the text, *Career Planning and Development: A Comprehensive Approach* and a related workbook, (*Student Manual*; Reardon, Lenz, Sampson, & Peterson, 2000).

All sections of the course follow the same syllabus, use similar materials, and participate in like activities. Between the first and second data collection participants received instruction and participated in activities focusing on improvement of self-knowledge, including writing a career focused autobiography, clarifying their values, and completing the *Self-Directed Search* (Holland, 1994) and a skills assessment activity. After the second but before the third data collection, students were provided opportunities to broaden their occupational knowledge through an introduction to computer-assisted career guidance systems (e.g., Choices and SIGI PLUS or Discover). Students also participated in a career center tour and career library scavenger hunt designed to familiarize them with career information resources that could be used

in later course assignments. Prior to the third data collection, participants were also instructed in the CASVE cycle of career problem solving and career decision making. A chapter on “Exploring Metacognitions”, which covered the influence of metacognitions on career decision making, was taught after the study was concluded. The data collection schedule can be viewed in [Appendix D](#).

Reed, et. al. (2001) found significant decreases in scores on the CTI when it was used as a pre-test and posttest measure with this career development course. The greatest decrease in negative thinking was found in students with the highest initial levels of negative thinking. Two factors of the CTI, decision-making confusion and commitment anxiety, contributed significantly to the main effect and there were no significant interactions with race or gender. In short, Reed found that the course (which based upon individual student needs may or may not have included the CTI Workbook) can impact levels of dysfunctional career thinking as measured by the CTI. Reed noted several threats to the validity of this quasiexperimental study, specifically the absence of a control group. Furthermore, Reed pointed out that no single element of the full course, which contains some 60 separate elements, could be attributed with contributing to the observed effect. Thus this course, which lowered endorsement of dysfunctional career thoughts on the CTI, may also have transmitted knowledge or skills necessary for reframing of these thoughts, thereby contaminating the control group in this study.

Possible threats to external validity, which may limit the generalizability of this study’s findings, are *demand characteristics* and *testing effect*. Demand characteristics are cues in the environment to which subjects react (Smith & Glass, 1987). As these cues may not be present, in other environments, the desired effects may not be created outside of the experimental setting. While care was taken to avoid the influence of such cues by scripting confederate interactions

with participants, some cuing may simply be unavoidable. For example, the *Hawthorne Effect* may have impacted this study. That is, participants may have improved the effectiveness of their reframes due to just being observed by the investigator's confederates. Results may also have been generated by the *Testing Effect*, which occurs when participants learn by merely engaging in a task several times over a brief period. In short, this study may be confounded by several threats to internal and external validity. However, the results of this study, while potentially suspect, may still offer some interpretive value.

Interpretation of Results

The overall hypothesis of this study was that there would be no significant interaction between experimental group status (i.e., treatment vs. control) and level of dysfunctional career thinking (e.g., high vs. low) over time and college students' acquisition of the skill of reframing dysfunctional career thoughts as measured by reframe effectiveness. Based upon the findings of this study, this hypothesis can be rejected. While there was no effect or interaction of initial level of dysfunctional career thinking on effectiveness of reframed thoughts, there was a significant effect and interaction of treatment group and time on reframe effectiveness.

Both treatment and control groups began the study with near identical skill at reframing dysfunctional career thoughts into more effective ones. Judges rated their reframing efforts as being only slightly more effective than no "change at all" (i.e., a score of 0 on a -1 to +2 scale). Posttest measures showed that the CTI Workbook improved the ability of the treatment group to create more effective reframes of dysfunctional career thoughts. This improvement was found to be both a statistically and practically significant change both in terms of the standard deviation of the distribution of the measure and in terms of movement on the rating scale. Treatment participants moved approximately one-half of a rating point on the four-point rating scale after

exposure to CTI Workbook instructions and eight stimulus-reframing statements. There was no significant movement of the control group between pretest and posttest.

However, there was an apparent decay in this treatment effect between posttest and delayed posttest. This may be due to the absence of the CTI Workbook reframing stimulus statements in the delayed posttest. In essence, the first posttest for the treatment group demonstrated immediate skill learning, while the delayed posttest demonstrated reduced performance when participants were engaged in a generalized, delayed application of the reframing skill to an alternate problem set. Thus, treatment participants may have learned the skill given their immediate previous exposure to instruction; however, some of this learning was lost when applied to a novel situation. Despite the decay effect, a significant overall improvement in reframe effectiveness occurred in the treatment group between pretest and delayed posttest.

During the interval between posttest and delayed posttest, the control group also improved significantly in their reframing skill. In fact, the control group finished the study with reframes slightly more effective than those of the treatment group. As previously discussed, this finding may be due to the Hawthorne effect, treatment diffusion, or some other confound. Furthermore, it is possible that the different item set used in the delayed posttest was somehow more salient to the control group than the treatment group. Another possible interpretation is that practice at the skill of reframing in general may be as important as the CTI Workbook treatment. Finally, another interpretation of these findings may be that the treatment group was more confident in their ability to complete the task and became bored with a repetitive assignment. The control group, however, having less instruction in cognitive reframing, may have been more challenged by and motivated to engage the final reframing task.

In conclusion, at immediate posttest the CTI Workbook appears to be effective in instructing participants in the skill of creating more effective reframes of dysfunctional career thoughts. However, this effect may decay with time or as the learner is asked to generalize their learning to other dysfunctional thoughts without the benefit of supporting reframe stimulus statements. Furthermore, repeated practice at making a thought “more positive” may lead to an improvement in effectiveness of reframes of dysfunctional career thoughts regardless of treatment. The possible implications of these interpretations for research and practice will now be discussed.

Implications for Research and Practice

The primary purpose of this study was to determine the effectiveness of the CTI Workbook in conveying the skill of cognitive reframing to college students, thereby filling a gap in the literature noted in two reviews of the *Career Thoughts Inventory*. This gap has now been partially bridged as results demonstrate that the CTI Workbook can improve college students’ reframing skill as measured by reframe effectiveness. However, the question of the CTI Workbook’s effectiveness as a cognitive restructuring intervention has not been completely resolved as this study only focused on the cognitive skill of reframing (i.e., self-statement modification) and excluded the behavioral feedback necessary to achieve cognitive restructuring.

Thus, in an effort to isolate the skill of cognitive reframing this study disregarded an assumption of cognitive theory that modeling is a necessary, but not sufficient, condition for learning. Self-instructional rehearsal by the learner (acting) is also necessary for improved task performance. Thus, training tasks should actively involve the learner and require mental transformation, not simply rote learning and repetition. Furthermore, training must help learners identify and alter existing maladaptive thoughts into self-statements incompatible with the

previous ones, rather than just adding more positive self-statements. “What is required is modeling and practice in synthesizing and internalizing the meaning of one’s self-statements” (Meichenbaum & Cameron, 1974, p. 106). Thus, the Workbook’s behavioral components (i.e., the creation and execution of Individual Action Plans) should be included in the treatment condition of further research on its effectiveness. This may reinforce the cognitive component of the reframing skill, thereby extending and generalizing the workbook’s effect beyond the immediate and somewhat abstract learning context of this study.

As this study was an analog of how the CTI and Workbook are actually applied in counseling, an investigation of the effect of the CTI on the learning outputs of clients receiving individual case managed services from counselors may also be helpful. Through the counseling relationship, clients might be better oriented to and understand the need for completing the CTI Workbook (e.g., seeing their results compared to group norms), which in turn may impact client motivation for, and belief in, the intervention. Such a study could utilize the complete workbook, asking clients to both cognitively reframe their dysfunctional career thoughts and act on these new thoughts; thus, possibly resulting in the restructuring of clients’ schema through behavioral feedback.

Another goal of this study was to obtain information about factors that may influence the instruction of cognitive reframing. The improvement in control group reframes over time, may indicate that the eight items used in the delayed posttest may have somehow been more salient to the control group than the treatment group. Similarly, the decline in the effectiveness of the treatment group’s reframes may be due to the limited salience of the new items. Such a scenario would be important to explore given that clients apply the CTI Workbook to *Career Thoughts Inventory* items that they have “strongly agreed” or “agreed” with (i.e., indicated item saliency).

For example, Lange et al. (1998) designed a treatment that employed only positive self-instruction statements created by participants. The goal of the treatment was not to bolster self-esteem by offering the individuals new information about themselves, but rather to manipulate “...the salience of a subset of information already present within the person’s own thought system” (Lange et al., 1998, p. 226). Participants in the treatment condition showed significantly greater improvement on measures of self-esteem compared to control. Furthermore, intrinsically motivated participants showed greater improvement in self-esteem with respect to extrinsically motivated participants after engaging in self-instruction. Unfortunately, a separate treatment group of investigator-created, positive self-instructions to compare against the efficacy of participant created positive self-instructions was not included in the study.

To further investigate the effect of item salience it may be possible to create a computer-based form of the Workbook, which would allow for treatment based on CTI items endorsed as more negative by individual participants. Furthermore, treatment could be varied by using the externally sourced stimulus reframe statements in the CTI Workbook or through internally sourced stimuli created via instruction of participants in important reframing concepts consistent with the themes of reframing model (e.g., concreteness, time sensitivity). Such a study may more accurately simulate the actual manner in which the CTI Workbook is used and yield data that could inform future workbook improvements.

Conclusion

This study has shown that the cognitive component of the CTI Workbook alone can immediately improve the effectiveness of reframes of dysfunctional career thoughts. However, several questions remain about the longevity and generalization of learning, and whether or not additional variables such as salience of dysfunctional thoughts and externality of reframing

stimuli may influence workbook effectiveness. Thus, additional research should be conducted on the effects of both the cognitive and behavioral elements of the CTI Workbook. Regardless of the need for additional research, the cognitive component of the CTI Workbook alone is successful in instructing the skill of reframing dysfunctional career thoughts. Furthermore, this part of the workbook is likely to be effective regardless of a client's initial level of dysfunctional career thinking. Follow-up studies on the CTI Workbook might include a more functional study of clients receiving individual case managed services or the creation of a computer-based version, which allows manipulation of the variable of item salience.

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Table 1

A Schema for Effectiveness of Reframes of Cognitive Distortions Influencing Career Problem Solving and Decision Making

| | Less Effective Reframe | More Effective Reframe |
|-----------------------------|---|---|
| Locus of control | <ul style="list-style-type: none"> ▪ External focus ▪ Reactive or defensive posture ▪ Views self as powerless to change ▪ Attributes positive events to chance or behavior of others ▪ Defers responsibility to others ▪ Lacks self-confidence (trust in self) | <ul style="list-style-type: none"> ▪ Internal focus ▪ Proactive or open posture ▪ Views self as capable of change ▪ Attributes positive events to own behavior ▪ Assumes responsibility for self ▪ Has self-confidence (trust in self) |
| Explicitness | <ul style="list-style-type: none"> ▪ Little or no evidence goal or direction (no gap identified) ▪ Uses general language about planning (lacks detail) ▪ No evidence of a decision-making model ▪ Does not provide measurable objectives ▪ Views planning as unimportant ▪ Identifies 0 or 1 option for solving problem ▪ No evidence of evaluating decision making progress | <ul style="list-style-type: none"> ▪ Evidence of a goal or direction (gap identified) ▪ Has specific details about a plan to reach a goal ▪ Evidence of a decision-making model ▪ Provides measurable objectives ▪ Views planning as important ▪ Identifies multiple options for solving problem ▪ Evidence of evaluating decision making progress |
| Affect | <ul style="list-style-type: none"> ▪ Does not address emotional component ▪ Provides no strategy for emotional coping | <ul style="list-style-type: none"> ▪ Addresses emotional component ▪ Provides a strategy for emotional coping |
| Time Sensitivity | <ul style="list-style-type: none"> ▪ A sense of pessimism about the future ▪ Unrealistic expectation of time required to make a decision ▪ No acknowledgement of need for persistence and commitment ▪ Views decision-making as a one-time event | <ul style="list-style-type: none"> ▪ A sense of optimism about the future ▪ Realistic expectation of time required to make a decision ▪ Acknowledges need for persistence and commitment ▪ Acknowledges the ongoing process of decision-making |
| Word Choice | <ul style="list-style-type: none"> ▪ Uses absolute words (can't, never, right) ▪ Uses imperatives (should, must, have to) ▪ Uses simple reversal (worried → not worried) | <ul style="list-style-type: none"> ▪ Uses positive words (can, able) ▪ Does not use imperatives (should, must, have to) ▪ Uses more detailed language |
| Missing Key Point(s) | <ul style="list-style-type: none"> ▪ Reframe excludes a problematic element of original item ▪ Reframe does not address career-decision making domain | <ul style="list-style-type: none"> ▪ Reframe resolves problematic elements of the original item ▪ Reframe addresses career-decision making domain |
| Reframe Structure | <ul style="list-style-type: none"> ▪ Reframe does not follow the parallel structure of the original item | <ul style="list-style-type: none"> ▪ Reframe parallels structure of item (if-then, action-consequence) |

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Table 2

Demographic Comparison of Sample vs. University Population

| Spring 2002 | | | | | | |
|-------------------------|---------------|----------|--------------------|----------|---------------|--|
| | Sample | % | FSU UG Pop* | % | % Diff | |
| College Admitted | | | | | | |
| Undecided | 24 | 27.91 | 1846 | 7.31 | -20.61 | |
| Arts & Sciences | 7 | 8.14 | 5137 | 20.33 | 12.19 | |
| Business | 15 | 17.44 | 5200 | 20.58 | 3.14 | |
| Education | 2 | 2.33 | 1738 | 6.88 | 4.55 | |
| Human Sciences | 4 | 4.65 | 1733 | 6.86 | 2.21 | |
| Social Sciences | 19 | 22.09 | 2507 | 9.92 | -12.17 | |
| Criminology | 5 | 5.81 | 1181 | 4.67 | -1.14 | |
| Communication | 8 | 9.30 | 1498 | 5.93 | -3.37 | |
| Visual Arts & Dance | 1 | 1.16 | 850 | 3.36 | 2.20 | |
| Missing | 1 | 1.16 | 0 | 0.00 | -1.16 | |
| Nursing | | 0.00 | 576 | 2.28 | 2.28 | |
| Information Studies | | 0.00 | 696 | 2.74 | 2.74 | |
| Social Work | | 0.00 | 294 | 1.16 | 1.16 | |
| Motion Picture Film | | 0.00 | 128 | 0.51 | 0.51 | |
| Music | | 0.00 | 498 | 1.97 | 1.97 | |
| Theatre | | 0.00 | 330 | 1.31 | 1.31 | |
| Engineering | | 0.00 | 1058 | 4.19 | 4.19 | |
| | 86 | 100.00 | 25270 | 100.00 | | |
| Ethnicity | | | | | | |
| None | 0 | 0.00 | 188 | 0.74 | 0.74 | |
| American Indian | 0 | 0.00 | 102 | 0.40 | 0.40 | |
| Asian | 1 | 1.16 | 720 | 2.84 | 1.67 | |
| Black | 7 | 8.14 | 3094 | 12.19 | 4.05 | |
| Hispanic | 4 | 4.65 | 2297 | 9.05 | 4.40 | |
| White | 70 | 81.40 | 18685 | 73.63 | -7.77 | |
| Other | 4 | 4.65 | 0 | 0.00 | 0.00 | |
| Non-Resident Alien | 0 | 0.00 | 292 | 1.15 | | |
| | 86 | 100.00 | 25378 | 100.00 | | |
| Year in School | | | | | | |
| Freshman | 17 | 19.77 | 4802 | 18.92 | -0.85 | |
| Sophomore | 26 | 30.23 | 5357 | 21.11 | -9.12 | |
| Junior | 16 | 18.60 | 7131 | 28.10 | 9.49 | |
| Senior | 27 | 31.40 | 8088 | 31.87 | 0.47 | |
| | 86 | 100.00 | 25378 | 100.00 | | |
| Sex | | | | | | |
| Female | 57 | 66.28 | 14253 | 56.16 | -10.12 | |
| Male | 29 | 33.72 | 11125 | 43.84 | 10.12 | |
| | 86 | 100.00 | 25378 | 100.00 | | |

*source is FSU Institutional Research <http://www.ir.fsu.edu/>

Table 3
Rater Agreement During Training

| | Rater 1 & 2 | Rater 2 & 3 | Rater 1 & Rater 3 |
|-----------------------|-------------|-------------|-------------------|
| Agreement (0) | 15 | 12 | 16 |
| Partial Agreement (1) | 7 | 11 | 7 |
| Disagreements (2) | 2 | 1 | 1 |
| Total Ratings | 24 | 24 | 24 |
| Weighted Kappa | .46 | .29 | .50 |
| p | .000 | .012 | .000 |

Table 4

Tests of Comparison of Treatment and Control Group Demographics

| | df | F | p. |
|------------------------------|----|-------|-------|
| Age | 1 | .002 | .964 |
| Sex | 1 | .051 | .821 |
| Self Reported Credit Hours | 1 | 1.110 | .295 |
| Year in School | 1 | .753 | .388 |
| Lower vs. Upper Division | 1 | .000 | 1.000 |
| Vocational Decidedness (OAQ) | 1 | .322 | .572 |
| Satisfaction | 1 | .010 | .921 |
| Transfer | 1 | .602 | .440 |

Table 5
Descriptive Statistics for Reframe Effectiveness by Time (With Outliers, n = 86)

| Effect | Pre Tx | Post Tx | Post Tx + 2wks |
|---------------|------------|------------|----------------|
| Mean | .18265504 | .32049419 | .33696705 |
| Std Deviation | .239221795 | .283826139 | .267641292 |
| Skewness | 1.049 | .037 | .600 |
| SE Skewness | .260 | .260 | .260 |
| Kurtosis | 1.573 | -.529 | 1.475 |
| SE Kurtosis | .514 | .514 | .514 |
| K-S Statistic | .108 | .076 | .118 |
| K-S df | 86 | 86 | 86 |
| K-S P | .015 | .200* | .005 |

* lower bound of true significance

Table 6
Descriptive Statistics for Reframe Effectiveness by Time (Outliers Removed, n = 84)

| Effect | Pre Tx | Post Tx | Post Tx + 2wks |
|---------------|------------|------------|----------------|
| Mean | .16914683 | .31001984 | .32415675 |
| Std Deviation | .221718710 | .278410096 | .252711848 |
| Skewness | .883 | .046 | .407 |
| SE Skewness | .263 | .263 | .263 |
| Kurtosis | 1.152 | -.461 | 1.205 |
| SE Kurtosis | .520 | .520 | .520 |
| K-S Statistic | .098 | .081 | .114 |
| K-S df | 84 | 84 | 84 |
| K-S P | .045 | .200* | .009 |

* lower bound of true significance

Table 7
Descriptive Statistics for Reframe Effectiveness by Time after Outliers Removed
(Control Group, n = 42)

| Effect | Pre Tx | Post Tx | Post Tx + 2wks |
|---------------|-----------|-----------|----------------|
| Mean | .17658730 | .20982143 | .34126984 |
| Std Deviation | .19999778 | .26478122 | .24770083 |
| Skewness | .968 | .509 | .787 |
| SE Skewness | .365 | .365 | .365 |
| Kurtosis | 2.291 | .269 | .874 |
| SE Kurtosis | .717 | .717 | .717 |
| K-S Statistic | .121 | .111 | .114 |
| K-S df | 42 | 42 | 42 |
| K-S p | .129 | .200* | .200* |

* lower bound of true significance

Table 8
*Descriptive Statistics for Reframe Effectiveness by Time after Outliers Removed/
 (Treatment Group, n = 42)*

| Effect | Pre Tx | Post Tx | Post Tx + 2wks |
|---------------|-----------|-----------|----------------|
| Mean | .16170635 | .41021825 | .30704365 |
| Std Deviation | .24373109 | .25736476 | .25947735 |
| Skewness | .876 | -.363 | .113 |
| SE Skewness | .365 | .365 | .365 |
| Kurtosis | .664 | .112 | 1.599 |
| SE Kurtosis | .717 | .717 | .717 |
| K-S Statistic | .107 | .111 | .114 |
| K-S df | 42 | 42 | 42 |
| K-S p | .200* | .105 | .054 |

* lower bound of true significance

Table 9

Multivariate Test of Effects and Interactions of Time, CTI Score, and Treatment Status on Reframe Effectiveness (n = 83, Control: n = 42, Treatment: n = 41, Low CTI: n = 39, High CTI: n = 44)

| Effect | Wilks λ | F | df | p |
|---|-----------------|--------|----|------|
| Time | .713 | 15.726 | 2 | .000 |
| Time x Treatment Status | .808 | 9.273 | 2 | .000 |
| Time x CTI Score | .986 | .568 | 2 | .569 |
| Time x CTI Score x Treatment Status | .993 | .280 | 2 | .757 |

Table 10

Multivariate Test of Effects and Interactions of Time, CTI Score, and Treatment Status on Reframe Effectiveness (n = 84, Control: n = 42, Treatment: n = 42)

| Effect | Wilks λ | F | df | p |
|----------------------------|-----------------|--------|----|------|
| Time | .710 | 15.726 | 2 | .000 |
| Time x Treatment Status | .818 | 9.016 | 2 | .000 |

Table 11

Tests of Within Subjects Effects and Associated Contrasts for Time and Time by Treatment Status (n = 84, Control: n = 42, Treatment: n = 42)

| Effect | Contrast | F | df | p |
|-------------------------|-------------------------|--------|----|------|
| Time | | 16.726 | | .000 |
| | PreTx vs. PostTx | 20.378 | 1 | .000 |
| | PostTx vs. PostTx+2 Wks | 12.182 | 1 | .001 |
| Time x Treatment Status | | 9.655 | | .000 |
| | PreTx vs. PostTx | 11.897 | 1 | .001 |
| | PostTx vs. PostTx+2 Wks | 6.866 | 1 | .010 |

Table 12
Post Hoc Tests of Reframe Effectiveness between Groups by Time

| Time | Treatment \bar{X} (σ) (n = 42) | Control \bar{X} (σ) (n = 42) | $\Delta \bar{X}$ | df | F | p | ES |
|--------------------|--|--|------------------|----|--------|------|-----|
| PreTx | .162 (.244) | .177 (.200) | .015 | 1 | .094 | .760 | N/A |
| PostTx | .410 (.257) | .210(.265) | .2 | 1 | 12.371 | .001 | .77 |
| PostTx +2 Weeks | .307 (.259) | .341 (.248) | .034 | 1 | .382 | .538 | N/A |

Table 13

Post Hoc Contrasts of Reframe Effectiveness by Time for Control Group

| Time | $\Delta \bar{X} (\sigma)$ | S.E. \bar{X} | t | df | p | ES |
|---------------------------|---------------------------|----------------|--------|----|------|-----|
| PreTx – PostTx | .033 (.276) | .0426 | -.781 | 41 | .440 | .14 |
| PostTx – PostTx + 2 Weeks | .131 (.256) | .0396 | -3.321 | 41 | .002 | .51 |
| PreTx – PostTx + 2 Weeks | .164 (.262) | .0405 | -4.063 | 41 | .000 | .73 |

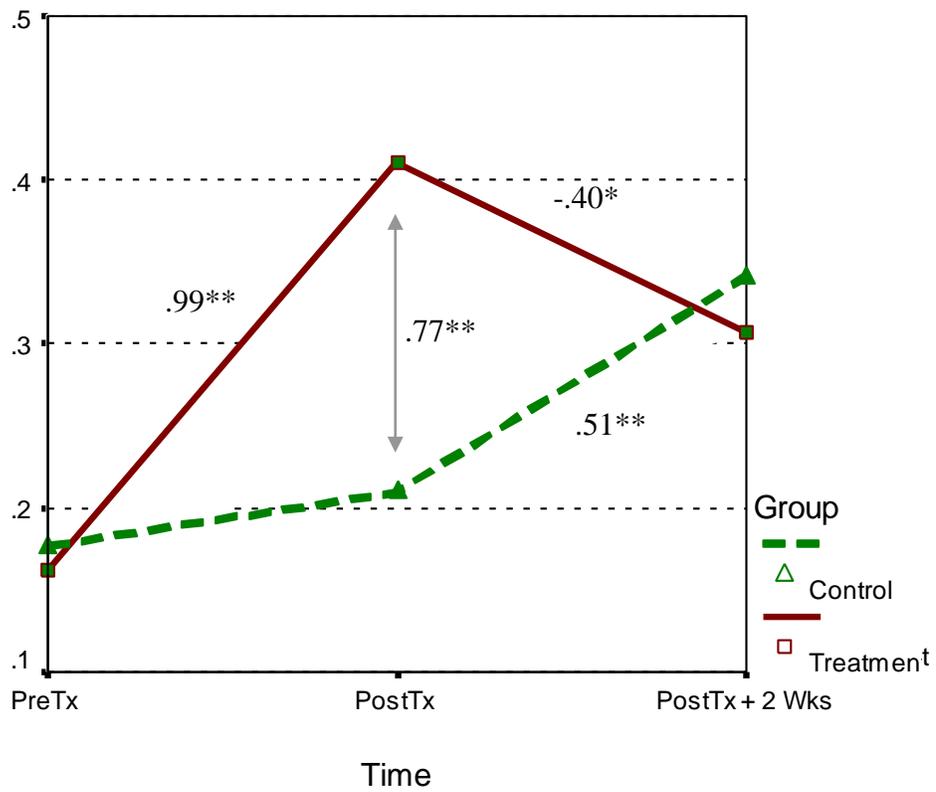
Table 14

Post Hoc Contrasts of Reframe Effectiveness by Time for Treatment Group

| Time | $\Delta \bar{X} (\sigma)$ | S.E. \bar{X} | t | df | p | ES |
|---------------------------|---------------------------|----------------|--------|----|------|------|
| PreTx – PostTx | .249 (.296) | .0456 | -5.446 | 41 | .000 | .99 |
| PostTx – PostTx + 2 Weeks | .103 (.278) | .0429 | 2.403 | 41 | .021 | -.40 |
| PreTx – PostTx + 2 Weeks | .145 (.259) | .0399 | -3.643 | 41 | .001 | .58 |

Figure 1

Effectiveness of Reframed Career Thoughts by Time and Treatment Condition
(*significant effect size, $p < .05$, **significant effect size, $p \leq .001$)



Appendix A
Informed Consent Form

Informed Consent

Career Thoughts Inventory Workbook Evaluation Project

I understand that I am being asked by the Florida State University Career Center to participate in a project evaluating the Career Thoughts Inventory Workbook. Darrin Carr, an instructor of SDS3340 at the FSU Career Center, is coordinating this project. James P. Sampson, Jr., Ph.D, is supervising him.

My participation in this project may help to improve the use of the Career Thoughts Inventory Workbook for students like myself enrolled in SDS 3340. There is no expected discomfort or risk associated with this evaluation project given previous experience with the workbook in SDS 3340. At the end of my participation, I will receive a debriefing providing greater detail about the purpose of this project and an opportunity to discuss the results of the Career Thoughts Inventory with my course instructor.

During the project, I will be asked to read and complete paper and pencil inventories and worksheets. Completing these worksheets will take approximately one hour and fifteen minutes over three class periods during the next four weeks. I will also be asked to provide my social security number so that the project coordinator can access data from my SDS 3340 Student Data Sheet and access data from the university registrar on the number of credit hours completed at Florida State University.

I realize that my participation in this task is completely voluntary and that I may withdraw from participation at any time. If I elect to not participate in this evaluation project there will be no penalty for nonparticipation/withdrawal from the evaluation project. Specifically, I understand that my course grade will not be impacted by my participation in this project. However, I do understand that I will be required to quietly remain in class during data collection, even if I decide not to participate.

I recognize that while my name will not be used on project materials, my social security number will be known only to the project coordinator. Other professionals involved in this evaluation project will not have access to information that identifies individual participants. Furthermore, I understand that confidentiality will be maintained and course instructors will not have access to information about my participation or my responses on workbook worksheets. Also, I understand that once data collection ends, my social security number will be replaced with a unique identifier to further ensure confidentiality. The data sheet matching my social security number to the unique identifying number for this evaluation will be destroyed as soon as all data are collected. The findings of this project will be reported in group, not individual, form to further protect confidentiality.

If I have questions about the design of this evaluation project, I will contact Darrin Carr at 644-6431 or dcarr@admin.fsu.edu.

_____ I agree to participate in the CTI Workbook Evaluation Project and grant the project coordinator access to my SDS 3340 Student Data Sheet and university registrar data on the number of credit hours completed at Florida State University.

_____ I do not agree to participate in the CTI Workbook Evaluation Project.

My Printed Name: _____

My Signed Name: _____

My Social Security Number: _____

Today's Date: _____

Appendix B

Student Data Sheet and Addendum

SDS 3340 STUDENT DATA SHEET

Name _____ Date _____

Soc. Sec. No. _____ Expected Graduation Date _____

FOR QUESTIONS 2-3, 10-11, AND 16, PLACE THE NUMBER IN THE SPACE IN THE RIGHT MARGIN WHERE INDICATED:

1. Major (print major or "undecided")....1. _____

2. Age.....2. _____

3. Sex (1 = Male 2 = Female).....3. _____

4. Advisor..... _____

5. No. of Hours This Semester _____

6. Campus Address.....

7. Local Telephone..... _____

8. E-mail Address (if any).. _____

9. Permanent Address.....

10. Ethnic Group.....10. _____

- | | |
|----------------------|--------------------------|
| 1. American Indian | 5. Caucasian |
| 2. Asian-American | 6. Other _____ |
| 3. African-American | 7. Prefer not to respond |
| 4. Hispanic-American | |

11. Year in school.....11. _____

- | | |
|--------------|---------------------|
| 1. Freshman | 4. Senior |
| 2. Sophomore | 5. Graduate Student |
| 3. Junior | 6. Other _____ |

(over)

12. Are you active in campus organizations? Which?

13. Outline your previous employment or work experience.

14. List all the occupations you are considering right now.

| | |
|-------|-------|
| <hr/> | <hr/> |
| <hr/> | <hr/> |
| <hr/> | <hr/> |

15. Which occupation is your first choice? (If undecided, write "undecided.")

16. How well satisfied are you with your first choice?.....16._____

1. Well satisfied with choice
2. Satisfied, but have a few doubts
3. Not sure
4. Dissatisfied and intend to remain
5. Very dissatisfied and intend to change
6. Undecided about my future career

17. How did you learn of this course?_____

18. What are your objectives in taking this course?_____

Soc. Sec. No. _____

19. Which statement best describes you? (1 or 2) _____

1 = After high school, I first attended college at Florida State University.

2 = After high school, I attended another community college, college, or university before coming to Florida State University.

Appendix C

Data Collection, Control and Treatment Instruments

Screening Instrument

Career Thoughts Inventory (32 Items)

This inventory has been developed to help people learn more about the way they think about career choices. Below you will find statements describing thoughts that some people have when considering career choices. Please answer each statement openly and honestly as it describes you.

Directions:

Read each statement carefully and indicate the degree to which you agree or disagree with each item by bubbling in the answer that best describes you on the red bubble sheet. Do not omit any items.

A=Strongly Disagree **B=Disagree** **C=Agree** **D=Strongly Agree**

If you make a mistake or change your mind completely erase your first response, then bubbling the new response.

1. No field of study or occupation interests me.

---- remainder of items deleted to maintain test security ----

Instructions

1. Read the first item listed on the page below labeled “Old Career Thought.”
2. Next, revise the first old career thought to be more positive on the line labeled “New Career Thought.”
3. Repeat step 2 for items 2 through 8.

Eight Career Thoughts

1. **Old Career Thought:** I get upset when people ask me what I want to do with my life.

New Career Thought: _____

2. **Old Career Thought:** I don't know how to find information about jobs in my field.

New Career Thought: _____

3. **Old Career Thought:** I worry a great deal about choosing the right field of study or occupation.

New Career Thought: _____

4. **Old Career Thought:** I'll never understand enough about occupations to make a good choice.

New Career Thought: _____

5. **Old Career Thought:** My age limits my occupational choice.

New Career Thought: _____

6. **Old Career Thought:** The hardest thing is settling on just one field of study or occupation.

New Career Thought: _____

7. **Old Career Thought:** Finding a good job in my field is just a matter of luck.

New Career Thought: _____

8. **Old Career Thought:** Making career choices is so complicated, I am unable to keep track of where I am in the process.

New Career Thought: _____

(When finished please turn face down on your desk and continue on to Workbook).

SSN: _____

A Workbook for the Career Thoughts Inventory

CONTROL VERSION

(This text added after study for clarity)

Instructions

1. Read the first item listed on the page below labeled “Old Career Thought.”
2. Now read the paragraph below it.
3. Next, revise the first old career thought to be more positive on the line labeled “New Career Thought.”
4. Repeat steps 2 and 3 for items 2 through 8.

Eight Career Thoughts

1. Old Career Thought: I get upset when people ask me what I want to do with my life.

- ▲ To relax, sit or lie quietly in a comfortable position and close your eyes. Relax all of the muscles of your body. Start at your feet and progress up through your face. Remind yourself that various parts of your body are beginning to feel heavy and relaxed. With practice, relaxation should come with little effort. Practice once or twice daily but not within 2 hours after a meal since digestion seems to interfere with the relaxation response.

New Career Thought: _____

2. Old Career Thought: I don't know how to find information about jobs in my field.

- ▲ Work on the basis of what you currently know about jobs. You most likely know about the World of Work through interacting with others and accessing the popular media. Besides, what is most important is what is real for you as opposed to what other people may think is true.

New Career Thought: _____

3. Old Career Thought: I worry a great deal about choosing the right field of study or occupation.

- ▲ It is common to worry about making important decisions. People sometimes worry less when they talk to a friend of family member about how they are feeling. Use your worry as a source of energy to move forward in choosing a field of study or occupation.

New Career Thought: _____

4. Old Career Thought: I'll never understand enough about occupations to make a good choice.

- ▲ It is possible to take what you currently know about occupations and identify new opportunities which you can pursue. It is also possible for you to learn how to compare occupations. For example, taking a variety of courses may help you to consider different career possibilities.

New Career Thought: _____

5. Old Career Thought: My age limits my occupational choice.

- ▲ We are all familiar with stereotypes that say that occupations are appropriate for people from certain groups. If your group membership plays a role in identifying appropriate occupations, it is important to understand your rights and responsibilities under federal anti-discrimination laws.

New Career Thought: _____

6. Old Career Thought: The hardest thing is settling on just one field of study or occupation.

- ▲ Often our worries about completing a task can lead us to believe it is much harder than it actually is. When trying to complete a complex task like choosing an occupation, simply break the task into smaller steps. These smaller tasks will be less intimidating and easier to complete.

New Career Thought: _____

7. Old Career Thought: Finding a good job in my field is just a matter of luck.

- ▲ The meaning of the phrase “good job” varies from person to person. Ask yourself, “What makes a job good for me?” Your answer to this question will most likely involve your values or what is important to you. Do you want extra vacation time to spend with your friends and family? Do you want a job that requires you to travel? Knowing your values will help you to find a job that is good for you.

New Career Thought: _____

8. Old Career Thought: Making career choices is so complicated, I am unable to keep track of where I am in the process.

- ▲ The process of career decision making is complex. It may be also helpful for you to talk to others about how they managed their career decisions. There are also many resources available that can guide you through the decision-making process.

New Career Thought: _____

Instructions

1. Read the first item listed on the page below labeled “Old Career Thought.”
2. Next, revise the first old career thought to be more positive on the line labeled “New Career Thought.”
3. Repeat step 2 for items 2 through 8.

Eight Career Thoughts

1. **Old Career Thought:** I get upset when people ask me what I want to do with my life.

New Career Thought: _____

2. **Old Career Thought:** I don't know how to find information about jobs in my field.

New Career Thought: _____

3. **Old Career Thought:** I worry a great deal about choosing the right field of study or occupation.

New Career Thought: _____

4. **Old Career Thought:** I'll never understand enough about occupations to make a good choice.

New Career Thought: _____

5. **Old Career Thought:** My age limits my occupational choice.

New Career Thought: _____

6. **Old Career Thought:** The hardest thing is settling on just one field of study or occupation.

New Career Thought: _____

7. **Old Career Thought:** Finding a good job in my field is just a matter of luck.

New Career Thought: _____

8. **Old Career Thought:** Making career choices is so complicated, I am unable to keep track of where I am in the process.

New Career Thought: _____

(When finished please turn face down on your desk and continue on to Workbook).

SSN: _____

A Workbook for the Career Thoughts Inventory

TREATMENT VERSION

(This text added after study for clarity)

Instructions for Challenging and Altering Negative Career Thoughts

This section of the workbook is intended to help **challenge** and **alter** negative career thoughts. Key words that make career thoughts more negative are underlined. Such key words include: *no*, *all*, *can't*, *never*, *whenever*, and *always*. In most cases, these key words make it more likely that the statements are false. Use these key words as "red flags" to signal that you are thinking negatively.

After each Old Career Thought, brief statements are presented to help you evaluate career thoughts. Written by practicing career counselors, these statements:

- ▲ Show how negative thoughts complicate and interfere with the ability to make career decisions
- ▲ Provide information on how to better explore career choices and make decisions

1. Consider the following "Old Career Thought":

Old Career Thought: *The views of important people in my life interfere with choosing a field of study or occupation.*

2. This statement below is intended to help you **challenge** your old way of thinking about your career decisions.

- ▲ *Sometimes the views of important people in your life can make it difficult to choose a field of study or an occupation. Some of the information you get from important people in your life may be useful, but some may make you more confused or uncertain. It is possible to balance the views of others with your views to make a career choice.*

3. Now reread the old career thought:

Old Career Thought: *The views of important people in my life interfere with choosing a field of study or occupation.*

Ask yourself: "Does this thought still make sense? Does this thought help me make a good decision?"

This old career thought might be more helpful if it was **altered** to:

New Career Thought: *I will listen to my parents' views about occupations, but I need to make a choice that is good for me.*

4. For each of the following 8 items,

- a. Read the old career thought
- b. Then read the statement **challenging** the old career thought
- c. Then **alter** the old career thought by writing down the more helpful, new career thought in the blanks provided.

Eight Career Thoughts

1. **Old Career Thought:** I get upset when people ask me what I want to do with my life.

- ▲ Being asked about your career plans may be uncomfortable. However, gaining life experience and learning more about yourself and the opportunities available will help you feel more confident in the decisions you will need to make. Then you will be able to answer questions about your plans with more confidence, based on the information you have.

New Career Thought: _____

2. **Old Career Thought:** I don't know how to find information about jobs in my field.

- ▲ It may take time and some special fact-finding skills to learn about jobs in your field. You can develop a systematic plan for researching your career options and learn how to make effective use of library resources and personal contacts.

New Career Thought: _____

3. Old Career Thought: I worry a great deal about choosing the right field of study or occupation.

- ▲ Looking for one "right" choice may only increase your anxiety and make it more difficult to think clearly. Every choice carries some uncertainty and risk. You may need to go ahead and make a choice and take action on it in spite of this uncertainty. It is possible that there are several options for you that would be a good fit with your values, interests, and skills, as opposed to only one "right" choice. Having a first choice as well as several attractive alternatives is actually a smart strategy in career problem solving.

New Career Thought: _____

4. Old Career Thought: I'll *never* understand enough about occupations to make a good choice.

- ▲ It is true that there is often a lot of occupational information to consider in making career choices. The word "never" may make the task seem hopeless and keep you from doing what is necessary to move forward with your decision-making. There are resources available that will allow you to research occupations so that eventually you will feel comfortable enough with the amount of information you have to make a choice.

New Career Thought: _____

5. Old Career Thought: My age limits my occupational choice.

- ▲ It is possible that your age limits some of your choices. Your educational background, skills, past experience, and personal qualities are all considered by prospective employers. You may find it helpful to focus on your strengths when considering your options, rather than your limitations.

New Career Thought: _____

6. Old Career Thought: The hardest thing is settling on just one field of study or occupation.

- ▲ There is most probably more than one occupation that fits your values, interests, and skills. In fact, you may change occupations successfully several times throughout your life. Every person's career path is unique, and you can work on creating a career that combines many things that you enjoy and that are important to you in life.

New Career Thought: _____

7. Old Career Thought: Finding a good job in my field is just a matter of luck.

- ▲ Sometimes people talk about careers in terms of luck and other outside forces over which they have no control. But when they really analyze it, career planning is not so mysterious. Thinking that only luck is involved may encourage you to do nothing when you could be taking steps to help yourself. If you stay focused on what you really like and want in your career, and if you practice good job hunting skills, your time and effort eventually will probably lead to job offers that fit some or all of your requirements.

New Career Thought: _____

8. Old Career Thought: Making career choices is so complicated, I am unable to keep track of where I am in the process.

- ▲ Career decision making can be difficult at times, but ultimately your career journey is in your hands and you can take charge of the process. It is important for you to stay focused on where you are in your decision making. Think about what you need to do next, when you need to act, and how well your career planning is going at any one time. By setting goals, keeping records, and concentrating on how you are using your time, you can keep track of the process.

New Career Thought: _____

(Delayed Post Test for Treatment and Control Conditions)

Instructions

1. Read the first item listed on the page below labeled "Old Career Thought."
2. Next, revise the first old career thought to be more positive on the line labeled "New Career Thought."
3. Repeat step 2 for items 2 through 8.

Eight Career Thoughts

1. **Old Career Thought:** My achievements must surpass my mother's or father's or my brother's or sister's.

New Career Thought: _____

2. **Old Career Thought:** I know so little about the world of work.

New Career Thought: _____

3. **Old Career Thought:** I'm embarrassed to let others know I haven't chosen a field of study or occupation.

New Career Thought: _____

4. **Old Career Thought:** Choosing an occupation is so complex, I'll never be able to make a good choice.

New Career Thought: _____

5. **Old Career Thought:** There are so many occupations that I like, I'll never be able to sort through them to find ones I like better than others.

New Career Thought: _____

6. **Old Career Thought:** I need to choose a field of study or occupation that will please the important people in my life.

New Career Thought: _____

7. **Old Career Thought:** I'm afraid if I try out my chosen occupation, I won't be successful.

New Career Thought: _____

8. **Old Career Thought:** I can't trust that my career decisions will turn out well for me.

New Career Thought: _____

Appendix D
Data Collection Schedule

**Proposed Data Collection Schedule
from Treatment and Control Groups
CTI Workbook Evaluation**

| | | First Data Collection (Class Week 2) | Second Data Collection (Class Week 3) | Third Data Collection (Class Week 5) |
|----------------------------------|---------------------|--|---|--|
| Section 1/Lenz | 9.30 – 10:45 TR | 1/15 Tue | 1/22 Tue | 2/5 Tue |
| Section 2/Reed | 9.30 – 10:45 MW | 1/14 Mon | 1/23 Wed | 2/6 Wed |
| Section 3/Rearдон | 11:00 – 12:15 TR | 1/15 Tue | 1/22 Tue | 2/5 Tue |
| Section 4/Vernick | 11:00 – 12:15 MW | 1/14 Mon | 1/23 Wed | 2/6 Wed |
| Section 5/Sampson | 3:15 – 4:30 MW | 1/14 Mon | 1/23 Wed | 2/6 Wed |
| | | | | |
| Required Materials | | Script – Time 1 Informed consent form Additional Data Form 32 item screener Red bubble sheet | Script – Time 2 Pretest/Workbook using Items 33 - 40 | Script – Time 3 Post Test using Items 41-48 Regular CTI Debriefing Handout |
| Approximate Time Required | | 15 minutes | 30 minutes | 20 minutes |
| Outputs | | Responses from items 1-32 Demographic data Data: First time in school vs. transfer status, year in school Data: FSU hours completed | Cognitively restructured statements from items 33-40 (Pre treatment) Cognitively restructured statements from items 33-40 (Post treatment) | Cognitively restructured statements from items 41-48 (Post treatment) |
| Course Topic | | Values Clarification | Skills Identification | Decision Making |

Data Collection Schedule
from Treatment and Control Groups
CTI Workbook Evaluation

First Data Collection

| Section | Confederate | Day | Time |
|--------------------------|--------------------|------------|-------------|
| Section 1/Lenz | James Murray | 1/15 Tue | 10:25 am |
| Section 2/Reed | Scott Arkin | 1/14 Mon | 10:25 am |
| Section 3/Reardon | Selah Rhoden | 1/15 Tue | 11:55 am |
| Section 4/Vernick | Page Purgar | 1/14 Mon | 11:55 am |
| Section 5/Sampson | Scott Arkin | 1/14 Mon | 4:10 pm |

Second Data Collection

| Section | Confederate | Day | Time |
|--------------------------|--------------------|------------|-------------|
| Section 1/Lenz | James Murray | 1/22 Tue | 10:10 am |
| Section 2/Reed | Scott Arkin | 1/23 Wed | 10:10 am |
| Section 3/Reardon | Selah Rhoden | 1/22 Tue | 11:40 am |
| Section 4/Vernick | Page Purgar | 1/23 Wed | 11:40 am |
| Section 5/Sampson | Scott Arkin | 1/23 Wed | 3:55 pm |

Third Data Collection

| Section | Confederate | Day | Time |
|--------------------------|--------------------|------------|-------------|
| Section 1/Lenz | James Murray | 2/5 Tue | 10:20 am |
| Section 2/Reed | Scott Arkin | 2/6 Wed | 10:20 am |
| Section 3/Reardon | Selah Rhoden | 2/5 Tue | 11:50 am |
| Section 4/Vernick | Page Purgar | 2/6 Wed | 11:50 am |
| Section 5/Sampson | Scott Arkin | 2/6 Wed | 4:05 pm |

Appendix E

Confederate Scripts

Script (First Data Collection)

Section: _____ Confederate Name: _____

Please do not read evaluation materials or deviate from the script. Please minimize all communication with participants and document any exchanges at the end of this script.

Materials: This Script
Evaluation Packet
Blue Informed Consent Form
White Career Thoughts Inventory 32 Item Form
Red Optical Scan Forms
Number 2 Pencils (additional pencils can be obtained from Jamie)

Time Required: 15 minutes

Step 1: Introduction

Good Morning/Afternoon. My name is _____ and I will be working with you during the next few weeks to evaluate a workbook on career thoughts that you may use later in this course.

It is important that you listen closely, and carefully follow my instructions for the next few minutes.

If room is quiet and participants attentive continue with Step 2.

Step 2: Pass out the premade participant packets and a pencil to each student in the room.

Please leave this packet face down until I ask you to turn them over.

Does everyone have a packet and a pencil?

If yes continue with Step 3.

Step 3: Participants complete informed consent form.

Please turn your packets over and remove the paper clip.

In front of you is a blue form entitled "Informed Consent." (*Hold up form*)

Please take a few minutes to read this form.

(pause)

Your decision to participate or not to participate in this evaluation project will not impact your course grade as your instructors will not be able to access your individual data.

You are not being graded on this task, your individual performance is not being evaluated, and all information collected during this evaluation will be completely confidential.

This form also serves as your permission for us to use personal information, such as your demographic information (e.g., sex and year in school) and standardized test scores in the evaluation of the workbook.

If you are willing to participate in the project please check "agree" and then print and sign your name.

Do not forget to neatly write your social security number in the blank provided and date the form.

If you choose not to participate, check “do not agree” then sign and print your name and date the form. Regardless of your decision, please remain seated quietly at your desk for the remainder of the class.

(pause)

Is everyone finished completing the blue informed consent form?

If yes, continue to step 4

Step 4: Participants complete CTI 32 Item Form.

Next, please find the red bubble form. *(Hold up form)*

Do not write your name on this form.

(pause)

Turn to the side of the form entitled “Florida State University- Evaluation Services” *(Hold up form)*

In the upper right hand corner of the page is a rectangle that says “Identification No.” *(Hold up form)*

Carefully and neatly write in your social security number in the spaces provided.

Now, bubble in your social security number. Use the #2 pencil provided, completely filling in only one circle for each digit. If you make an error completely erase the mistake before filling in another circle.

(pause)

Now find the white document entitled “Career Thoughts Inventory.” *(Hold up form)*

Note that there are two pages containing 32 statements. *(Hold up form)*

Please read the directions at the top of the first page. Pay close attention to the rating scale:
A=Strongly Disagree B=Disagree C=Agree D=Strongly Agree.

(pause)

When you are finished reading the directions please respond to the 32 items using the red bubble sheet.

(pause until a participant appears to be finished)

When you are finished, make sure you have bubbled in each of the 32 items completely.

Please paper clip the four sheets of paper together.

Make sure the blue “Informed Consent” form is on top. *(Hold up form)*

Then turn the packet into me as you quietly leave the room.

(Quickly proof social security numbers on blue form and red bubble form for clarity before you allow the participant to leave the room.)

Thank you for your help in this evaluation project.

Step 5: Document any deviations from this script or questions asked by participants below.

If no deviations or questions occurred, write “NONE.”

Step 6: Place this document and the participant packets in the large envelope provided.

Please give this envelope to Darrin Carr or place it in the bin labeled Darrin’s CTI Workbook Evaluation on top of the CA Mailboxes in the Career Advisor office.

Script (Second Data Collection)

Section: _____ Confederate Name: _____

Please do not read evaluation materials or deviate from the script. Please minimize all communication with participants and document any exchanges at the end of this script.

Materials: This Script
Pink Paper
White Career Thoughts Inventory Workbook Form
Number 2 Pencils (additional pencils can be obtained from Jamie)

Time Required: 30 minutes

Step 1: Introduction.

Good Morning/Afternoon. My name is _____ and I will be working with you today to evaluate a workbook on career thoughts that you may use later in this course.

It is important that you listen closely, and carefully follow my instructions for the next few minutes.

If you previously declined to participate in the evaluation of the workbook or if you have not completed a blue informed consent form (*hold up sample*), please use the remainder of this class period to quietly study Chapter 2 of your textbook or work on your Autobiography assignment, which can be found on page 1 of your student workbook.

Step 2: Pass out the white workbooks, pink papers, and a pencil to each student in the room.

Please leave these packets face down until I ask you to turn them over.

Does everyone have a packet and a pencil or pen to write with?

If yes continue with Step 3.

Step 3: Students write their social security numbers on workbook.

Please turn your packets over.

In front of you is a pink paper and white workbook entitled “A Workbook for the Career Thoughts Inventory” (*Hold up form*)

You will find a blank in the upper left corners of both the pink paper and white workbook labeled “SSN:”

In both of these blanks, carefully print your social security number.

(pause)

Has everyone written their social security number on both the pink paper and the white workbook?

If yes continue with Step 4.

Step 4: Students complete the pink paper and the Workbook.

Now please read and follow the instructions on the pink paper (*Hold up pink paper*).

When you are finished with the pink paper, please turn it face down on your desk.

Once the pink paper is turned face down, please read and follow the instructions in the white workbook. I will walk around and collect the pink papers as you finish.

When you are finished you should have filled in all of the blanks on the pink paper and in the workbook.

Since we are evaluating the workbook, I cannot give you further instructions or answer your questions. Simply try your best to follow the directions. Remember, we are evaluating the workbook not you.

(Pause until a student appears to be finished with the pink paper, then quietly collect pink papers)

(Pause until a student appears to be finished with the white workbook)

When you are finished with the white workbook, make sure all of your writing is neat and that you have written a response in each of the blanks.

You may then give me your completed workbook and quietly leave the classroom. Those not participating in the evaluation can also quietly leave the classroom at this time.

(Quickly proof social security number on front of workbook for clarity before you allow the participant to leave the room.)

Thank you for your help.

Step 5: Document any deviations from this script or questions asked by participants below.

If no deviations or questions occurred, write “NONE.”

Step 6: Place this document and the participant packets in the large envelope provided.

Please give this envelope to Darrin Carr or place it in the bin labeled Darrin’s CTI Workbook Evaluation on top of the CA Mailboxes in the Career Advisor office.

Script (Third Data Collection)

Section: _____ Confederate Name: _____

Please do not read evaluation materials or deviate from the script. Please minimize all communication with participants and document any exchanges at the end of this script.

Materials: This Script
Yellow Form
Regular Career Thoughts Inventory
Debriefing Form
Number 2 Pencils (additional pencils can be obtained from Jamie)

Time Required: 30 minutes

Step 1: Introduction

Good Morning/Afternoon. My name is _____ and I will be working with you today to evaluate a workbook on career thoughts that you may use later in this course.

It is important that you listen closely and carefully follow my instructions for the next few minutes.

Step 2: Pass out the yellow form and a pencil to each student in the room.

Please leave these yellow sheets face down until I ask you to turn them over.

Does everyone have a yellow sheet and a pencil?

If yes continue with Step 2.

Step 3: Students write their social security numbers on the yellow form.

Please turn over
the yellow paper.

Find the blank in the upper left corner labeled "SSN:".

In this blank, carefully print your social security number.

(pause)

Has everyone written their social security number?

If yes, continue with Step 3.

Step 4: Students complete the yellow form.

When I ask you to begin, please read and follow the instructions. When you are finished you should have filled in blanks for each of the 8 items on the page. Make sure all of your writing is neat. And that you have written a response for each of the 8 items in the blanks provided.

Since we are evaluating the workbook, I can not give you further instructions or answer your questions. Simply try your best to follow the directions. Remember, we are evaluating the workbook not you.

When you are finished, you may give me your completed yellow sheet and quietly leave the classroom. On your way out I will give you a debriefing packet and a Career Thoughts Inventory you are to complete and bring

to your instructor conference. Be sure to complete the Career Thoughts Inventory before you read the debriefing packet.

Please begin work on the yellow sheet.

(pause until a participant appears to be finished)

When you are finished, make sure all of your writing is neat. And that you have written a response for each of the 8 items in the blanks provided.

(Quickly proof social security number on front of the yellow sheet for clarity before you allow the participant to leave the room.)

Thank you for your help.

Step 5: Document any deviations from this script or questions asked by participants below.

If no deviations or questions occurred, write “NONE.”

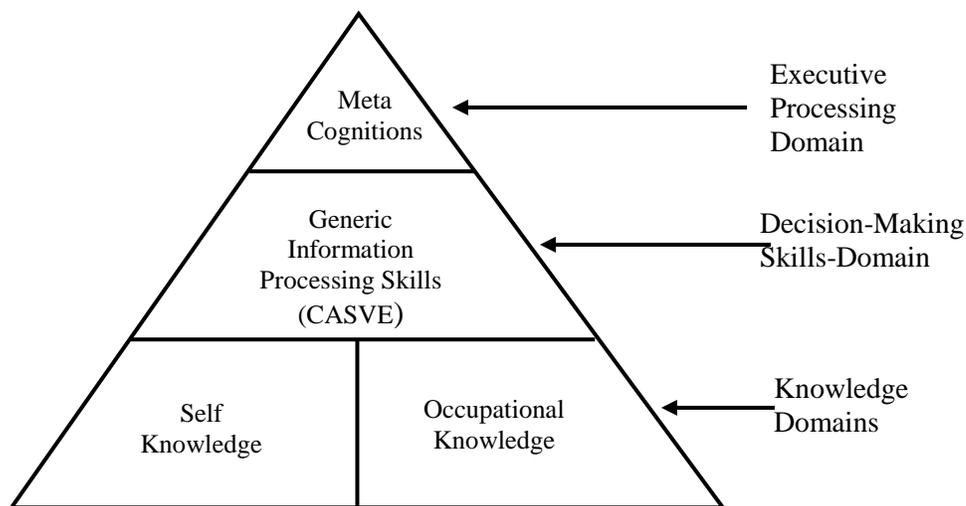
Step 6: Place this document and the participant packets in the large envelope provided.

Please give this envelope to Darrin Carr or place it in the bin labeled Darrin’s CTI Workbook Evaluation on top of the CA Mailboxes in the Career Advisor office.

Appendix F
Debriefing Materials

This concludes your participation in the Career Thoughts Inventory (CTI) Workbook Evaluation Project! (All Participants)

The purpose of this project was to evaluate how effective the Career Thoughts Inventory Workbook is in helping SDS3340 students learn how to challenge and alter negative career thoughts.



Negative career thoughts are a kind of *metacognition* that resides in the *Executive Processing domain* at the top of the *Pyramid of Information Processing* (see right). These negative thoughts can weigh heavily on the rest of the pyramid, making it difficult for students to make decisions, learn about self knowledge, or find out about occupation/education options.

Used with the 48 item Career Thoughts Inventory, the CTI Workbook was designed to help reduce the impact of negative career thoughts by teaching career decision makers how to actively change their negative thoughts or *negative self talk*. More positive self talk can encourage more active career exploration and decision-making behaviors, which in turn fosters more positive thoughts. Thus, a cycle of positive thinking and behavior is created, which increase the chance of successful career problem solving.

A more everyday example of how negative thoughts can impact performance can be found in the sports world. Which person do you think is more likely to win a match with top ranked tennis player Venus Williams? The one who thinks, "I'm a poor tennis player, there is no way I can beat Venus Williams!" or the person who thinks, "Venus may be a higher ranked player than I am, but with practice I have the potential to be as good as she!"?

Person 1: "I'm a poor tennis player, there is no way I can beat Venus Williams!"

Person 2: "Venus may be a higher ranked player than I am, but with practice I have the potential to be as good as she!"

Notice that Person 1 expresses a poor self concept "I'm a poor tennis player" and uses absolute thinking "no way." Person 2, on the other hand, acknowledges that the road to beating Venus Williams will be difficult "may be a higher ranked player", but identifies an action "with practice" and thinks positively about her ability, "I have the potential."

Turn the page to learn more about your role in evaluating the Career Thoughts Inventory Workbook for the SDS3340 class.

Your Role in Evaluating the CTI Workbook (Control Group)

In class, you read paragraphs that were created to sound like plausible advice from friends on how to challenge and alter negative career thoughts. However, the advice focused on the “wrong part” of the negative thought. For example, in item one below the advice from “a friend” is about controlling “anxiety.” However, the suggestions from counselors in the CTI Workbook focused on a lack of experience and confidence.

When looking at post test measures (such as the last 8 items you wrote today), we are hoping to find career thoughts that are both of better quality and more positive from those students who read the real CTI Workbook compared to those students who read the advice from friends. **It is very important that you read the suggestions in the What Other Students Saw column.** If you have any questions about the Career Thoughts Inventory speak with your small group leader or section leader. If you have questions about the Career Thoughts Inventory Work book Evaluation Project, contact Darrin Carr at dcarr@admin.fsu.edu.

| <u>What You Saw</u> <u>(i.e., possible advice from friends)</u> | <u>What Other Students Saw</u> <u>(i.e., suggestions from career counselors in the Career Thoughts Inventory Workbook)</u> |
|--|---|
| <p>1. I get upset when people ask me what I want to do with my life. To relax, sit or lie quietly in a comfortable position and close your eyes. Relax all of the muscles of your body. Start at your feet and progress up through your face. Remind yourself that various parts of your body are beginning to feel heavy and relaxed. With practice, relaxation should come with little effort. Practice once or twice daily but not within 2 hours after a meal since digestion seems to interfere with the relaxation response.</p> | <p>1. I get upset when people ask me what I want to do with my life. Being asked about your career plans may be uncomfortable. However, gaining life experience and learning more about yourself and the opportunities available will help you feel more confident in the decisions you will need to make. Then you will be able to answer questions about your plans with more confidence, based on the information you have.</p> |
| <p>2. I don't know how to find information about jobs in my field. Work on the basis of what you currently know about jobs. You most likely know about the World of Work through interacting with others and accessing the popular media. Besides, what is most important is what is real for you as opposed to what other people may think is true.</p> | <p>2. I don't know how to find information about jobs in my field. It may take time and some special fact-finding skills to learn about jobs in your field. You can develop a systematic plan for researching your career options and learn how to make effective use of library resources and personal contacts.</p> |
| <p>3. I worry a great deal about choosing the right field of study or occupation. It is common to worry about making important decisions. People sometimes worry less when they talk to a friend or family member about how they are feeling. Use your worry as a source of energy to move forward in choosing a field of study or occupation.</p> | <p>3. I worry a great deal about choosing the right field of study or occupation. Looking for one "right" choice may only increase your anxiety and make it more difficult to think clearly. Every choice carries some uncertainty and risk. You may need to go ahead and make a choice and take action on it in spite of this uncertainty. It is possible that there are several options for you that would be a good fit with your values, interests, and skills, as opposed to only one "right" choice. Having a first choice as well as several attractive alternatives is actually a smart strategy in career problem solving.</p> |
| <p>4. I'll never understand enough about occupations to make a good choice. It is possible to take what you currently know about occupations and identify new opportunities which you can pursue. It is also possible for you to learn how to compare occupations. For example, taking a variety of courses may help you to consider different career possibilities.</p> | <p>4. I'll <u>never</u> understand enough about occupations to make a good choice. It is true that there is often a lot of occupational information to consider in making career choices. The word "never" may make the task seem hopeless and keep you from doing what is necessary to move forward with your decision-making. There are resources available that will allow you to research occupations so that eventually you will feel comfortable enough with the amount of information you have to make a choice.</p> |

| | |
|---|--|
| <p>5. My age limits my occupational choice. We are all familiar with stereotypes that say that occupations are appropriate for people from certain groups. If your group membership plays a role in identifying appropriate occupations, it is important to understand your rights and responsibilities under federal anti-discrimination laws.</p> | <p>5. My age limits my occupational choice. It is possible that your age limits some of your choices. Your educational background, skills, past experience, and personal qualities are all considered by prospective employers. You may find it helpful to focus on your strengths when considering your options, rather than your limitations.</p> |
| <p>6. The hardest thing is settling on just one field of study or occupation. Often our worries about completing a task can lead us to believe it is much harder than it actually is. When trying to complete a complex task like choosing an occupation, simply break the task into smaller steps. These smaller tasks will be less intimidating and easier to complete.</p> | <p>6. The hardest thing is settling on just one field of study or occupation. There is most probably more than one occupation that fits your values, interests, and skills. In fact, you may change occupations successfully several times throughout your life. Every person's career path is unique, and you can work on creating a career that combines many things that you enjoy and that are important to you in life.</p> |
| <p>7. Finding a good job in my field is just a matter of luck. The meaning of the phrase "good job" varies from person to person. Ask yourself, "What makes a job good for me?" Your answer to this question will most likely involve your values or what is important to you. Do you want extra vacation time to spend with your friends and family? Do you want a job that requires you to travel? Knowing your values will help you to find a job that is good for you.</p> | <p>7. Finding a good job in my field is just a matter of luck. Sometimes people talk about careers in terms of luck and other outside forces over which they have no control. But when they really analyze it, career planning is not so mysterious. Thinking that only luck is involved may encourage you to do nothing when you could be taking steps to help yourself. If you stay focused on what you really like and want in your career, and if you practice good job hunting skills, your time and effort eventually will probably lead to job offers that fit some or all of your requirements.</p> |
| <p>8. Making career choices is so complicated, I am unable to keep track of where I am in the process. The process of career decision making is complex. It may be also helpful for you to talk to others about how they managed their career decisions. There are also many resources available that can guide you through the decision-making process.</p> | <p>8. Making career choices is so complicated, I am unable to keep track of where I am in the process. Career decision making can be difficult at times, but ultimately your career journey is in your hands and you can take charge of the process. It is important for you to stay focused on where you are in your decision making. Think about what you need to do next, when you need to act, and how well your career planning is going at any one time. By setting goals, keeping records, and concentrating on how you are using your time, you can keep track of the process.</p> |

Once again, thank you for participating in the Career Thoughts Inventory Workbook evaluation. Your help may make SDS3340 a more effective course for career decision makers in the future!

Your Role in Evaluating the CTI Workbook (Treatment Group)

In class, you read suggestions about improving negative career thoughts that were written by career counselors for the Career Thoughts Inventory Workbook. However, other students read paragraphs that were created to sound like plausible advice from friends on how to challenge and alter negative career thoughts. However, the advice focused on the “wrong part” of the negative thought. For example, in item one below the advice from a counselor in the CTI Workbook focuses on a lack of experience and confidence. However, the advice from “a friend” is about controlling “anxiety.”

When looking at post test measures (such as the last 8 items you wrote today), we are hoping to find career thoughts that are both of better quality and more positive from those students who read the real CTI Workbook compared to those students who read the advice from friends. If you have any questions about the Career Thoughts Inventory speak with your small group leader or section leader. If you have questions about the Career Thoughts Inventory Work book Evaluation Project, contact Darrin Carr at dcarr@admin.fsu.edu.

| <u>What Other Students Saw</u> (i.e., possible advice from friends) | <u>What You Saw</u> (i.e., advice from career counselors in the Career Thoughts Inventory Workbook) |
|---|--|
| <p>1. I get upset when people ask me what I want to do with my life. To relax, sit or lie quietly in a comfortable position and close your eyes. Relax all of the muscles of your body. Start at your feet and progress up through your face. Remind yourself that various parts of your body are beginning to feel heavy and relaxed. With practice, relaxation should come with little effort. Practice once or twice daily but not within 2 hours after a meal since digestion seems to interfere with the relaxation response.</p> | <p>1. I get upset when people ask me what I want to do with my life. Being asked about your career plans may be uncomfortable. However, gaining life experience and learning more about yourself and the opportunities available will help you feel more confident in the decisions you will need to make. Then you will be able to answer questions about your plans with more confidence, based on the information you have.</p> |
| <p>2. I don't know how to find information about jobs in my field. Work on the basis of what you currently know about jobs. You most likely know about the World of Work through interacting with others and accessing the popular media. Besides, what is most important is what is real for you as opposed to what other people may think is true.</p> | <p>2. I don't know how to find information about jobs in my field. It may take time and some special fact-finding skills to learn about jobs in your field. You can develop a systematic plan for researching your career options and learn how to make effective use of library resources and personal contacts.</p> |
| <p>3. I worry a great deal about choosing the right field of study or occupation. It is common to worry about making important decisions. People sometimes worry less when they talk to a friend or family member about how they are feeling. Use your worry as a source of energy to move forward in choosing a field of study or occupation.</p> | <p>3. I worry a great deal about choosing the right field of study or occupation. Looking for one "right" choice may only increase your anxiety and make it more difficult to think clearly. Every choice carries some uncertainty and risk. You may need to go ahead and make a choice and take action on it in spite of this uncertainty. It is possible that there are several options for you that would be a good fit with your values, interests, and skills, as opposed to only one "right" choice. Having a first choice as well as several attractive alternatives is actually a smart strategy in career problem solving.</p> |
| <p>4. I'll never understand enough about occupations to make a good choice. It is possible to take what you currently know about occupations and identify new opportunities which you can pursue. It is also possible for you to learn how to compare occupations. For example, taking a variety of courses may help you to consider different career possibilities.</p> | <p>4. I'll <u>never</u> understand enough about occupations to make a good choice. It is true that there is often a lot of occupational information to consider in making career choices. The word "never" may make the task seem hopeless and keep you from doing what is necessary to move forward with your decision-making. There are resources available that will allow you to research occupations so that eventually you will feel comfortable enough with the amount of information you have to make a choice.</p> |

| | |
|---|--|
| <p>5. My age limits my occupational choice. We are all familiar with stereotypes that say that occupations are appropriate for people from certain groups. If your group membership plays a role in identifying appropriate occupations, it is important to understand your rights and responsibilities under federal anti-discrimination laws.</p> | <p>5. My age limits my occupational choice. It is possible that your age limits some of your choices. Your educational background, skills, past experience, and personal qualities are all considered by prospective employers. You may find it helpful to focus on your strengths when considering your options, rather than your limitations.</p> |
| <p>6. The hardest thing is settling on just one field of study or occupation. Often our worries about completing a task can lead us to believe it is much harder than it actually is. When trying to complete a complex task like choosing an occupation, simply break the task into smaller steps. These smaller tasks will be less intimidating and easier to complete.</p> | <p>6. The hardest thing is settling on just one field of study or occupation. There is most probably more than one occupation that fits your values, interests, and skills. In fact, you may change occupations successfully several times throughout your life. Every person's career path is unique, and you can work on creating a career that combines many things that you enjoy and that are important to you in life.</p> |
| <p>7. Finding a good job in my field is just a matter of luck. The meaning of the phrase "good job" varies from person to person. Ask yourself, "What makes a job good for me?" Your answer to this question will most likely involve your values or what is important to you. Do you want extra vacation time to spend with your friends and family? Do you want a job that requires you to travel? Knowing your values will help you to find a job that is good for you.</p> | <p>7. Finding a good job in my field is just a matter of luck. Sometimes people talk about careers in terms of luck and other outside forces over which they have no control. But when they really analyze it, career planning is not so mysterious. Thinking that only luck is involved may encourage you to do nothing when you could be taking steps to help yourself. If you stay focused on what you really like and want in your career, and if you practice good job hunting skills, your time and effort eventually will probably lead to job offers that fit some or all of your requirements.</p> |
| <p>8. Making career choices is so complicated, I am unable to keep track of where I am in the process. The process of career decision making is complex. It may be also helpful for you to talk to others about how they managed their career decisions. There are also many resources available that can guide you through the decision-making process.</p> | <p>8. Making career choices is so complicated, I am unable to keep track of where I am in the process. Career decision making can be difficult at times, but ultimately your career journey is in your hands and you can take charge of the process. It is important for you to stay focused on where you are in your decision making. Think about what you need to do next, when you need to act, and how well your career planning is going at any one time. By setting goals, keeping records, and concentrating on how you are using your time, you can keep track of the process.</p> |

Once again, thank you for participating in the Career Thoughts Inventory Workbook evaluation. Your help may make SDS3340 a more effective course for career decision makers in the future!

Appendix G

Web Based Rater Training Resource

The image shows a screenshot of a Microsoft Internet Explorer browser window. The title bar reads "Item Scoring - Microsoft Internet Explorer". The menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The address bar is empty, and the status bar at the bottom shows "Done" and "Internet".

Training for CTI Workbook Evaluation

Thank you for helping us with this evaluation project.

After this training you will be able to globally rate cognitive reframes as to their effectiveness in supporting career decision making.

To learn how to make these global ratings, you will work with two different items from the Career Thoughts Inventory. For each item you will learn how to rate four different reframes of varying effectiveness.

At the end of the training, you will be provided with a learning summary and 24 practice items to rate.

It should take about 1 hour for you to complete this training.

Please read the instructions carefully on each page, even if you think you have read them before, as there will be subtle but important changes throughout.

[Begin Training with Item 1](#)

Item Scoring - Microsoft Internet Explorer

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Rater Training

Item 1 Overview

Step 1: Read the original item and then the four cognitive reframes of the original item.

Step 2: Rate each cognitive reframe from **-1** (less effective) to **+2** (more effective).

Step 3: Press the submit button to compare your ratings to the preferred ratings for each reframe. .

Original Item: I'm so frustrated with the process of choosing a field of study or occupation I just want to forget about it for now.

Cognitive Reframes:

| | | | |
|--|--------------------------------|--|---|
| I don't have the time to be frustrated about choosing a major or occupation. | I have already chosen a major. | It doesn't help me to ignore that I need to choose a major, even though I may feel frustrated. | I know I feel frustrated right now, but if I educate myself and have a plan, then things will turn out all right. |
| <input type="text" value="-1"/> | <input type="text" value="0"/> | <input type="text" value="+1"/> | <input type="text" value="+2"/> |

[Return to Home Page](#)

Done Internet

Item Rating - Microsoft Internet Explorer

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Rater Training

Feedback for Item 1

Step 1: Compare your ratings with the preferred ratings below them. How did you do?
Did you notice that the cognitive reframes were already arranged on a continuum from less effective (-1) to more effective (+2)?

Step 2: Read again each of the four reframes. Why do you think it received its preferred rating?

Step 3: Press the submit button to learn why each reframe would receive its preferred rating.

Original Item: I'm so frustrated with the process of choosing a field of study or occupation I just want to forget about it for now.

Cognitive Reframes:

| | Less Effective | No Change or Task not understood or Item does not apply | More Effective |
|--------------------------|--|---|--|
| | I don't have the time to be frustrated about choosing a major or occupation. | I have already chosen a major. | It doesn't help me to ignore that I need to choose a major, even though I may feel frustrated. |
| Preferred Rating: | -1 | 0 | +1 |
| Your Rating: | -1 | 0 | +1 |

submit

[Return to Home Page](#)

Done Internet

Item Rating - Microsoft Internet Explorer

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Rater Training

Item 1 Reframe 3

Step 1: Read the original item and then the cognitive reframe of the original item.
Note that this cognitive reframe was rated as a +1 or more effective reframe.

Step 2: Now read the criteria below for less effective and more effective reframes.

Step 3: Place checks next to the criteria that you think resulted in the reframe below being rated as +1.

Step 4: Press the submit button to compare your reasoning to the preferred reasoning.

Original Item: I'm so frustrated with the process of choosing a field of study or occupation I just want to forget about it for now.

Cognitive Reframe: It doesn't help me to ignore that I need to choose a major, even though I may feel frustrated.

-1 0 +1 +2

Exceptions

- No change
- Task not understood
- Item does not apply

| | Less Effective Reframe | More Effective Reframe |
|-------------------------|---|--|
| Locus of control | <input type="checkbox"/> External focus <input type="checkbox"/> Reactive or defensive posture <input type="checkbox"/> Views self as powerless to change <input type="checkbox"/> Attributes positive events to chance or behavior of others <input type="checkbox"/> Defers responsibility to others <input type="checkbox"/> Lacks self-confidence (trust in self) | <input type="checkbox"/> Internal focus <input type="checkbox"/> Proactive or open posture <input type="checkbox"/> Views self as capable of change <input type="checkbox"/> Attributes positive events to own behavior <input checked="" type="checkbox"/> Assumes responsibility for self <input type="checkbox"/> Has self-confidence (trust in self) |
| Explicitness | <input type="checkbox"/> Little or no evidence goal or direction (no gap identified) <input checked="" type="checkbox"/> Uses general language about planning (lacks detail) <input type="checkbox"/> No evidence of a decision-making model <input type="checkbox"/> Does not provide measurable objectives <input type="checkbox"/> Views planning as unimportant <input type="checkbox"/> Identifies 0 or 1 option for solving problem <input type="checkbox"/> No evidence of evaluating decision making progress | <input type="checkbox"/> Evidence of a goal or direction (gap identified) <input type="checkbox"/> Has specific details about a plan to reach a goal <input type="checkbox"/> Evidence of a decision-making model <input type="checkbox"/> Provides measurable objectives <input type="checkbox"/> Views planning as important <input type="checkbox"/> Identifies multiple options for solving problem <input type="checkbox"/> Evidence of evaluating decision making progress |
| Affect | <input type="checkbox"/> Does not address emotional component <input type="checkbox"/> Provides no strategy for emotional coping | <input type="checkbox"/> Addresses emotional component <input type="checkbox"/> Provides a strategy for emotional coping |
| Time Sensitivity | <input type="checkbox"/> A sense of pessimism about the future <input type="checkbox"/> Unrealistic expectation of time required to make a decision | <input type="checkbox"/> A sense of optimism about the future <input type="checkbox"/> Realistic expectation of time required to make a decision |

Done Internet

Item Rating - Microsoft Internet Explorer

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Rater Training

Feedback on Item 1 Reframe 3

Step 1: Read the original item and then the cognitive reframe of the original item.
Note that this cognitive reframe was rated as a +1 or more effective reframe.

Step 2: Now compare the criteria you checked to the preferred, highlighted criteria. Do they match?
It is okay if they do not match exactly.
On balance, this reframe is more effective because of the items marked in green, however it could be better if a gap was identified.
So, the reframe receives a rating of +1.

Step 3: Press the submit button to review the next reframe for the first item.

Original Item: I'm so frustrated with the process of choosing a field of study or occupation I just want to forget about it for now.

Cognitive Reframe: It doesn't help me to ignore that I need to choose a major, even though I may feel frustrated.

-1 0 +1 +2

Exceptions

No change

Task not understood

Item does not apply

| | Less Effective Reframe | More Effective Reframe |
|-------------------------|--|--|
| Locus of control | <input type="checkbox"/> External focus <input type="checkbox"/> Reactive or defensive posture <input type="checkbox"/> Views self as powerless to change <input type="checkbox"/> Attributes positive events to chance or behavior of others <input type="checkbox"/> Defers responsibility to others <input type="checkbox"/> Lacks self-confidence (trust in self) | <input type="checkbox"/> Internal focus <input checked="" type="checkbox"/> Proactive or open posture <input type="checkbox"/> Views self as capable of change <input type="checkbox"/> Attributes positive events to own behavior <input checked="" type="checkbox"/> Assumes responsibility for self <input type="checkbox"/> Has self-confidence (trust in self) |
| Explicitness | <input checked="" type="checkbox"/> Little or no evidence goal or direction (no gap identified) <input checked="" type="checkbox"/> Uses general language about planning (lacks detail) <input type="checkbox"/> No evidence of a decision-making model <input type="checkbox"/> Does not provide measurable objectives <input type="checkbox"/> Views planning as unimportant <input type="checkbox"/> Identifies 0 or 1 option for solving problem <input type="checkbox"/> No evidence of evaluating decision making progress | <input type="checkbox"/> Evidence of a goal or direction (gap identified) <input type="checkbox"/> Has specific details about a plan to reach a goal <input type="checkbox"/> Evidence of a decision-making model <input type="checkbox"/> Provides measurable objectives <input type="checkbox"/> Views planning as important <input type="checkbox"/> Identifies multiple options for solving problem <input type="checkbox"/> Evidence of evaluating decision making progress |
| Affect | <input type="checkbox"/> Does not address emotional component <input type="checkbox"/> Provides no strategy for emotional coping | <input checked="" type="checkbox"/> Addresses emotional component <input type="checkbox"/> Provides a strategy for emotional coping |

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Item Rating - Microsoft Internet Explorer

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Rater Training

Summary for Item 1

Step 1: Review the four reframes below and their corresponding ratings and criteria.
Criteria in **red** make the corresponding reframe less effective and criteria in **green** make the corresponding reframe more effective.

Step 2: Press submit to continue to the next page.

Original Item: I'm so frustrated with the process of choosing a field of study or occupation I just want to forget about it for now.

Cognitive Reframes:

| | ←-----> | -----> | |
|--|---|---|---|
| Less Effective | No Change or Task not understood or Item does not apply | More Effective | |
| I don't have the time to be frustrated about choosing a major or occupation. | I have already chosen a major. | It doesn't help me to ignore that I need to choose a major, even though I may feel frustrated. | I know I feel frustrated right now, but if I educate myself and have a plan, then things will turn out all right. |
| Preferred Rating: -1 | 0 | +1 | +2 |
| Matching Criteria: - Reactive or defensive posture - Does not address emotional component - Provides no strategy for emotional coping | - Item does not apply to person's situation | - Proactive or open posture - Addresses emotional component - Little or no evidence goal or direction (no gap identified) | - Attributes positive events to own behavior - Assumes responsibility for self - Has self-confidence (trust in self) - Has self-confidence (trust in self) - Views planning as important - Addresses emotional component - A sense of optimism about the future |

submit

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Learning Review

Guidelines for Globally Rating Effectiveness of Cognitive Reframes

The effectiveness of cognitive reframes can be rated on a continuum from less effective (-1) to more effective (+2). This can be accomplished using a set of criteria that cover 7 areas: locus of control, explicitness, affect, time sensitivity, word choice, missing key points, and reframe structure.

Reframes are rated -1 when:

- Criteria for less effective reframes are met, but few if any criteria for more effective reframes are also met. That is, the reframe may actually undermine a person's career decision making process.

Reframes are rated 0 when they meet one or more of the following exceptions:

- There is no significant change from the original item to the reframe (e.g. simple reversal: will interfere --> will not interfere).
- OR The person did not appear to understand the task.
- OR The original item did not appear to apply to the person writing the reframe (e.g., I've already chosen my major).

Reframes are rated +1 when:

- Criteria for both more effective reframes and less effective reframes are met and the reframe will support a person's career decision making.
- OR criteria for only more effective reframes are met but the reframe could have been taken further

Reframes are rated +2 when:

- Several criteria for more effective reframes are met, and few if any criteria for less effective reframes are met

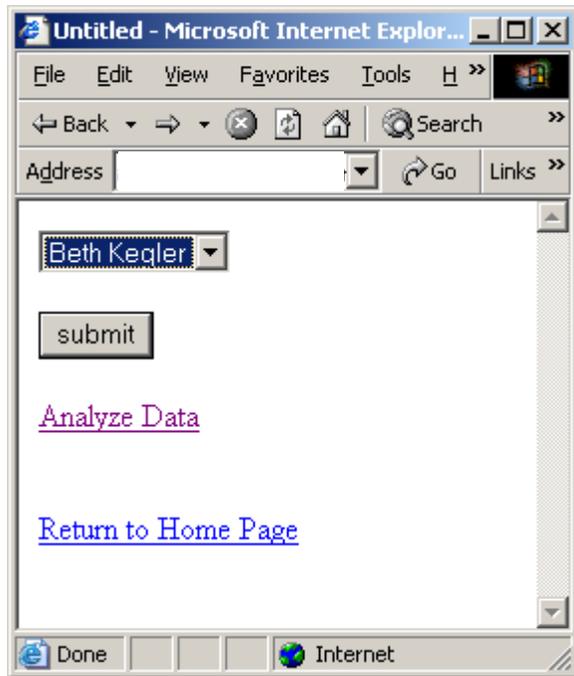
This training asked you to identify individual criteria, to familiarize you with the criteria in general. It is important to **remember that you will making a global judgement** about each reframe. **Counting criteria is *not* necessary** to rate the effectiveness of the reframes..

Now, apply your new skill by [globally rating 24 practice reframes](#)

Done Internet

Appendix H

Web Based Data Rating Module



Item Rating - Microsoft Internet Explorer

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Rater1
Item 2055 of 2064

Step 1: Read the original item and then the cognitive reframe of the original item.

Step 2: Rate the highlighted cognitive reframe from -1 (less effective) to +2 (more effective) using the criteria below.
You may also wish to refer back to these [guidelines](#).

Step 3: Press the submit button to enter your Rate in the database. To quit close your browser window.

Original Item: I'll never understand enough about occupations to make a good choice.

Cognitive Reframe: I try to find out all the information about an occupation before I make a choice.

-1 0 +1 +2

Exceptions

- No change
- Task not understood
- Item does not apply

| | Less Effective Reframe | More Effective Reframe |
|-------------------------|---|---|
| Locus of control | <ul style="list-style-type: none"> ▪ External focus ▪ Reactive or defensive posture ▪ Views self as powerless to change ▪ Attributes positive events to chance or behavior of others ▪ Defers responsibility to others ▪ Lacks self-confidence (trust in self) | <ul style="list-style-type: none"> ▪ Internal focus ▪ Proactive or open posture ▪ Views self as capable of change ▪ Attributes positive events to own behavior ▪ Assumes responsibility for self ▪ Has self-confidence (trust in self) |
| Explicitness | <ul style="list-style-type: none"> ▪ Little or no evidence goal or direction (no gap identified) ▪ Uses general language about planning (lacks detail) ▪ No evidence of a decision-making model ▪ Does not provide measurable objectives ▪ Views planning as unimportant ▪ Identifies 0 or 1 option for solving problem ▪ No evidence of evaluating decision making progress | <ul style="list-style-type: none"> ▪ Evidence of a goal or direction (gap identified) ▪ Has specific details about a plan to reach a goal ▪ Evidence of a decision-making model ▪ Provides measurable objectives ▪ Views planning as important ▪ Identifies multiple options for solving problem ▪ Evidence of evaluating decision making progress |
| Affect | <ul style="list-style-type: none"> ▪ Does not address emotional component ▪ Provides no strategy for emotional coping | <ul style="list-style-type: none"> ▪ Addresses emotional component ▪ Provides a strategy for emotional coping |
| Time Sensitivity | <ul style="list-style-type: none"> ▪ A sense of pessimism about the future ▪ Unrealistic expectation of time required to make a decision ▪ No acknowledgement of need for persistence and commitment ▪ Views decision-making as a one-time event | <ul style="list-style-type: none"> ▪ A sense of optimism about the future ▪ Realistic expectation of time required to make a decision ▪ Acknowledges need for persistence and commitment ▪ Acknowledges the ongoing process of decision-making |

Done Internet

Item Rating - Microsoft Internet Explorer

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Rater1

Item 2056 of 2064

Step 1: Read the original item and then the cognitive reframe of the original item.

Step 2: Rate the highlighted cognitive reframe from -1 (less effective) to +2 (more effective) using the criteria below.
You may also wish to refer back to these [guidelines](#).

Step 3: Press the submit button to enter your Rate in the database. To quit close your browser window.

Original Item: There are so many occupations that I like, I'll never be able to sort through them to find ones I like better than others.

Cognitive Reframe: I know that once I find that occupation, I'll have a successful future.

-1

○

| | |
|-------------------------|---|
| Exceptions | <ul style="list-style-type: none"> ▪ No cl ▪ Task ▪ Item |
| Locus of control | <ul style="list-style-type: none"> ▪ Exter ▪ React ▪ View ▪ Attrib ▪ Defer ▪ Lack: |
| Explicitness | <ul style="list-style-type: none"> ▪ Little ▪ Uses ▪ No e ▪ Does ▪ View ▪ Ident ▪ No e |
| Affect | <ul style="list-style-type: none"> ▪ Does ▪ Provi |
| Time Sensitivity | <ul style="list-style-type: none"> ▪ A ser ▪ Unrea ▪ No a ▪ View |

Guidelines for Globally Rating Effectiveness of Cognitive Reframes

The effectiveness of cognitive reframes can be rated on a continuum from less effective (-1) to more effective (+2). This can be accomplished using a set of criteria that cover 7 areas: locus of control, explicitness, affect, time sensitivity, word choice, missing key points, and reframe structure.

Reframes are rated -1 when:

- Criteria for less effective reframes are met, but few if any criteria for more effective reframes are also met. That is, the reframe may acutally undermine a person's career decision making process.

Reframes are rated 0 when they meet one or more of the following exceptions:

- There is no significant change from the original item to the reframe (e.g. simple reversal: will interfere --> will not interfere).
- **OR** The person did not appear to understand the task.
- **OR** The original item did not appear to apply to the person writing the reframe (e.g., I've already chosen my major).

Reframes are rated +1 when:

- Criteria for both more effective reframes and less effective reframes are met and the reframe will support a person's career decision making.
- **OR** criteria for only more effective reframes are met but the reframe could have been taken further

Reframes are rated +2 when:

- Several criteria for more effective reframes are met, and few if any criteria for less effective reframes are met

This training asked you to identify individual criteria, to familiarize you with the criteria in general. It is important to **remember that you will making a global judgement** about each reframe.
Counting criteria is *not* necessary to rate the effectives of the reframes..

http://www.blindservices.fsu.edu/Statements/reliability.cfm - Microsoft Internet Explorer

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| ID | R1 | R2 | Diff(R1-R2) | Avg(R1,R2) | R3* | Avg(R1,R2,R3) |
|----|-----|------|-------------|------------|-----|---------------|
| 1 | 0.0 | 0.0 | 0 | 0 | | |
| 2 | 0.0 | 0.0 | 0 | 0 | | |
| 3 | 0.0 | 0.0 | 0 | 0 | | |
| 4 | 0.0 | 0.0 | 0 | 0 | | |
| 5 | 0.0 | 0.0 | 0 | 0 | | |
| 6 | 0.0 | 0.0 | 0 | 0 | | |
| 7 | 0.0 | 0.0 | 0 | 0 | | |
| 8 | 0.0 | 0.0 | 0 | 0 | | |
| 9 | 0.0 | 0.0 | 0 | 0 | | |
| 10 | 0.0 | 0.0 | 0 | 0 | | |
| 11 | 0.0 | 0.0 | 0 | 0 | | |
| 12 | 0.0 | 0.0 | 0 | 0 | | |
| 13 | 1.0 | 0.0 | 1 | 0.5 | | |
| 14 | 1.0 | 0.0 | 1 | 0.5 | | |
| 15 | 0.0 | 0.0 | 0 | 0 | | |
| 16 | 0.0 | 0.0 | 0 | 0 | | |
| 17 | 0.0 | 0.0 | 0 | 0 | | |
| 18 | 1.0 | -1.0 | 2 | | 0.0 | 0 |
| 19 | 0.0 | 0.0 | 0 | 0 | | |
| 20 | 0.0 | 0.0 | 0 | 0 | | |

Done Internet

http://www.blindservices.fsu.edu/Statements/reliability.cfm - Microsoft Internet Explorer

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| | | | | | | |
|--|------|---------------|---|------|--|--|
| 2054 | 0.0 | 0.0 | 0 | 0 | | |
| 2055 | 0.0 | 0.0 | 0 | 0 | | |
| 2056 | 0.0 | 0.0 | 0 | 0 | | |
| 2057 | 2.0 | 2.0 | 0 | 2 | | |
| 2058 | 0.0 | -1.0 | 1 | -0.5 | | |
| 2059 | -1.0 | -1.0 | 0 | -1 | | |
| 2060 | 1.0 | 1.0 | 0 | 1 | | |
| 2061 | 1.0 | 0.0 | 1 | 0.5 | | |
| 2062 | 1.0 | 0.0 | 1 | 0.5 | | |
| 2063 | 0.0 | 0.0 | 0 | 0 | | |
| 2064 | 1.0 | 0.0 | 1 | 0.5 | | |
| avgs 0.268895348837 0.278100775194 -0.00920542635659 0.28003875969 | | | | | | |
| Count Total Count Percent | | | | | | |
| 149 | 2064 | 7.21899224806 | | | | |
| 548 | 2064 | 26.5503875969 | | | | |
| 1367 | 2064 | 66.230620155 | | | | |

Done Internet