

Career Counseling and Services: A Cognitive Information Processing Approach

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Chapter Six

Using the Career Thoughts Inventory to Measure Career Choice Readiness

Chapter Organization

- [Background of the CTI](#)
- [Use of the CTI and the CTI Workbook](#)
- [CTI Case Studies](#)
- [Development of the CTI and the CTI Workbook](#)

Background of the CTI

- A theory-based assessment and intervention resource intended to
 - Improve the quality of career decisions made by adults, college students, and high school students
 - Improve the quality of career service delivery
- A self-administered, objectively scored 48-item measure of dysfunctional thoughts in career choice

Components of the CTI

- Traditional assessment components
 - CTI Test Booklet and Professional Manual
- Learning resource component
 - CTI Workbook

Goals of the CTI

- To link the test booklet and workbook to help clients and practitioners make more efficient use of their time
- To more effectively incorporate assessment concepts from the test booklet into interventions from the workbook to promote change

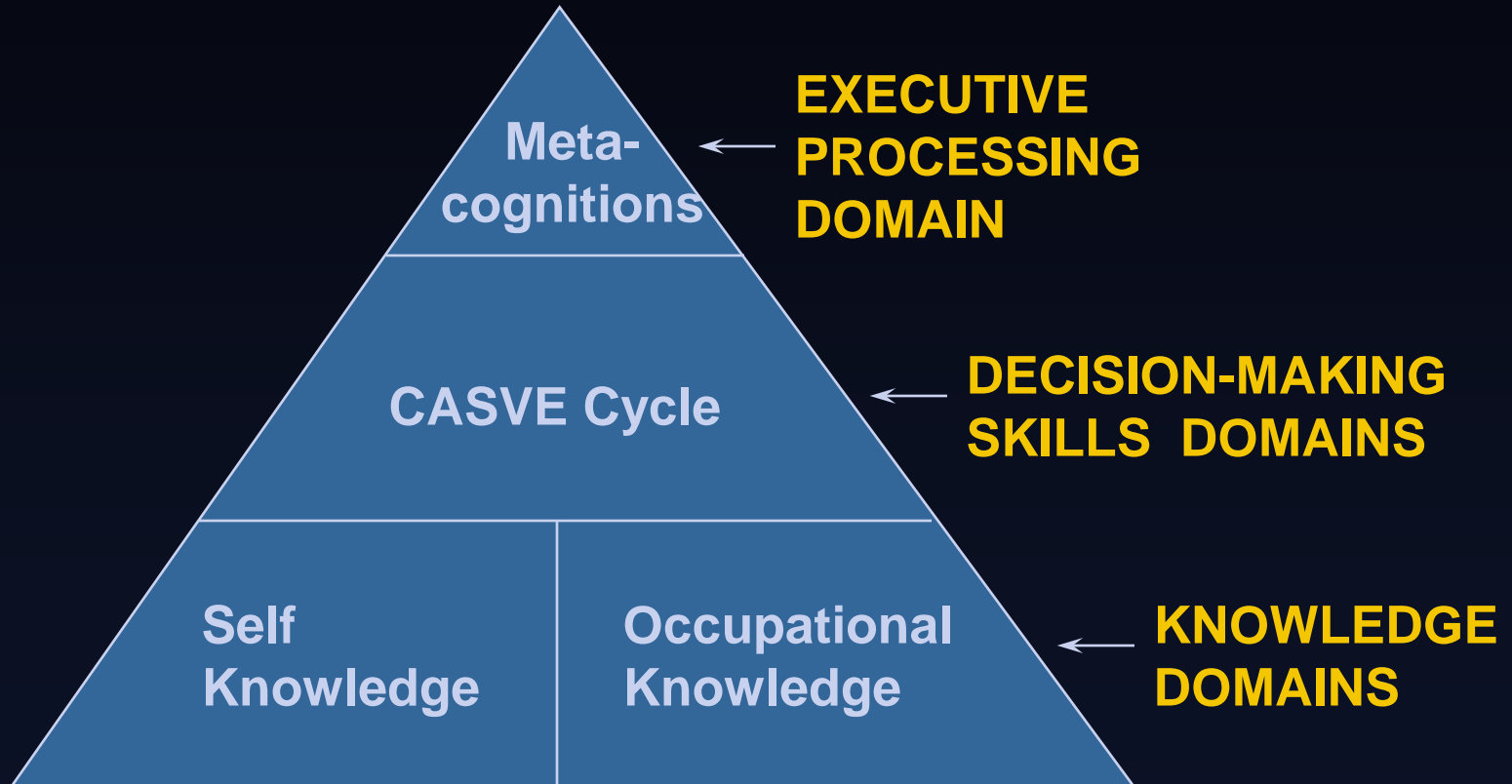
Development of the CTI & Workbook

- Theoretical basis of the CTI and the CTI Workbook
 - Cognitive Information Processing (CIP) Theory
 - Beck's Cognitive Theory

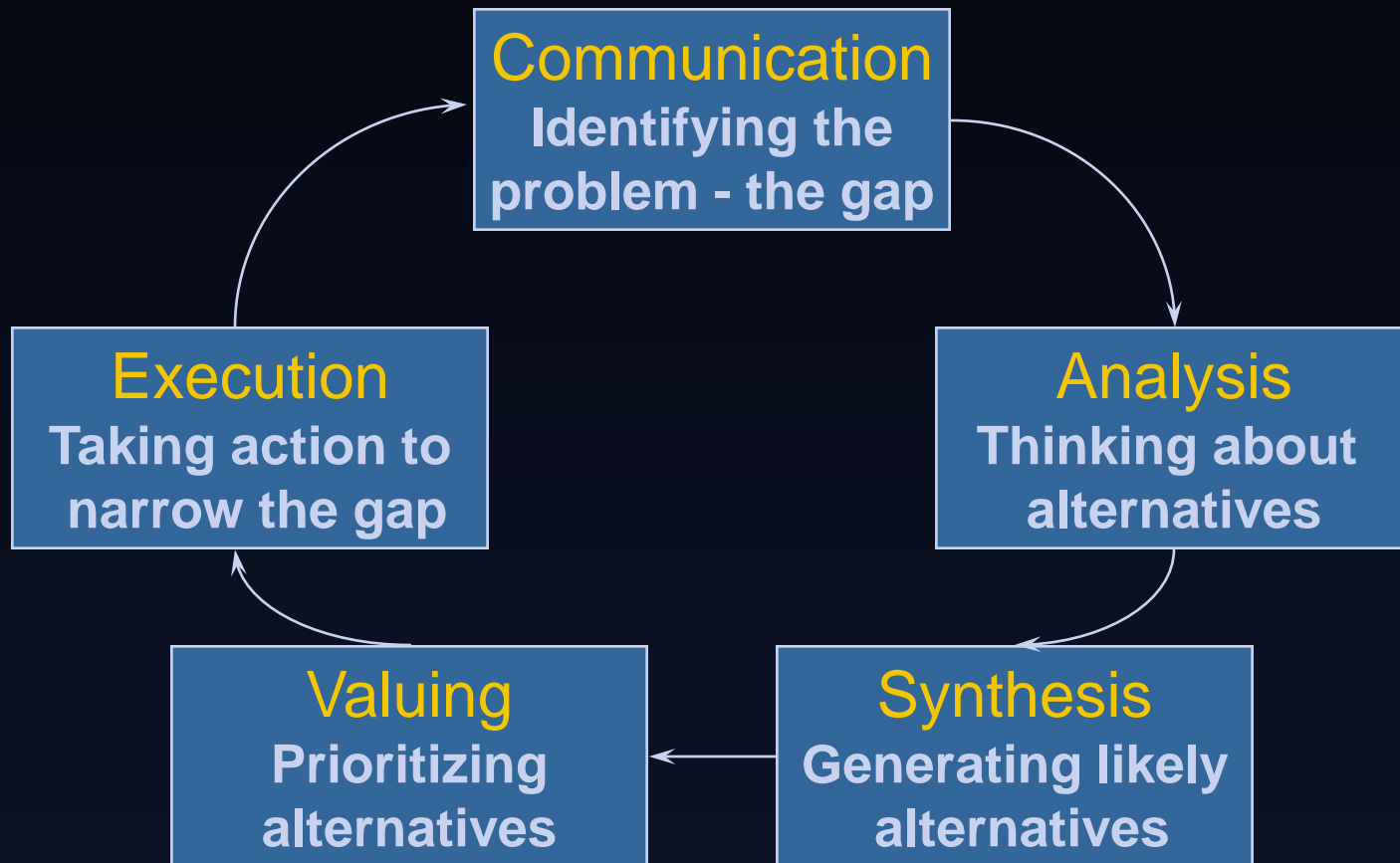
8 CIP Content Dimensions

- To simplify instrument development, Cognitive Information Processing concepts (the Pyramid of Information Processing Domains and the CASVE Cycle) were organized into eight content domains

Pyramid of Information Processing Domains



CASVE Cycle



8 CIP Content Dimensions

- Self-Knowledge
- Occupational Knowledge
- Communication
- Analysis
- Synthesis
- Valuing
- Execution
- Executive Processing

Beck's Cognitive Theory

- Dysfunctional cognitions have a detrimental impact on behavior and emotions

Beck's Cognitive Theory

- Dysfunctional cognitions can be replaced with functional cognitions by
 - Cognitive restructuring
 - Collaborative empiricism
 - Attention to emotions, and
 - Development of an effective helping relationship

Assumption

- While dysfunctional thinking in career choice cannot be measured directly, it can be inferred from an person's endorsement of test items reflecting dysfunctional career thoughts

Career Thoughts Defined

- **Outcomes** of one's **thinking** about assumptions, attitudes, behaviors, beliefs, feelings, plans, or strategies related to career choice

Use of The CTI and CTI Workbook

- A resource for
 - Screening
 - Needs Assessment
 - Learning

Screening

- CTI Total Score
 - Identify individuals who are likely to have career choice problems due to negative thoughts
 - Higher number of negative career thoughts – lower readiness for career choice and more need for assistance
 - Lower number of negative career thoughts – higher readiness for career choice and less need for assistance

Screening

- CTI Total Score
 - A single global indicator of dysfunctional career thoughts
 - Help practitioners and clients decide how much help an individual needs
 - The practitioner and client make a collaborative decision - tests do not make decisions

Screening

- For all normative groups, **higher** CTI Total scores are associated with **lower** scores on
 - vocational identity
 - certainty
 - knowledge about occupations and training

Screening

- For all normative groups, **higher** CTI Total scores are associated with **higher** scores on
 - indecision
 - neuroticism
 - vulnerability

Screening

- Adults with **Higher** CTI Total scores also tend to
 - have a greater need for information
 - be less decided
 - perceive more barriers to choice
 - be more anxious

Screening

- College students with **Higher** CTI Total scores also tend to be
 - less decisive and
 - more depressed

Screening

- High School Students with **Higher** CTI
Total scores also tend to
 - lack self-clarity

Needs Assessment

- Identifying the specific nature of dysfunctional thoughts
- CTI Construct scores
 - Decision-making confusion
 - Commitment anxiety
 - External conflict
- Specific career interventions can be related to specific construct scores

Decision-Making Confusion

- Inability to initiate or sustain decision making due to
 - disabling emotions
 - a lack of understanding about decision making

Commitment Anxiety

- Inability to commit to a specific career choice, accompanied by decision making anxiety

External Conflict

- Inability to balance self-perceptions with input from significant others
- Difficulty in assuming responsibility for decision making

Needs Assessment

- CTI Construct scores related to **capability**
 - Decision-making confusion
 - Commitment anxiety
- CTI Construct scores related to **complexity**
 - External conflict

Learning

- The CTI Workbook can be used in assisting individuals
 - to challenge and alter the specific dysfunctional thoughts identified in the prior needs assessment process
 - to take action needed to complete a career choice
- By reducing dysfunctional career thinking, clients are more likely to effectively process information needed for career choice

Learning

Use the CTI and CTI Workbook to help clients

- **Identify** negative thoughts (CTI Test Booklet)
- **Challenge** restructuring exercise (CTI Workbook)
- **Alter** thoughts restructuring exercise (CTI Workbook)
- **Act** by completing Individual Action Plan (Workbook)

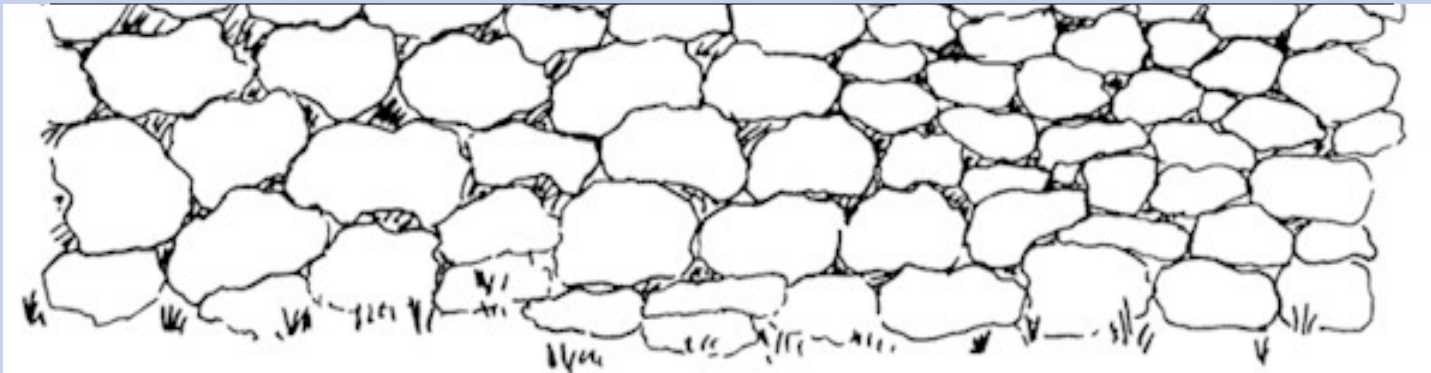
CTI Workbook Sections

1. Identifying Your Total Amount of Negative Career Thoughts
2. Identifying the Nature of Your Negative Career Thoughts
3. Challenging and Altering Your Negative Career Thoughts and Taking Action
4. Improving Your Ability to Make Good Decisions
5. Making Good Use of Support from Other People

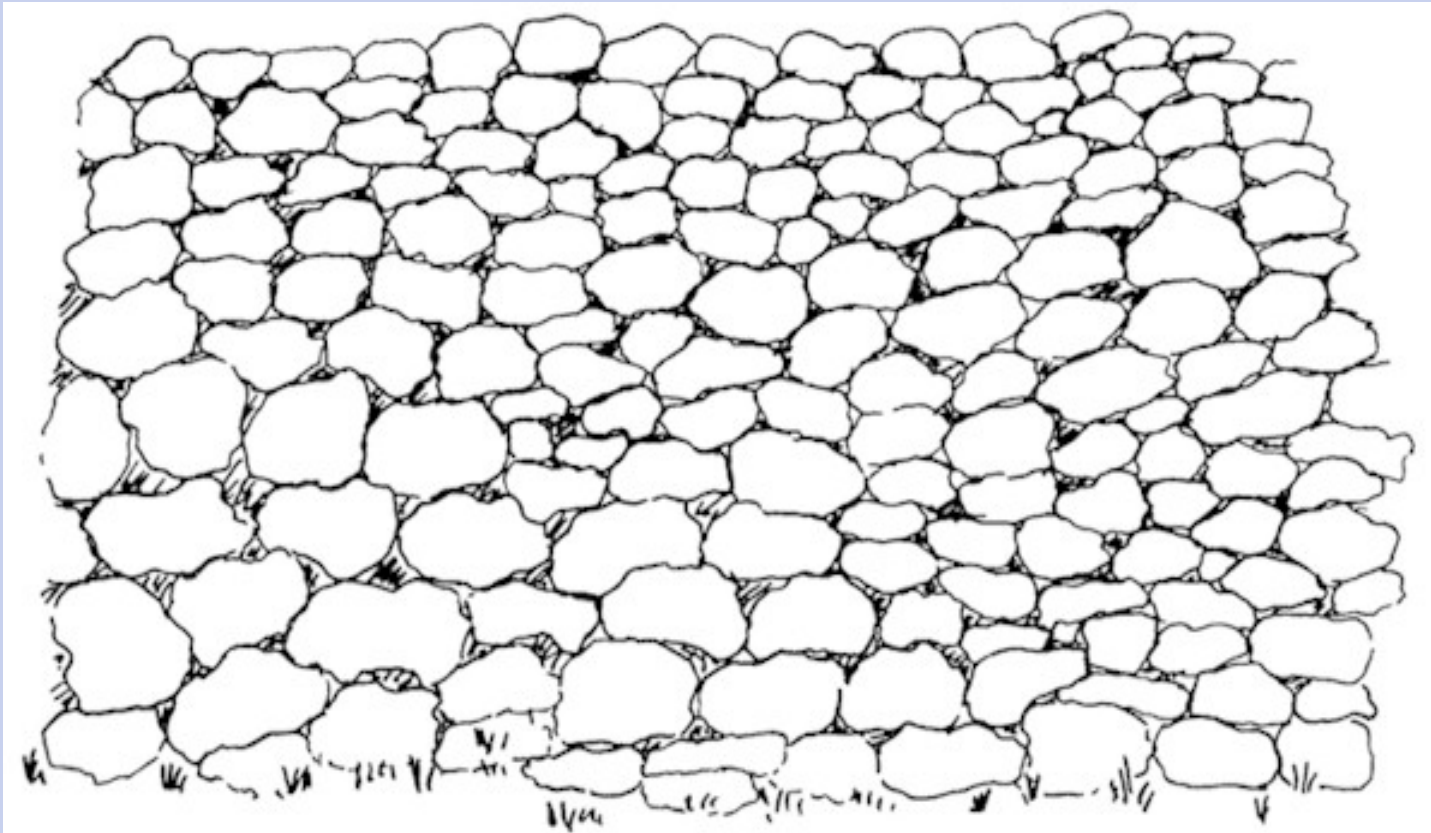
Use of Metaphors

- Common, simple representations of concepts linked to more abstract constructs
 - **Stone wall** - impact of negative thoughts on decision making
 - **Uneven stone wall** - priorities for cognitive restructuring
 - **Cooking with a recipe** - the content and process of decision making

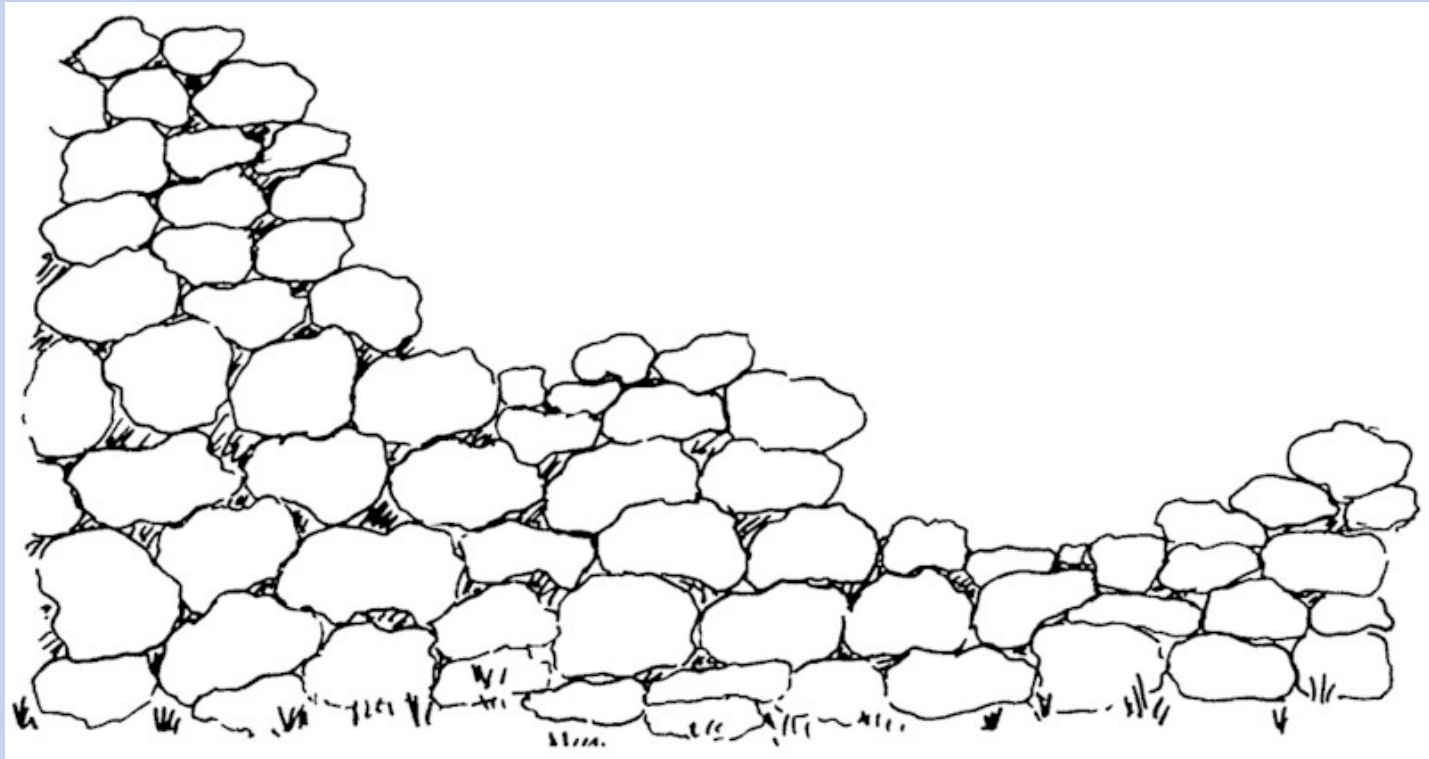
Low Amount of Negative Career Thoughts



High Amount of Negative Career Thoughts

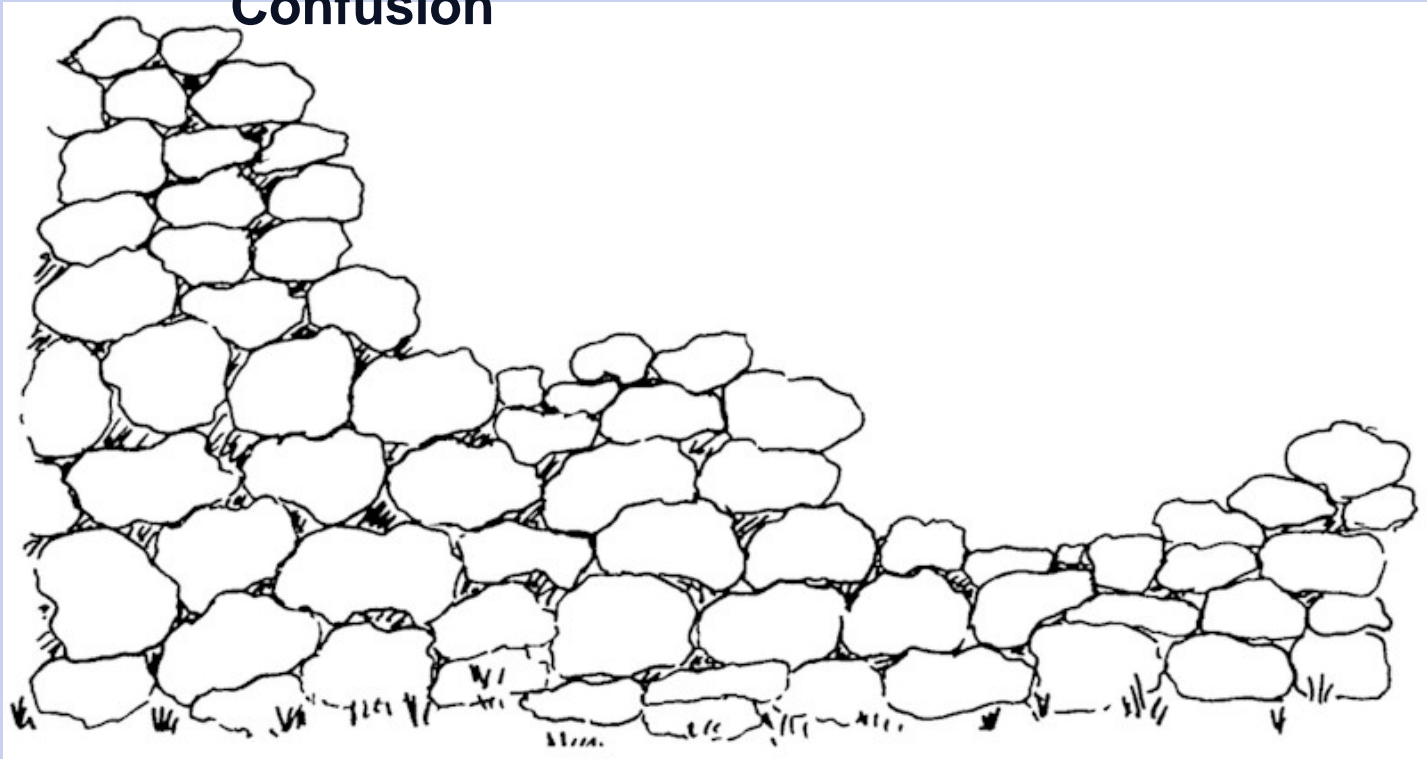


Identifying the Nature of Negative Career Thoughts



Identifying the Nature of Negative Career Thoughts

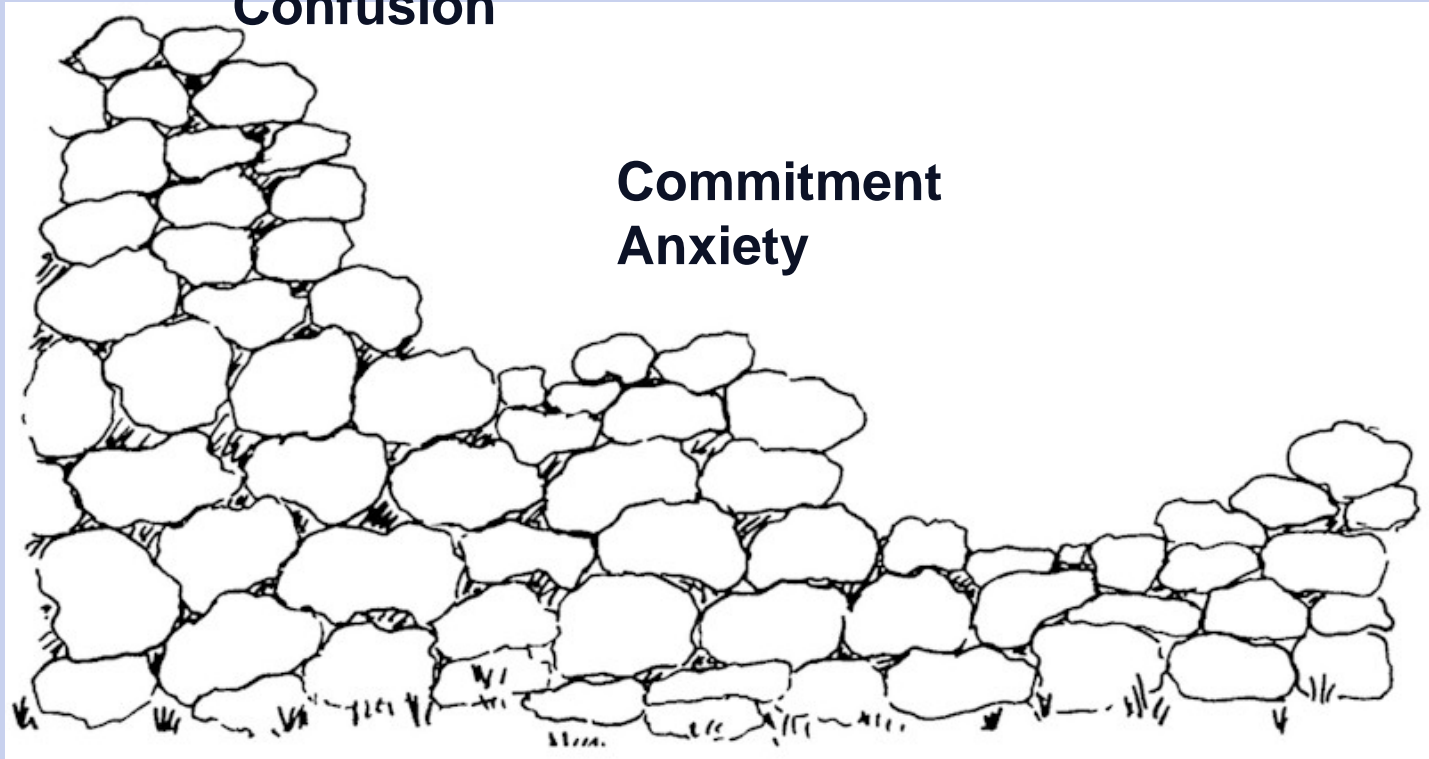
Decision-Making Confusion



Identifying the Nature of Negative Career Thoughts

**Decision-Making
Confusion**

**Commitment
Anxiety**

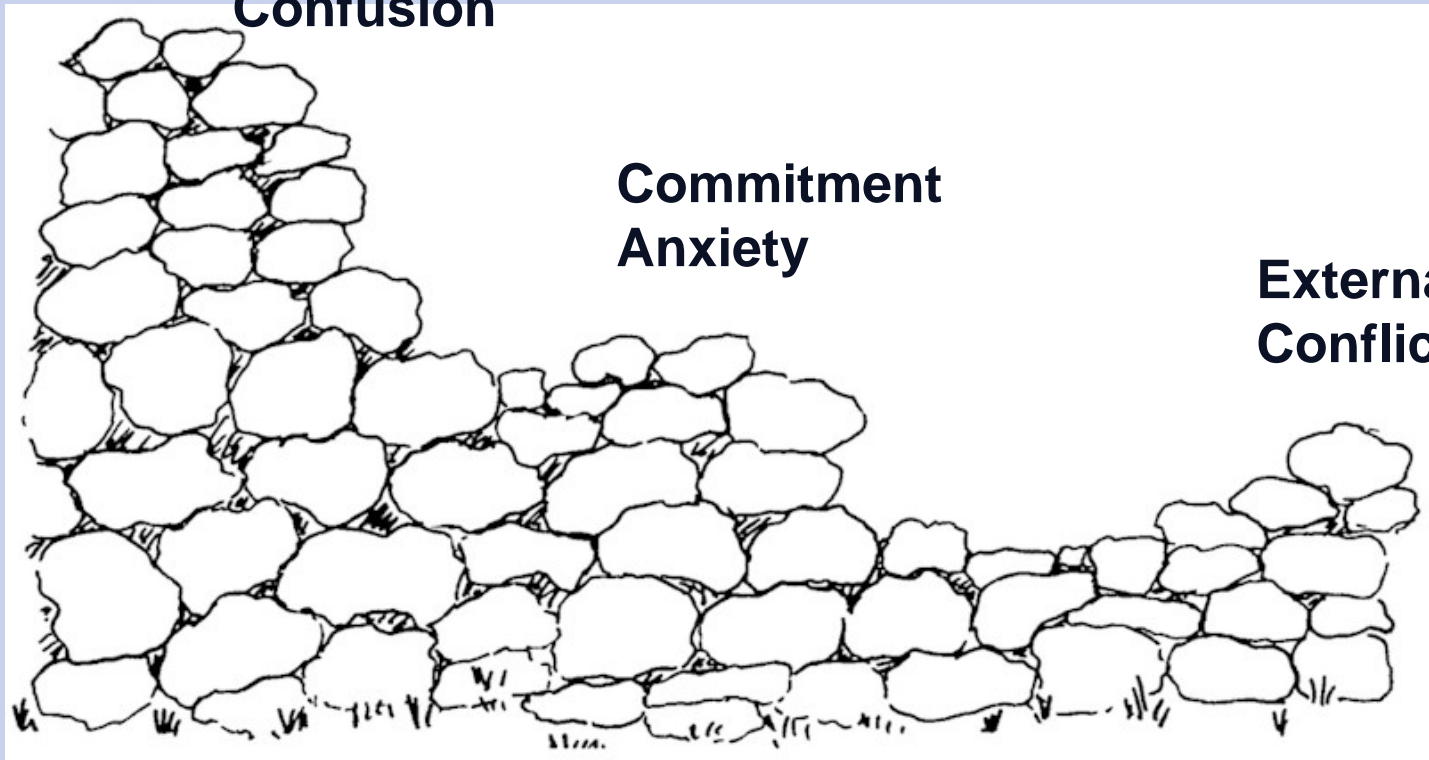


Identifying the Nature of Negative Career Thoughts

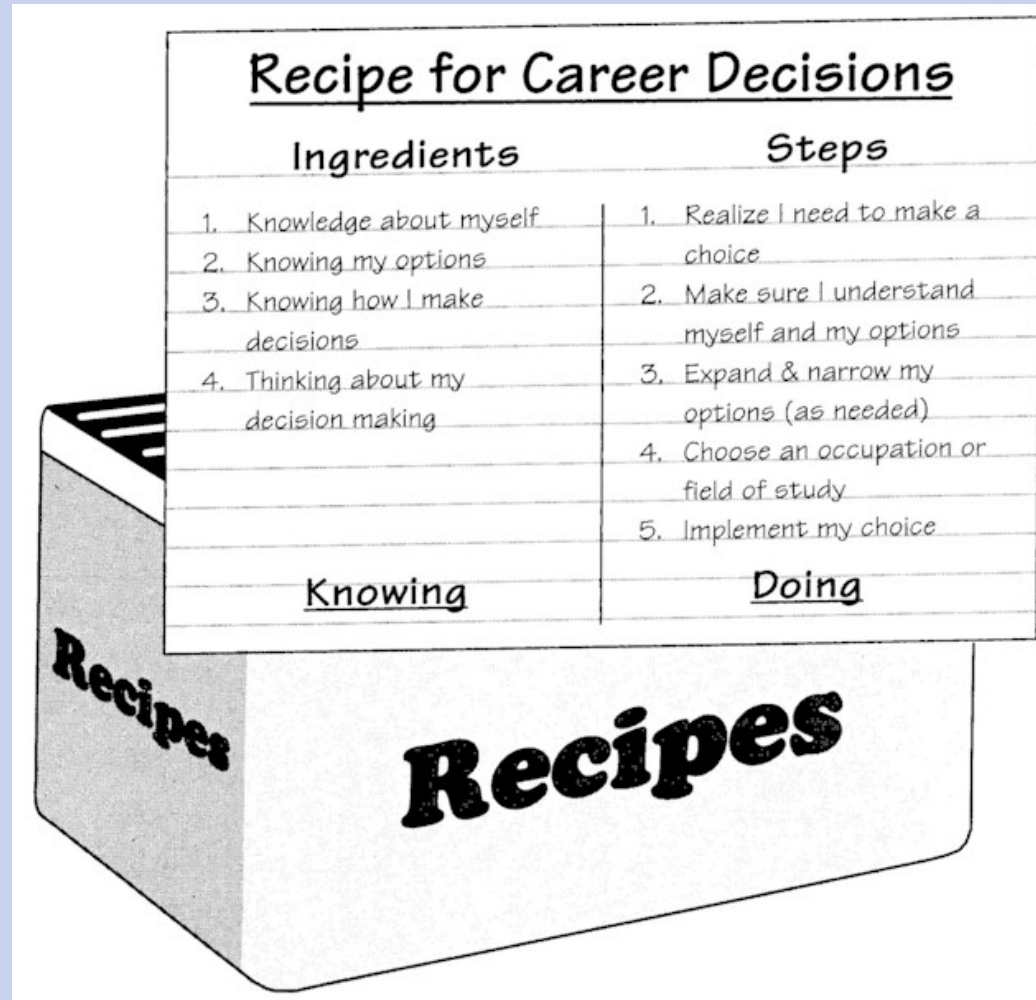
**Decision-Making
Confusion**

**Commitment
Anxiety**

**External
Conflict**



Improving Your Ability to Make Good Decisions



Recipe for Career Decisions

Ingredients

1. Knowledge about myself
2. Knowing my options
3. Know how I make decisions
4. Thinking about my decision making

Knowing

Steps

1. Realize I need to make a choice
2. Make sure I understand myself and my options
3. Expand & narrow my options (as needed)
4. Choose an occupation or field of study
5. Implement my choice

Doing

Appropriate Users of the CTI

- 11th and 12th grade high school students
- College students
- Adults

Readability

- CTI Test Booklet - 6.4 grade level
- CTI Workbook - 7.7 grade level

Administration and Scoring

- Review directions with the user
- User completes the CTI in approximately 7-15 minutes
- Practitioner completes hand scoring in 5-8 minutes
 - The user may complete hand scoring with supervision in some group settings

Use of Terminology

- All client materials use "negative" career thoughts instead of "dysfunctional" career thoughts
- Practitioners should also use "negative" career thoughts instead of "dysfunctional" career thoughts

Diversity Issues

- Consider the impact of group membership on career choice
- The influence of age, disability, ethnicity, gender, race, sexual orientation, and socio-economic status on career thoughts can influence the complexity of career choice
- Use the CTI as a stimulus to discuss diversity issues

Professional Requirements

Screening, Interpretation, and Intervention

- Training in human behavior, helping skills, and assessment
- Training in career development, career services, and cognitive therapy
- Supervised experience in delivering career services
- Familiarity with the CTI, CTI Workbook, and Professional Manual

Professional Requirements

Screening and Referral

- Training in helping skills and assessment
- Training in career development & career services
- Supervised experience in delivering career services
- Familiarity with the CTI, CTI Workbook, and portions of the Professional Manual

Case Studies

- **Karen**
 - 38 year old female seeking assistance at a community college (Moderate readiness)
- **Jeff**
 - 20 year old sophomore seeking assistance from a college counseling center (Low readiness)
- **Carmen**
 - 17 year old high school senior participating in a classroom guidance unit (Moderate readiness)

CTI and Workbook Development

- Item selection and scale construction
- Workbook development and pilot testing
- Standardization
- Reliability
- Validity
- Utility

Item Selection & Scale Construction

- After a literature review, criteria were established for items in the eight dimensions
- An initial item pool was created based upon actual client statements from the counseling experience of the authors
- Items were administered to college students and retained on the basis of psychometric quality, freedom from gender, ethnic, or social desirability bias, item-scale reliability, and content domain coverage

Item Selection & Scale Construction

- Factor analyses revealed three interpretable factors
 - Decision-making confusion (14 items)
 - Commitment anxiety (10 items)
 - External conflict (5 items)
- These three factors became the three construct scales of the CTI
- Each item in each scale could also be related to the eight CIP content dimensions

CTI Workbook Development

- A cognitive restructuring exercise was created to help clients challenge and alter negative career thoughts
- Reframing stimulus statements were written for each of the 48 test items
- These statements show how negative thoughts interfere with making career decisions and provide information on how to make effective use of time spent on career choice

CTI Workbook Development

- Reframing stimulus statements were examined for potential bias regarding ethnicity, gender, disability, and age
- The exercise was pilot tested and revised
- Sections were added on score interpretation, decision-making instruction, and use of social support

Standardization

- National norms were developed for
 - Adults (n= 571)
 - College students (n= 595)
 - 11th and 12th grade High schools students (n=396)
 - Clients seeking career services (n=376)
- Little relationship was found between gender and ethnicity and CTI scores, showing that separate norms were not needed
- Creation of local norms is recommended, provided appropriate expertise is available

Reliability

- **Internal consistency**
 - High to acceptable Alpha coefficients
- **Stability**
 - Good to acceptable test-retest reliability for college students and high school students

Validity

- **Face**
 - Relevance of items to negative career thoughts
- **Content**
 - Clear relationship to the eight CIP content areas
- **Factorial**
 - Consistent results from a series of factor analyses
- **Convergent**
 - Predicted results shown with constructs from other measures (MVS, CDS, CDP, & NEO PI-R)
- **Criterion**
 - Ability to separate clients from non-clients

Utility

- Quick administration
 - 7-15 minutes
- Rapid scoring
 - 5-8 minutes
- Easy interpretation
 - Small number of scales and interpretative data in workbook
- Easy integration into service delivery
 - CTI workbook assigned as homework
- Inexpensively used
 - Relatively inexpensive purchase costs

Summary

- Background of the CTI
- Use of the CTI and the CTI Workbook
- CTI Case Studies
- Development of the CTI and the CTI Workbook

Getting the Most Benefit from Reading

- Compare the CTI with another test you have used
- Use the CTI yourself and get help interpreting the results
- Complete the CTI Workbook and have a practitioner review your work
- Discuss the three case studies with a practitioner who is familiar with the CTI

For Additional Information

www.career.fsu.edu/techcenter/

Thank You

