

Cognitive Information Processing Theory: Applying Theory and Research to Practice

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Today's Goals:

- Review key elements of CIP
- Present practical CIP tools and strategies
- Share research findings on CIP and its service delivery model



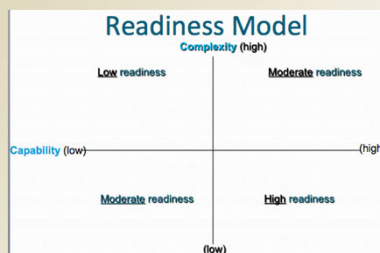
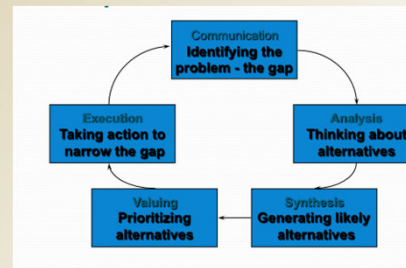
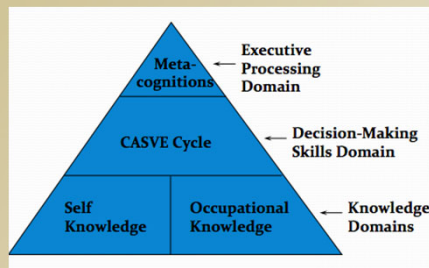
CIP Theory Proposition

The *aim* of CIP interventions:
enhance one's *capability* as
a *career problem solver* and
decision maker

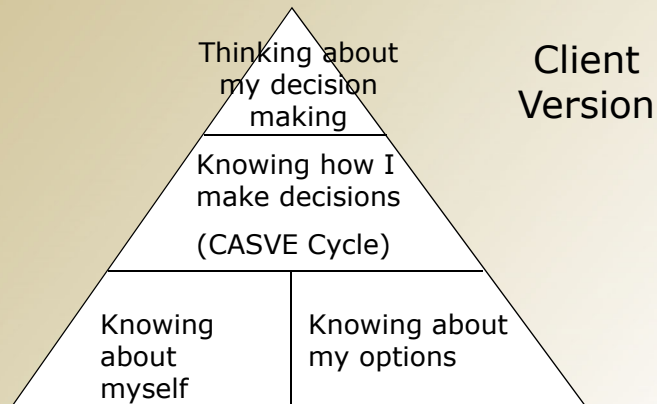


INTEGRATING
RESEARCH

Theoretical Foundations: CIP Theory



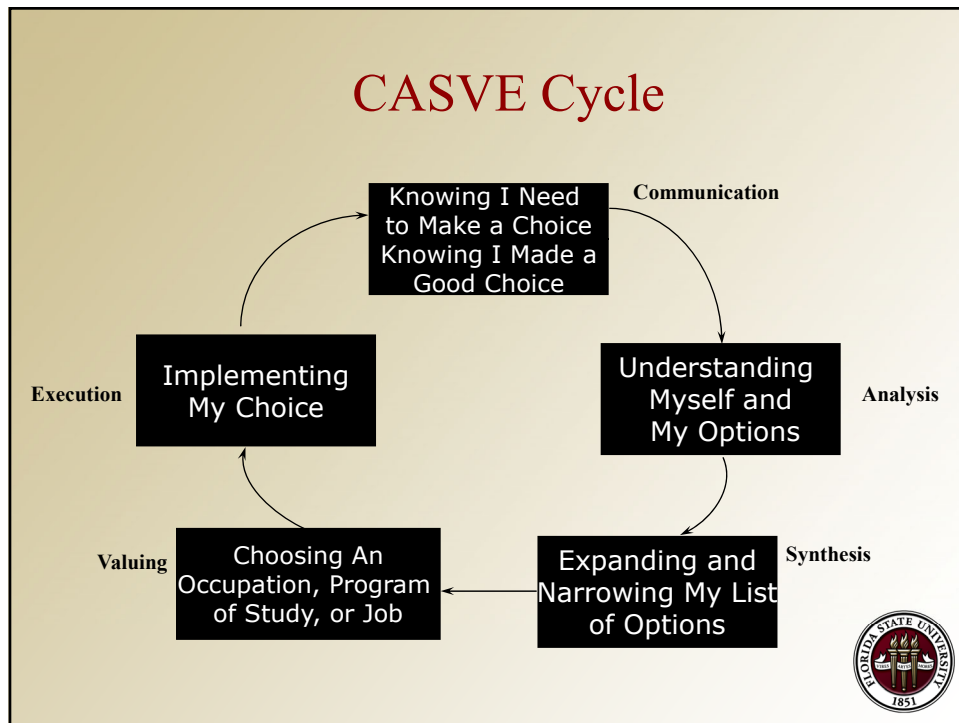
CIP Pyramid Domains



Research on Pyramid Components

- Multiple studies correlating DCT to career constructs (indecision, anxiety, depression, impulsivity, neuroticism)
- Recent study on the relationships among the pyramid (Osborn et al., in press).
- Impact of CIP-based courses on reducing DCT and increasing career decidedness (multiple studies)





Research on CASVE Cycle

- Osborn et. al (in press) found all students start in earlier stages, but those in career course more likely to move to later stages by the end of the course.
- Bullock-Yowell currently testing instrument on CASVE Cycle.



Readiness

The **capability** of an individual to make appropriate career choices taking into account the **complexity** of family, social, economic, and organizational factors that influence career development

Readiness also includes possessing adequate language skills and literacy skills for communication and learning

Source: Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. G. (2004). *Career counseling and services: A cognitive information processing approach*. Pacific Grove, CA: Brooks/Cole.

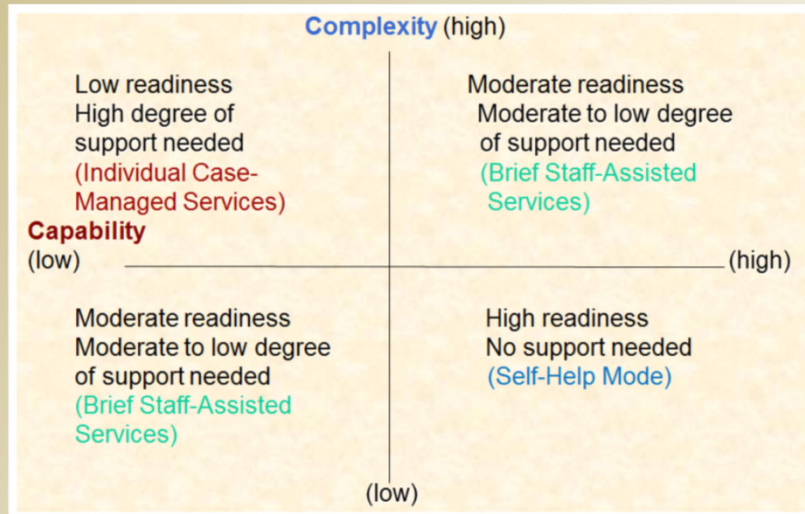


Accurate Assessment of Individual Needs

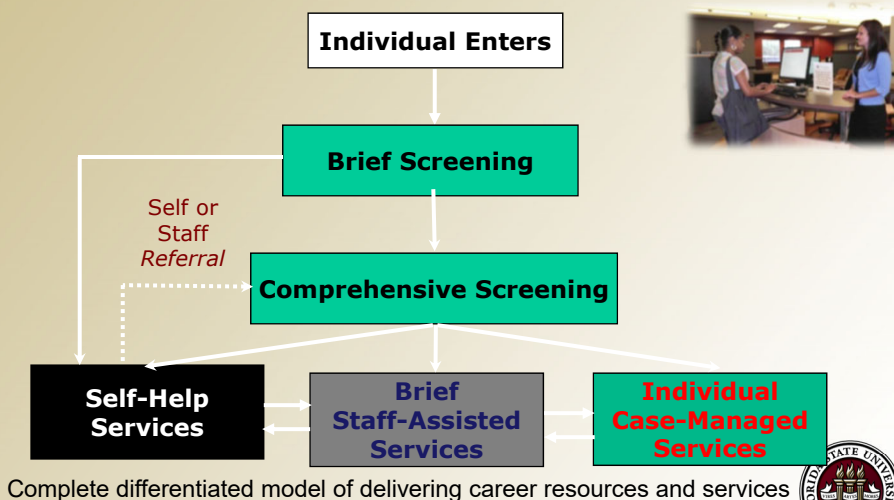
- **Capability** concerns internal factors that make it more, or less, difficult to decide about occupational, educational, training, or employment options
- **Complexity** concerns external factors that make it more, or less, difficult to decide, such as the family, society, the economy, or organizations



CIP Readiness Model



Differentiated Service Delivery Model



Poll question

Which of the service delivery styles has demonstrated effectiveness via empirical research?

- a) Brief-assisted model
- b) Self-help services
- c) Individual case-managed approach
- d) All of the above



Research on Differentiated Model

ALL OF THE ABOVE:

- Kronholz (2015) provided case study/report on effectiveness of self-help career services.
- Osborn et al. (2016) demonstrated effectiveness of brief-career assisted model.
- Whiston et al. (2017) found individual career counseling sessions had the largest effect size.



CIP-related & created resources

- Decision Space Worksheet
- Individual Career Learning Plan
- Guide to Good Decision Making
- Career Thoughts Inventory/Workbook

Available at:

<http://career.fsu.edu/tech-center/resources/service-delivery-handouts>



Decision Space Worksheet (DSW)

Decision Space Worksheet (DSW)

Name _____ Date _____

The career decision you are considering _____

List all thoughts, feelings, circumstances, people, or events that bear on the career decision you are making. Then, for each factor indicate whether it has a specific negative, positive, or neutral impact on your decision by circling the corresponding symbol at the end of each line.

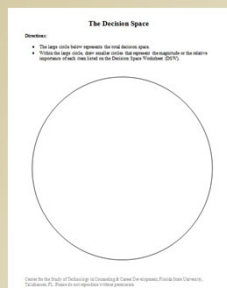
1. _____	Negative Neutral Positive — 0 +
2. _____	Negative Neutral Positive — 0 +
3. _____	Negative Neutral Positive — 0 +
4. _____	Negative Neutral Positive — 0 +
5. _____	Negative Neutral Positive — 0 +

Decision Space Worksheet (DSW) Activity Manual

Gary Peterson, PhD
Janet Lenz, PhD
Debra Osburn, PhD

August 2016

- Assessing personal and social context
- A measure of complexity



Available at:

<http://career.fsu.edu/tech-center/resources/service-delivery-handouts>

or <http://tinyurl.com/fsu-handouts>



Peterson, G. W., Leasure, K. K., Carr, D. L., & Lenz, J. G. (2010). The Decision Space Worksheet: An assessment of context in career decision making. *Career Planning and Adult Development Journal*, 25, 87-100.

Purpose of the Decision Space Worksheet (DSW)

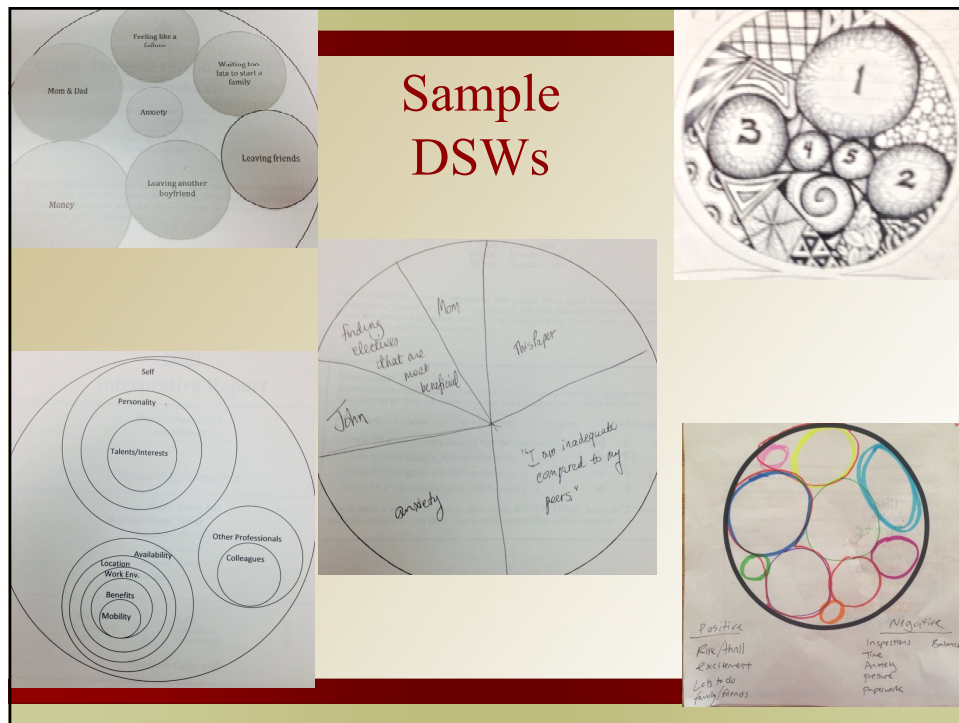
- Cognitive mapping task
- Helps clients reveal thoughts, feelings, persons, circumstances associated with career decision
- Helps clients prioritize importance of contextual influences
- Can be used with middle school through college level students and adults



Types of Issues Revealed

- | | |
|-----------------------|------------------|
| •Cognitive distortion | •Interests |
| •Disabling emotions | •Self doubt |
| •Financial | •Employment |
| •Family | •Quality of life |
| •Education | |





Next Steps with the DSW

- Further readiness assessment?
- Develop a treatment plan or Individual Learning Plan
 - Readiness assessment
 - Career assessment
 - Options information
 - Referrals for mental health concerns



Individual Learning Plan

Individual Learning Plan

Goal(s) #1 Clarify interests and ascertain readiness for career counseling

#2 Explore options for a graduate degree

#3 Improve peer networking skills at work

#4 Increase social interactions among family members

Activity	Purpose/Outcome	Estimated Time Commitment	Goal #	Priority
Individual career counseling to foster self exploration	Enhance knowledge of self and career options	On-going	1, 2, & 3	2
Complete the Career Thoughts Inventory	Ascertain potential dysfunctional career thoughts	15 minutes	1	1
Complete Self-Directed Search	Enhance self knowledge	45 minutes	1	3
Explore potential graduate degree programs of interest	Enhance knowledge of options	On-going	2	4
Practice interacting with other people at work and in neighborhood	Gain self-observation skills and experience in interactions with peers	On-going	3	5
Carry out referral to university counseling center for family counseling*	Improve quality of family relationships related to career choice and support	One week	4	6

Ned

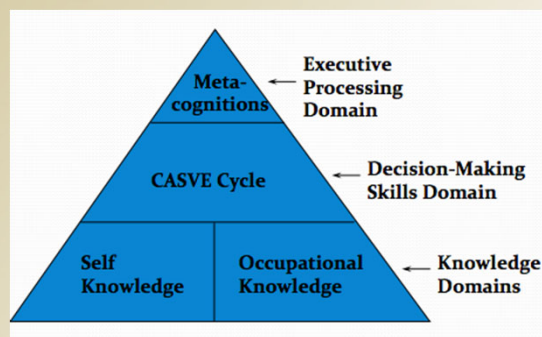
Student/Client

Date

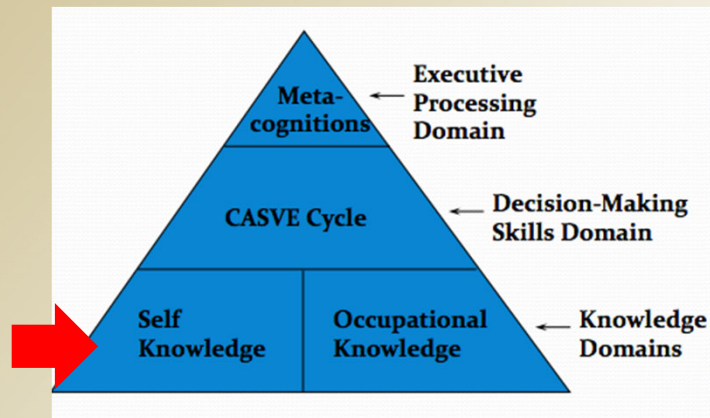
* This activity may be conducted in a career center if counselor possesses appropriate skills and training



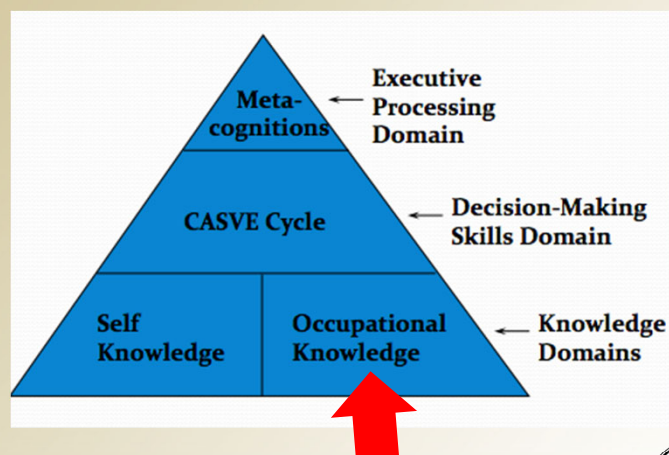
CIP Strategies & Interventions



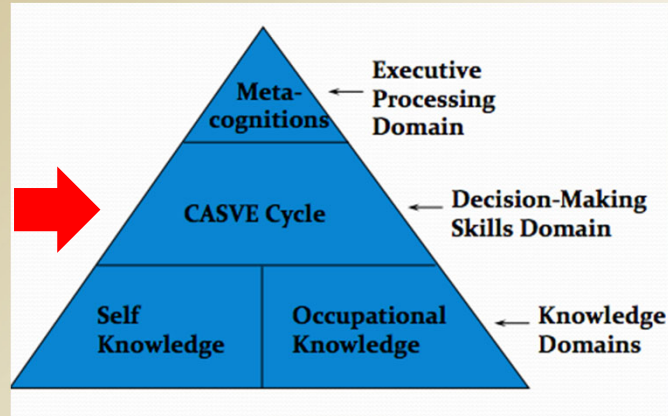
Practical Strategies for Building Self-Knowledge?



Practical Strategies for Building Options Knowledge?



Practical Strategies for Building Decision Making Skills?



EXAMPLES

Guide to Good Decision Making Exercise¹

A cycle can be used to show the steps in making a career choice. Use the blank spaces below to note your thoughts and feelings about your career choice.

Communication

Knowing I Need to Make a Choice

Events - things that happen to me
Example: "I need to choose a major by next semester."

Comments from my friends and relatives
Example: "My roommate said that I have problems if I don't make a decision soon."

The way I feel
Example: "I'm scared about committing myself."

Avoiding my problems
Example: "I'll get married next week."

Physical problems
Example: "I'm so upset about this, I can't eat."

Analysis

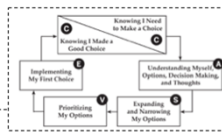
Understanding Myself, Options, Decision Making, and Thoughts

Understanding myself, such as
My values
Example: security

My interests
Example: working with people

My skills
Example: using a computer to plan a budget

My employment preferences
Example: limited travel



¹ Adapted from Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., & Beaudoin, R. C. (1992). A cognitive approach to career services: Translating concepts into practice. *The Career Development Quarterly*, 41, 47-74.

Labeling Prioritizing My Options

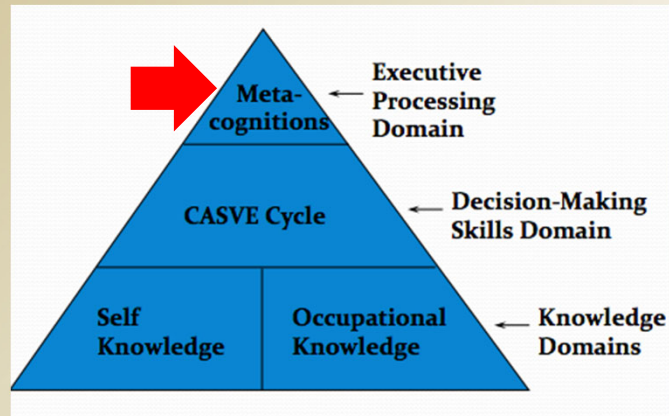
Occupation, program of study, or job	Benefits to myself? My family? Friends? Cultural group? Community? Society?	Costs to myself? My family? Friends? Cultural group? Community? Society?

Diverse Decision Makers

Adapted from Donald & Carlisle, 1983

Rank	Name	Description	Pros of making decisions this way	Cons of making decisions this way
	<i>Hasty Harry</i>	Makes a decision immediately, no matter what. He wants to eliminate the discomfort of ambiguity as soon as possible.		
	<i>Last Minute Louie</i>	Always waits until the very last possible second before deciding on anything.		
	<i>Stubborn Susan</i>	Makes a firm decision and refuses to consider any other alternative.		
	<i>Mia Fraid</i>	Delays any decision for fear of being wrong or appearing foolish.		
	<i>Wilbur the Worrier</i>	Avoids deciding because he lacks self-confidence in his ability to live with the consequences of the decision.		

Practical Strategies for Assessing Metacognitions (Self-Talk)?



Poll Question

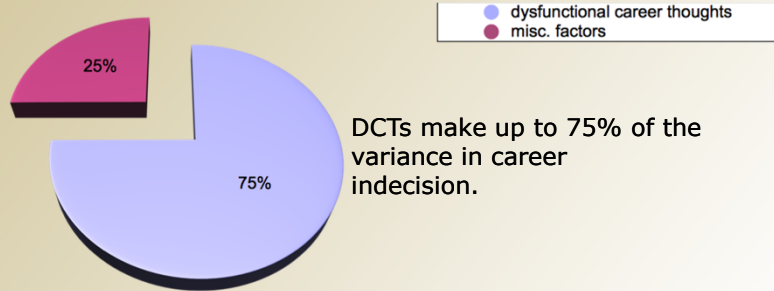
• What %age of career indecision is attributed to dysfunctional career thinking?

- a) 25%
- b) 50%
- c) 75%
- d) 100%



Career Thoughts Inventory

- Measures dysfunctional career thoughts
- Why???

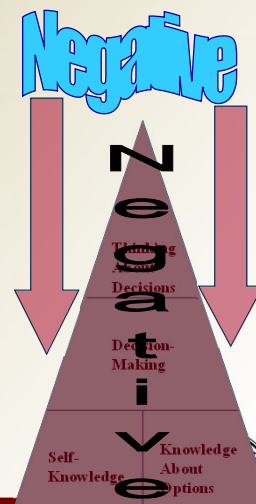


Based on Cognitive Information Processing (CIP) theory

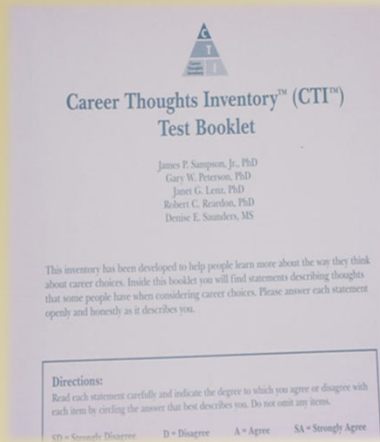


Impact of negative thinking?

- # They **color**:
 - A client's perception of interests and abilities
 - Whether they think a certain career is a good choice
 - How the client evaluates options
 - How the client make career decisions
- # Negative thoughts trickle down into all other components of career decision making



Career Thoughts Inventory (CTI)



- Self-administered
- Objectively scored
- 48-Item measure of dysfunctional thoughts in career choice
- 3 Subscales:
 - Decision Making Confusion
 - Commitment Anxiety
 - External Conflict

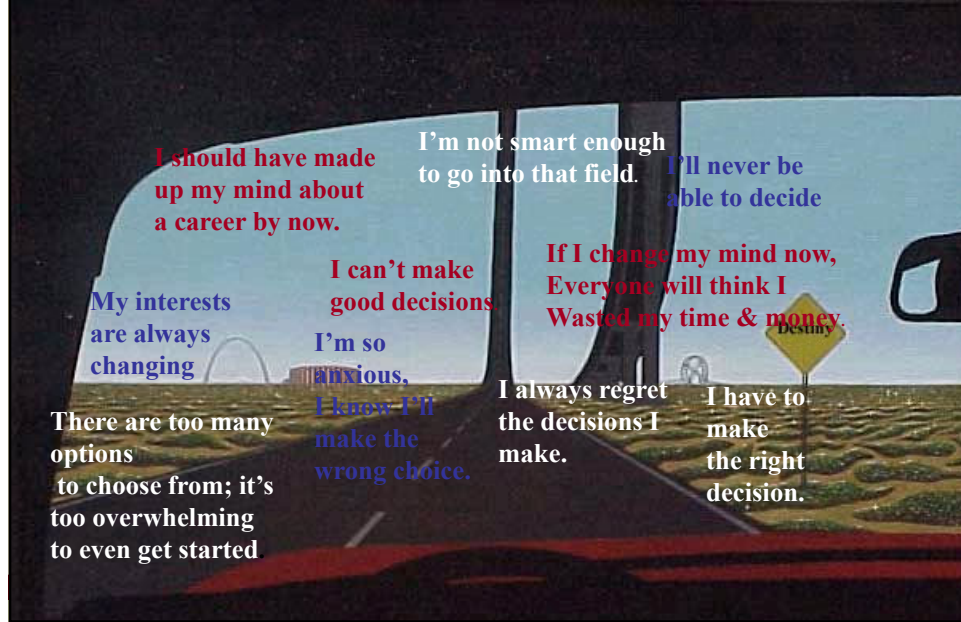


Sample Items

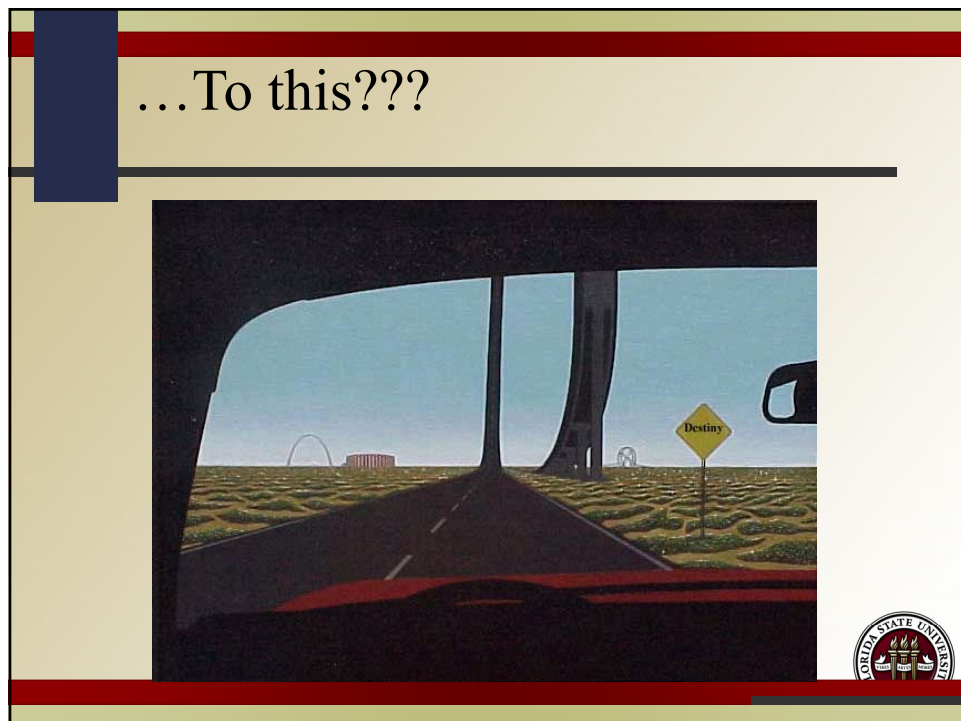
- Finding a good job is just a matter of luck.
- I'm embarrassed to let others know I haven't chosen a career.
- I know what job I want, but someone's always putting obstacles in my way.



How can we go from this...?



...To this???



Poll question

Which of the following is an evidenced-based approach to addressing dysfunctional thoughts?

- a) Cognitive restructuring
- b) Diaphragmatic breathing
- c) Paraphrasing
- d) Reflective Listening



Poll question

Which of the following is an evidenced-based approach to addressing dysfunctional thoughts?

- a) **Cognitive restructuring**
- b) Diaphragmatic breathing
- c) Paraphrasing
- d) Reflective Listening



CTI Workbook

Decision Making Checklist

1. Place a check mark (✓) next to each item with which you *Strongly Agree* or *Agree* on the CTI.
2. Add up the number of check marks for each group of CTI items. Focus your attention on sections with a higher number of checks. A human service professional can help you review these findings and doing elements of decision making. This professional can also help you apply what you are learning to a specific career choice.

✓ Knowing About Myself

1. No field of study or occupation interests me. _____
9. Whenever I've become interested in something, important people in my life disapprove. _____
17. My interests are always changing. _____
25. Even though I've taken career tests, I still don't know what field of study or occupation I like. _____
33. I get upset when people ask me what I want to do with my life. _____
41. My achievements must surpass my mother's or father's or my brother's or sister's. _____

☐ Total checks

✓ Knowing About My Options

2. Almost all occupational information is slanted toward making the occupation look good. _____
10. There are few jobs that have real meaning. _____
18. Jobs change so fast it makes little sense to learn much about them. _____
26. My opinions about occupations change frequently. _____
34. I don't know how to find information about jobs in my field. _____
42. I know so little about the world of work. _____

☐ Total checks

Understanding Myself and My Options

4. I'll never understand myself well enough to make a good career choice. _____
12. I don't know why I can't find a field of study or occupation that seems interesting. _____
20. Choosing an occupation is so complicated, I just can't get started. _____
28. The more I try to understand myself and find out about occupations, the more confused and discouraged I get. _____
36. I'll never understand myself about

☐ Total checks

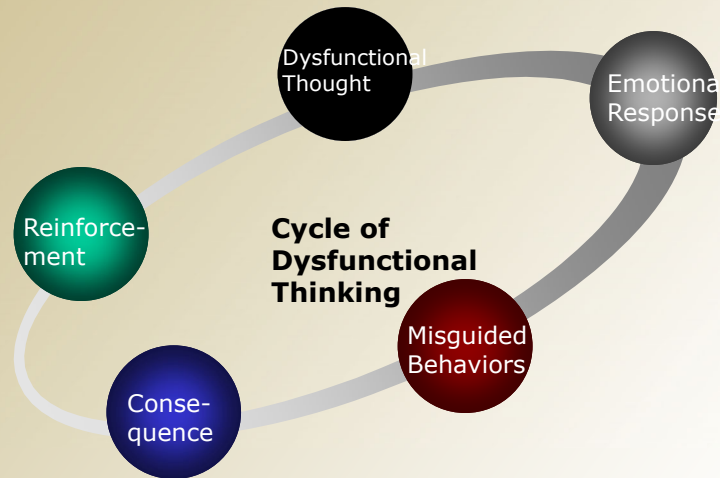


Casting Off Negative Thoughts

1. Catch the negative thoughts when they come.
2. Ask:
 - What's the proof for this?
 - Is there an underlying theme?
E.g., Fear of failure, perfectionism
 - How does this thought make me feel?
3. Reframe the thought into something more positive, truthful and productive.
4. Repeat process as necessary.



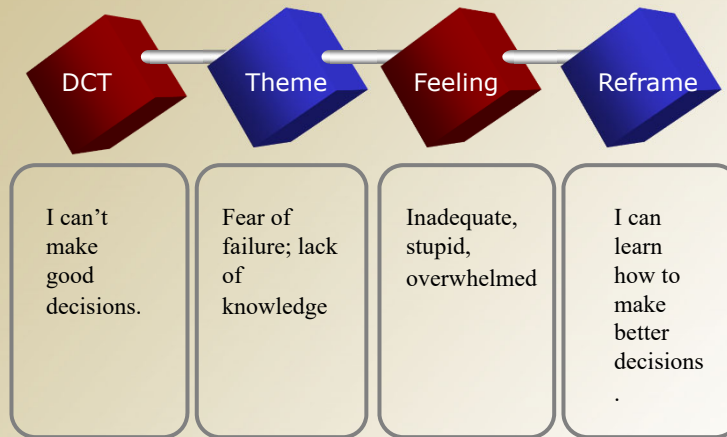
Dysfunctional Thinking Cycle



DIBS Method

- Dispute Irrational Beliefs (Ellis)
 - Identify the irrational belief.
 - Ask: Can I rationally support it?
 - Ask: What evidence exists of the falseness of my belief?
 - Ask: Is there any evidence for the trueness of my belief?
 - Dispute:
 - What are the worst things that could happen if my belief is true?
 - What are good things that could happen if my belief is true?
- 10 minutes a day
- “So what if...?” versus “What if?”
- Identify, Challenge, Alter, Act

Reframing



Reframing Exercise

Negative thought	Theme	Feeling	Reframe



Research on CIP theory-based interventions

- “Probably the most widely studied career interventions....cognitive information processing theory...”.
- “Studies in Iceland and Switzerland provide empirical support for the efficacy of CIP-based interventions.”

– Brown, S. (2015). Career intervention efficacy: Making a difference in people's lives. APA Handbook of Career Interventions, Vol. 1.

Comparisons between Pre-intervention and Post-intervention Scores on Brief Staff-Assisted Outcomes (n = 158)

Dimension	Pre-intervention		Post-intervention		F	d	Percent of Change Scores ^c		
	M	SD	M	SD			Positive	Neutral	Negative
1. Knowledge of next steps	3.40 ^a	1.04	3.90	.81	36.25**	.51	38.4	53.8	5.8
2. Confidence in next steps	3.77 ^a	.89	4.01	.71	13.29**	.31	26.5	64.0	9.6
3. Anxiety about concern	3.46 ^b	1.10	3.20	1.03	9.20*	-.26	10.8	57.2	31.9

*p < .01
**p < .001
a. 5-point scale, 5 = Strongly agree, 1 = Strongly disagree
b. 4-point scale, 1 = not at all anxious, 2 = A little anxious, 3 = Moderately anxious, 4 = Very anxious
c. Change score = (post-intervention minus pre-intervention)

Summary

- CIP offers simple structures to the sometimes chaotic and complex nature of career decision making.
- CIP provides a guide for understanding where a client is and for pinpointing relevant interventions.
- CIP offers tools to aid career practitioners in their work.
- CIP continues to generate research and has an ongoing bibliography.

BIBLIOGRAPHY: A COGNITIVE INFORMATION PROCESSING (CIP) THEORY-BASED APPROACH TO CAREER DEVELOPMENT AND SERVICES

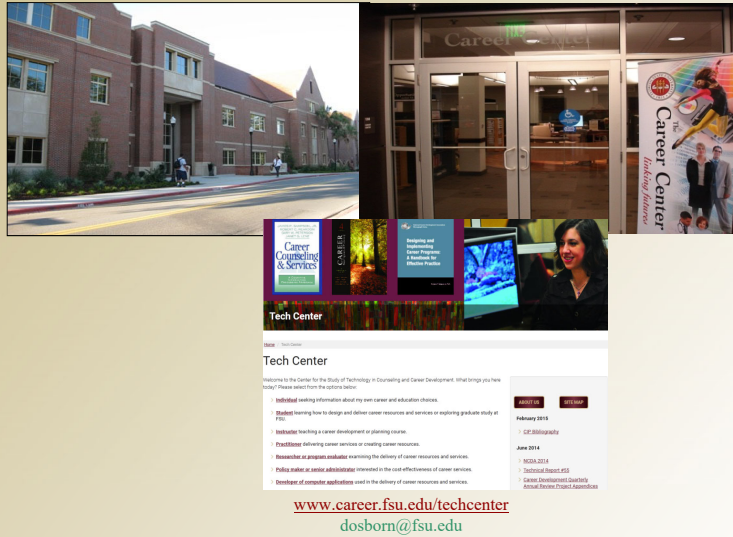
James P. Sampson, Jr., PhD; Gary W. Peterson, PhD; Robert C. Reardon, PhD; and Janet G. Lentz, PhD

Revised with the help of Andrew R. Morrison, Jacob A. Galles, Brittany R. Melvin, Jane Tyler Finkles, Mary Buzzetta, Vanessa F. Freeman, Adam K. Miller, and Ryan Sides

March 2017



For More Information



Tech Center

resources to the Center for the Study of Technology in Counseling and Career Development. What brings you here today? Please select from the options below:

- ☐ **Individual** seeking information about my own career and education choices.
- ☐ **Student** learning how to design and deliver career resources and services or exploring graduate study at FSU.
- ☐ **Instructor** teaching in career development or planning course.
- ☐ **Faculty/Staff** delivering career services or creating career resources.
- ☐ **Researcher or program evaluator** examining the delivery of career resources and services.
- ☐ **Policy analyst or senior administrator** interested in the cost effectiveness of career services.
- ☐ **Developer of computer applications** used in the delivery of career resources and services.

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