Cognitive Information Processing Theory: Applying Theory and Research to Practice

Debra Osborn, Ph.D.
Florida State University
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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*. 
Theoretical Foundations: CIP Theory

- Executive Processing Domain
- Decision-Making Skills Domain
- Knowledge Domains

CASVE Cycle
- Meta-cognitions
- Self Knowledge
- Occupational Knowledge

Readiness Model
- Complexity (high)
- Low readiness
- Moderate readiness
- Capability (low)
- (high)
- Moderate readiness
- High readiness
- (low)
CIP Pyramid Domains

Thinking about my decision making

Knowing how I make decisions
(CASVE Cycle)

Knowing about myself

Knowing about my options

Client Version
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)
CASVE Cycle

Knowing I Need to Make a Choice
Knowing I Made a Good Choice

Understanding Myself and My Options

Expanding and Narrowing My List of Options

Choosing An Occupation, Program of Study, or Job

Implementing My Choice

Communication

Analysis

Synthesis

Execution

Valuing
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

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

<table>
<thead>
<tr>
<th>Complexity (high)</th>
<th>Capability (low)</th>
<th>Complexity (high)</th>
<th>Capability (high)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low readiness</td>
<td>Moderate readiness</td>
<td>Moderate to low degree of support needed</td>
<td>High readiness</td>
</tr>
<tr>
<td>High degree of</td>
<td>Moderate to low degree of support needed</td>
<td>No support needed</td>
<td>of support needed</td>
</tr>
<tr>
<td>support needed</td>
<td>(Brief Staff-Assisted Services)</td>
<td>(Self-Help Mode)</td>
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</tr>
<tr>
<td>(Individual Case-</td>
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<td></td>
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<tr>
<td>Managed Services)</td>
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</tbody>
</table>
Differentiated Service Delivery Model

Individual Enters

Brief Screening

Comprehensive Screening

Self or Staff Referral

Self-Help Services

Brief Staff-Assisted Services

Individual Case-Managed Services

Complete differentiated model of delivering career resources and services
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
ALL OF THE ABOVE:

- 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)

- 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

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
- Disabling emotions
- Financial
- Family
- Education
- Interests
- Self doubt
- Employment
- Quality of life
Sample DSWs

- Feeling like a failure
- Waiting too late to start a family
- Leaving friends
- Leaving another boyfriend

Circle Diagram:
- Finding electives that are most beneficial
- Native
- Mom
- Soup

John: I am inadequate compared to my peers.

Circle Diagram:
- Positive
  - Rare
  - Thrill
  - Excitement
  - Like to do
  - Family/friends

- Negative
  - Inspectors
  - Time
  - Anxiety
  - Pressure
  - Grades
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**

**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

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

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*Ned*

Student/Client: [Blank]  
Date: [Blank]

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*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?
**Guide to Good Decision Making Exercise**

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'll 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 started 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
Example: "My values: security"

My interests
Example: "Working with people"

My skills
Example: "Using a computer to plan a budget"

My employment preferences
Example: "Limited travel"

**Prioritizing My Options**

|--------------------------------------|---------------------------------|----------------------------|

**CASVE Cycle**

1. *Knowing I Need to Make a Choice*
2. *Knowing I Made a Good Choice*
3. *Implementing My First Choice*
4. *Prioritizing My Options*
5. *Expanding and Narrowing My Options*
6. *Understanding Myself, Options, Decision Making, and Thoughts*

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**Examples**

- **Hasty Harry**
  Makes a decision immediately, no matter what. He wants to eliminate the discomfort of ambiguity as soon as possible.

- **Last Minute Louie**
  Always waits until the very last possible second before deciding on anything.

- **Stubborn Susan**
  Makes a firm decision and refuses to consider any other alternative.

- **Mia Fraid**
  Delays any decision for fear of being wrong or appearing foolish.

- **Wilbur the Worrier**
  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

DCTs make up to 75% of the variance in career indecision.

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.
Dysfunctional Thinking Cycle

Dysfunctional Thought

Misguided Behaviors

Consequence

Reinforcement

Emotional Response

Cycle of Dysfunctional Thinking
How can we go from this...?

I should have made up my mind about a career by now.

I’m not smart enough to go into that field.

I’ll never be able to decide

My interests are always changing

I can’t make good decisions.

If I change my mind now, Everyone will think I Wasted my time & money.

I’m so anxious, I know I’ll make the wrong choice.

I always regret the decisions I make.

There are too many options to choose from; it’s too overwhelming to even get started.

I have to make the right decision.
...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

Section 1

Identifying Your Total Amount of Negative Career Thoughts: The CTI Total Score

The CTI Total score tells you your total amount of negative career thinking. This score can suggest how much help you may need to make a good career decision.

Here is another way to think about negative career thoughts. Imagine these thoughts as stones piled up to make a wall, with a good career decision on the other side. If the wall is low, then little help is needed to remove the stones so you can walk forward to make a choice. Some people just step over a low wall. The wall is annoying and slows them down, but they don’t want to make the effort to remove the stones that make up the wall. If the wall is high, it can still be taken down. People just need more help to take the wall down so they can walk forward and choose. The higher your CTI Total score, the higher this wall and the more effort or help you may need to take it down.
Decision Making Checklist

1. Place a check mark (✓) next to each item with which you strongly agree or agree on the CTI items. Focus your attention on sections with a higher number of checks. A human service professional can help you decide on specific career choice.

✓ Knowing About Myself

1. No field of study or occupation interests me.
2. Almost all occupational information is slanted toward making the occupation look good.
3. There are few jobs that have real meaning.
4. I’ll never understand myself well enough to make a good career choice.
5. I don’t know why I can’t find a field of study or occupation that seems interesting.
6. Choosing an occupation is so complicated, I just can’t get started.
7. The more I try to understand myself and find out about occupations, the more confused and discouraged I get.
8. I’ll never understand enough about

✓ Knowing About My Options

9. Whenever I’ve become interested in something, important people in my life disapprove.
10. Jobs change so fast it makes little sense to learn much about them.
11. I’m so frustrated with the process of choosing a field of study or occupation I just want to forget about it for now.
12. I don’t know why I can’t find a field of study or occupation that seems interesting.
13. Choosing an occupation is so complicated, I just can’t get started.
14. The more I try to understand myself and find out about occupations, the more confused and discouraged I get.
15. I’ll never understand enough about

✓ Reality

17. My interests are always changing.
18. Jobs change so fast it makes little sense to learn much about them.
19. If I change my field of study or occupation I will feel like a failure.
20. I worry a great deal about choosing the right field of study or occupation.
21. I’m embarrassed to let others know I haven’t chosen a field of study or occupation.
22. My achievements must surpass my mother’s or father’s or my brother’s or sister’s.
23. I get upset when people ask me what I want to do with my life.
24. I worry a great deal about choosing the right field of study or occupation.
25. Even though I’ve taken career tests, I still don’t know what field of study or occupation I like.
26. My opinions about occupations change frequently.
27. I’m so confused, I’ll never be able to choose a field of study or occupation.
28. I worry a great deal about choosing the right field of study or occupation.
29. I’m embarrassed to let others know I haven’t chosen a field of study or occupation.
30. My achievements must surpass my mother’s or father’s or my brother’s or sister’s.

Total checks

An Exercise for Improving Your Career Thoughts

<table>
<thead>
<tr>
<th>Old Career Thought</th>
<th>New Career Thought</th>
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Total checks
CTI Workbook

Decision Making Checklist

1. Place a check mark (✓) next to each item with which you Strongly Agreed or Agreed 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 knowing 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 enough about myself to make a good career choice.

11. I’m so frustrated with the process of choosing a field of study or occupation I just want to forget about it for now.
19. If I change my field of study or occupation, I will feel like a failure.
27. I’m so confused, I’ll never be able to choose a field of study or occupation.
35. I worry a great deal about choosing the right field of study or occupation.
43. I’m embarrassed to let others know I haven’t chosen a field of study or occupation.

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.
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
I can’t make good decisions. Fear of failure; lack of knowledge Inadequate, stupid, overwhelmed I can learn how to make better decisions.
<table>
<thead>
<tr>
<th>Negative thought</th>
<th>Theme</th>
<th>Feeling</th>
<th>Reframe</th>
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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.”


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<thead>
<tr>
<th>Dimension</th>
<th>Pre-intervention</th>
<th>Post-intervention</th>
<th>F</th>
<th>d</th>
<th>Percent of Change Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of next steps</td>
<td>3.40±</td>
<td>3.90±</td>
<td>36.22**</td>
<td>.51</td>
<td>38.4 55.8 5.8</td>
</tr>
<tr>
<td>Confidence in next steps</td>
<td>3.77±</td>
<td>4.01±</td>
<td>13.29**</td>
<td>.31</td>
<td>26.5 64.0 9.6</td>
</tr>
<tr>
<td>Anxiety about concern</td>
<td>3.46±</td>
<td>3.20±</td>
<td>9.20*</td>
<td>.26</td>
<td>10.8 57.2 31.9</td>
</tr>
</tbody>
</table>

*a < .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.
For More Information

www.career.fsu.edu/techcenter
dosborn@fsu.edu