Applying Cognitive Information Processing (CIP) Theory to Career Counseling & Services

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The FSU Career Center
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• **Career Center is our laboratory**
Cognitive Information Processing (CIP) Theory in Career Services

- Both practitioner and client play an active role
- “Expert” and client versions of concepts
- Model is practical, easy to learn and apply, yet accounts for complexity
- Emphasis on “getting inside the client’s head” to look at how information is processed
- Ultimate aim is to enable individuals to become skillful career problem solvers and decision makers.
Some Myths About CIP Theory

• is simply a decision-making model with a rational focus
• has only been researched and applied at Florida State
• has not been applied or researched with diverse populations or cultures
• emphasizes cognition/thinking over feelings
• doesn’t deal with chance or unplanned events
• focuses solely on the individual, rather than individuals in context
Key CIP Concepts

- Pyramid of Information Processing Domains (*Knowing*)
- CASVE Cycle (*Doing*)
- Readiness for Career Choice Model
- Differentiated Service Delivery Model
CIP Pyramid Domains

Thinking about my decision making

Knowing how I make decisions

CASVE Cycle

Knowing about myself

Knowing about my options

Client Version
CASVE Cycle - Client Version

- Knowing I Need to Make a Choice
- Knowing I Made a Good Choice
- Understanding Myself and My Options
- Implementing My Choice
- Expanding and Narrowing My List of Options
- Choosing An Occupation, Program of Study, or Job
Translating Concepts for Client Use

• Pyramid
  – What’s involved in career choice
  – The content of career choice
  – What you need to know
  – Contributes to an informed career choice

• The CASVE Cycle
  – A guide to good decision making
  – The process of career choice
  – What you need to do
  – Contributes to a careful career choice
CIP in Practice

- Focus is on creating a learning event
- Goal: clients learn how to solve career problems and make decisions
- CIP approach/ concepts can be easily explained to clients
Definition of Readiness

• Readiness is the capability of an individual to make informed and careful 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.
Capability

• The cognitive and affective capacity to engage in effective career choice behaviors

• How are my career choices influenced by the way I think and feel?
Capability

- Honest exploration of values, interests, and skills
- Motivated to learn about options
- Able to think clearly about career problems
- Confident of their decision-making ability
- Willing to assume responsibility for problem solving
- Aware of how thoughts and feelings influence behavior
- Able to monitor and control problem solving
Complexity

• Contextual factors, originating in the family, society, the economy, or employing organizations, that make it more (or less) difficult to make career choices

• How does the world around me influence my career choices?
Service Delivery Levels

• Self-Help Services
• Brief Staff-Assisted Services
• Individual Case-Managed Services
# CIP Readiness Model

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

Individual Enters

Brief Screening

Self or Staff Referral

Comprehensive Screening

Self-Help Services

Brief Staff-Assisted Services

Individual Case-Managed Services

Complete differentiated model of delivering career resources and services
Self-Help Services

- Guided by the user
- Served in library-like or remote setting
- High decision-making readiness
- Little or no assistance needed
Brief Staff-Assisted Services

- Guided by a practitioner
- Served in library-like, classroom, or group setting
- Moderate decision making readiness
- Minimal assistance needed
Individual Case-Managed Services

• Guided by a practitioner
• Served in an individual office, classroom, or group setting
• **Low** decision-making readiness
• Substantial assistance needed
Aim of Differentiated Service Delivery

- Individuals and adults should receive the level of help they need, no more and no less.
- The aim of the differentiated service delivery model (the CIP approach) is to provide:
  - the right resource
  - used by the right person
  - with the right level of support
  - at the lowest possible cost
A Word About Assessments

- Consider type of clientele served
- Assessing various domains of the Pyramid
- More is not better—consider value-added
- Varied career assessments in terms of methods
## Career Assessment Methods

<table>
<thead>
<tr>
<th>Stimulus</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear</td>
<td>clear</td>
</tr>
<tr>
<td>CTI</td>
<td>Structured interview</td>
</tr>
<tr>
<td>Self-Directed Search</td>
<td>Decision Space</td>
</tr>
<tr>
<td>CACG systems</td>
<td></td>
</tr>
<tr>
<td>ambiguous</td>
<td>ambiguous</td>
</tr>
<tr>
<td>Occupational Alter. Question (OAQ)</td>
<td>Autobiography</td>
</tr>
<tr>
<td></td>
<td>Five Lives to Live</td>
</tr>
<tr>
<td></td>
<td>Unstructured interview</td>
</tr>
</tbody>
</table>

Preliminary Assessment

• Screening instrument—helps determine readiness for career choice and level of assistance needed, examples—

  Career Thoughts Inventory (CTI)

  Occup. Alternatives Questionnaire (OAQ)
Interpreting Assessments

• **Level I**—meaning of scores
  – relative to others (normative)
  – in relation to external standard (criterion referenced)
  – within individual (idiographic)

• **Level II**—connecting results to CIP
  – pyramid
  – CASVE cycle
Career Assessment Examples

• Occupational Alternatives Questionnaire (OAQ)
• Career Thoughts Inventory (CTI)
• Decision Space Worksheet (DSW)
Initial Interview

- “What brings you here today?”
- “I would like to find information comparing the starting salaries of teachers and guidance counselors.”
- Concrete request with no problems apparent
- No further screening needed - refer to self-help services
Occupational Alternative Questionnaire (OAQ)

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

____________________________________

____________________________________

____________________________________

2. Which occupation is your first choice? (If undecided, write “undecided.”)

____________________________________

3. How well satisfied are you with your first choice?
   (Write one of the numbers below in the space to the right.)

   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
Purpose of the OAQ

• Measures the career decision state
  – degree of certainty pertaining to a career choice
  – satisfaction with current choice
  – assesses clarity of occupational aspirations
  – content indicates level of maturity and level of occupational knowledge
• Scoring the OAQ:
  1  1\textsuperscript{st} choice, no alternatives
  2  alternatives and a 1\textsuperscript{st} choice
  3  alternatives, no 1\textsuperscript{st} choice
  4  neither alternatives, nor 1\textsuperscript{st} choice

Note: this is an ordinal scale

• Correlates of OAQ
  • Commitment anxiety
  • Decision-making confusion
  • Depression
What is the CTI?

• Self-administered
• Objectively scored
• 48-item measure of dysfunctional thoughts in career choice
• 10-15 minutes
Purpose of the CTI

• Identify individual negative thoughts that impair, impede, or block information processing in career decision making (item level)
• Locate blocks in CASVE cycle (construct scales)
• Measure general state of indecision or confusion (total score)
Available Norms of the CTI

• 11th and 12th grade high school students
• College students
• Adults
Theoretical Basis of the CTI

- Cognitive Information Processing (CIP) Theory, items and scales
- Beck’s Cognitive Theory, reframe dysfunctional thoughts
Career Thoughts Defined

- Outcomes of one’s thinking about
  - assumptions,
  - attitudes,
  - behaviors,
  - beliefs,
  - feelings,
  - plans, or
  - strategies

- related to career choice
Negative Thinking

- Reduces options
- Distorts perception of options
- Lowers expectations of favorable outcomes
- Blocks information processing
The CTI in Needs Assessment

- Identifying the specific nature of negative thoughts
- Three CTI Construct Scales
  - Decision-making Confusion (DMC)
  - External Conflict (EC)
  - Commitment Anxiety (CA)
- Specific career interventions can be related to specific construct scores
Decision-Making Confusion (DMC)

• Inability to initiate or sustain the decision making due to
  – disabling emotions
  – a lack of understanding about decision making

  “I get so overwhelmed, I can’t get started.”
External Conflict (EC)

- Inability to balance self-perceptions with input from significant others
- Difficulty in assuming responsibility for decision making
- “A significant person in my life disagrees with my current choice.”
Commitment Anxiety (CA)

- Inability to commit to a specific career choice, accompanied by decision making anxiety
- “I am afraid I am overlooking something.”
Assessing the personal and social context

• Decision Space Worksheet (DSW)
Decision Space Worksheet

• Page 1: list elements

• Page 2: draw circles within a given circle in proportion to the importance of an element
Decision Space Worksheet (DSW)

Name_________________________ Date____________________

Decision you are making_______________________________

Please list all thoughts, feelings, circumstances, people, or events that bear on the decision you are making.

1._________________________________________
2._________________________________________
3._________________________________________
4._________________________________________
5._________________________________________
6._________________________________________
7._________________________________________
8._________________________________________
9._________________________________________
10._________________________________________

The Decision Space

Directions:
- The large circle below represents the overall decision space.
- Within the large circle, draw smaller circles that represent the magnitude or the relative importance of each item listed on the Decision Space Worksheet (DSW).
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
Typical Issues Revealed

- Cognitive distortion
- Disabling emotions
- Financial
- Family
- Education
- Interests
- Self doubt
- Employment
- Quality of life
Developing an ILP

• goal—the conversion of assessment results into a sequence of learning events culminating in a career decision

• the ultimate aim—the development of career problem solving and decision-making skills
Formulate Goals & Learning Activities

Career practitioner and client develop goals to narrow the gap between existing state & desired state

Develop Individual Learning Plan (ILP)
Potential Advantages of ILP Use

• Promote collaboration between the career practitioner and the client
• Model brainstorming in problem solving
• Reinforces idea of career counseling as a “learning event”
• Reduces client anxiety about “what next?”
• Monitor progress
• Tracking client needs
ILP Tasks & Interventions

- Readiness
- Self knowledge
- Option knowledge
- Identifying options
- Making a choice
- Developing a plan
Case Study Analysis

• What is the nature of the client’s pyramid?
• What are the gaps in the clients pyramid?
• What other data might be important to look at for this client?
• Complete an ILP appropriate for this client’s situation.
CIP in Instruction

- Theory-based undergraduate 3-credit career development class
- CIP integrated into text, class lectures, small group activities
- CTI used as pre-post test
- Study by Reed, Reardon, Lenz, & Leierer (2001) showed a significant decrease in students’ negative career thoughts
CIP in Program Development

- International applications
- CIP as a “social justice” approach to career services
- Policy development & CIP
- Diverse populations, translation of materials globally
- Visitors from 42 nations to FSU Career Center/Tech Center
Albert Parrillo, guidance counselor in Mechanicsburg, PA, using CIP concepts with a student...

Albert authored a dissertation on Parental attachment and involvement as predictors of high school students career thoughts
Sampson Monograph to Highlight Use of CIP in Program Development
CIP in Program Development

- Pacific Island college students in a college success course--CTI Workbook improved CTI total score, and CTI Workbook and career research improved DMC and CA (*JCD*, 2012)

- Application of CIP to assist service members’ transition into the civilian world (Clemens & Milsom, *CDQ*, 2008)

- Career workshop with secondary school students:
  - “CIP approach…can be successfully applied to promote career development on an international scale” (Hirschi & Lage, 2007)
CIP Applications in National, State, & Regional Systems for Career Services

• Examples
  – Connexions Services in England
  – Careers Scotland Centres
  – Careers Service in Northern Ireland
  – JobLink Centers in North Carolina
  – Workforce Centers in Oklahoma
  – Private Secondary School in Tasmania
CIP Future Directions

• Further convergence of career & mental health counseling (e.g., Decision Space Worksheet, Beck Depression Inventory)
• Career thoughts in relation to other constructs in vocational behavior, e.g., motivation, self-efficacy, career stress
• Spirituality & vocational choice (Valuing)
• Use of model-reinforced learning in ISB
CIP Future Directions

• Further integration of multicultural factors in vocational choice, e.g., the nature of positive family influence on decision making in the Valuing phase of the CASVE Cycle
CIP Future Directions

Further integration of CIP and other theoretical perspectives, such as Holland’s RIASEC theory, Social Cognitive Career Theory (SCCT)
For More Information

www.career.fsu.edu/techcenter