

# **Applying Cognitive Information Processing Theory to Career Counseling and Services**

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# Workshop Objectives

- Learn a cost-effective theory-based approach to providing career advising and counseling services
- Gain knowledge on the role of readiness assessment in determining client needs, and matching those needs to appropriate levels of service delivery in varied career services settings.
- Develop skills in the use of a screening instrument for assessing clients' level of readiness for career problem solving and decision making and applying that knowledge to case examples

# The FSU Career Center



# “Tech Center”

## Research Staff

- James P. Sampson, Jr., Co-Director
- Janet G. Lenz, Co-Director
- Robert C. Reardon, Senior Research Associate
- Gary W. Peterson, Senior Research Associate

## Graduate Assistants

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

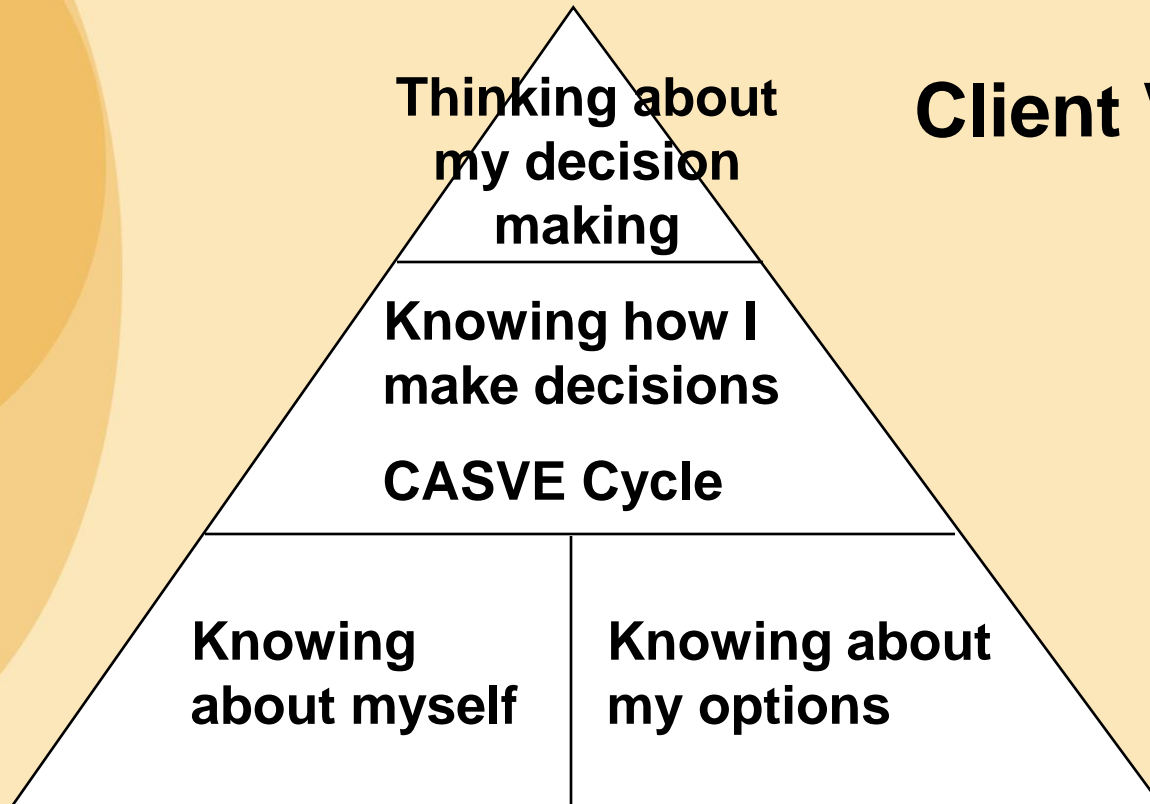
Pyramid of Information Processing Domains  
(**Knowing**)

CASVE Cycle (**Doing**)

Readiness for Career Choice Model

Differentiated Service Delivery Model

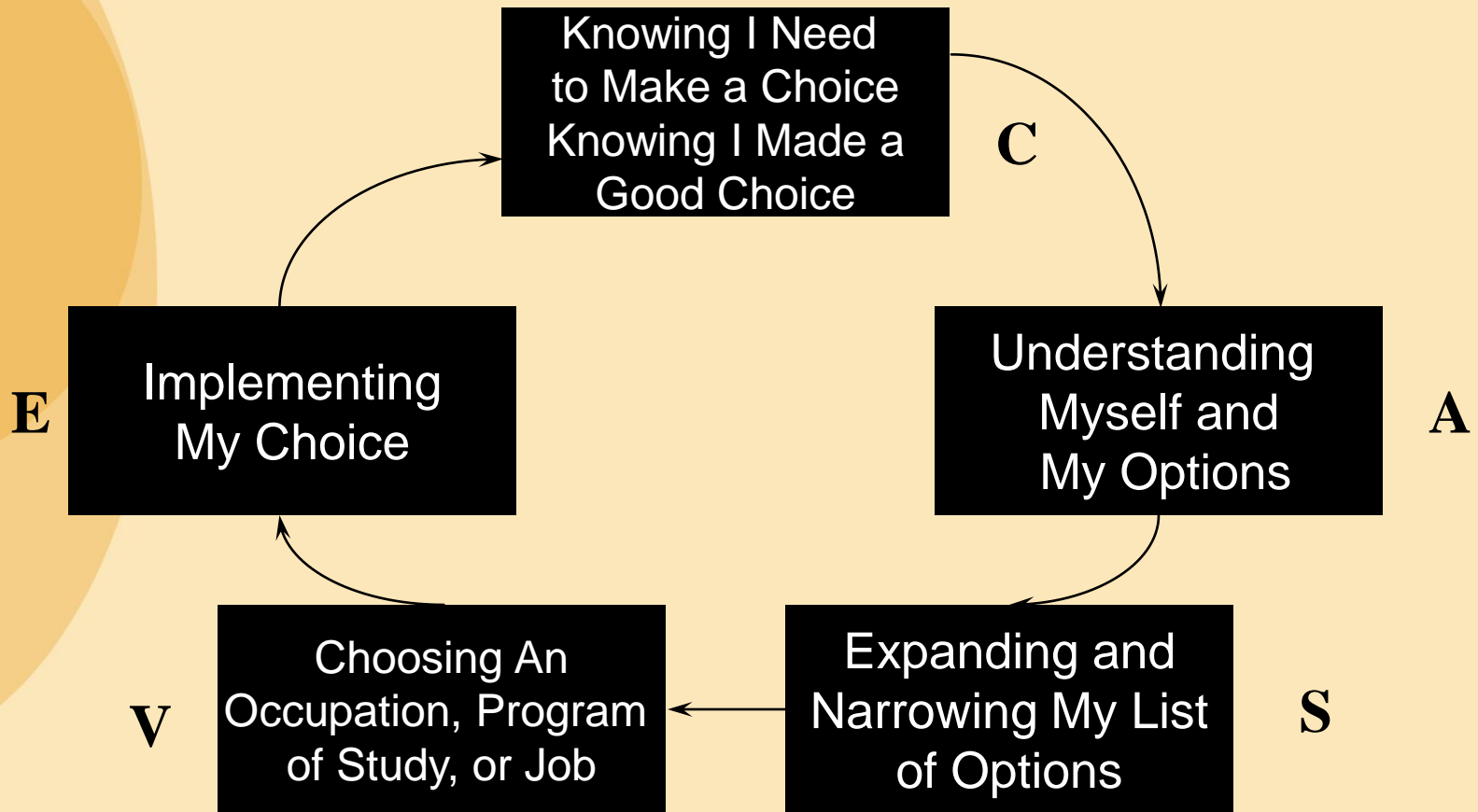
# CIP Pyramid Domains



**Client Version**



# CASVE Cycle - Client Version



# 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

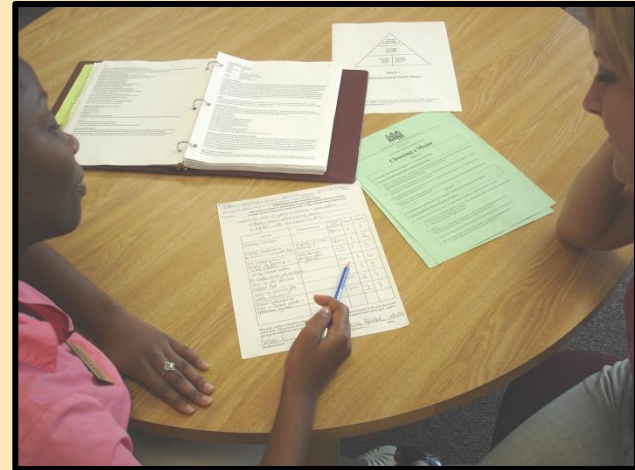
- A guide to good decision making
- The process of career choice
- What you need to do
- Contributes to a careful career choice

# 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

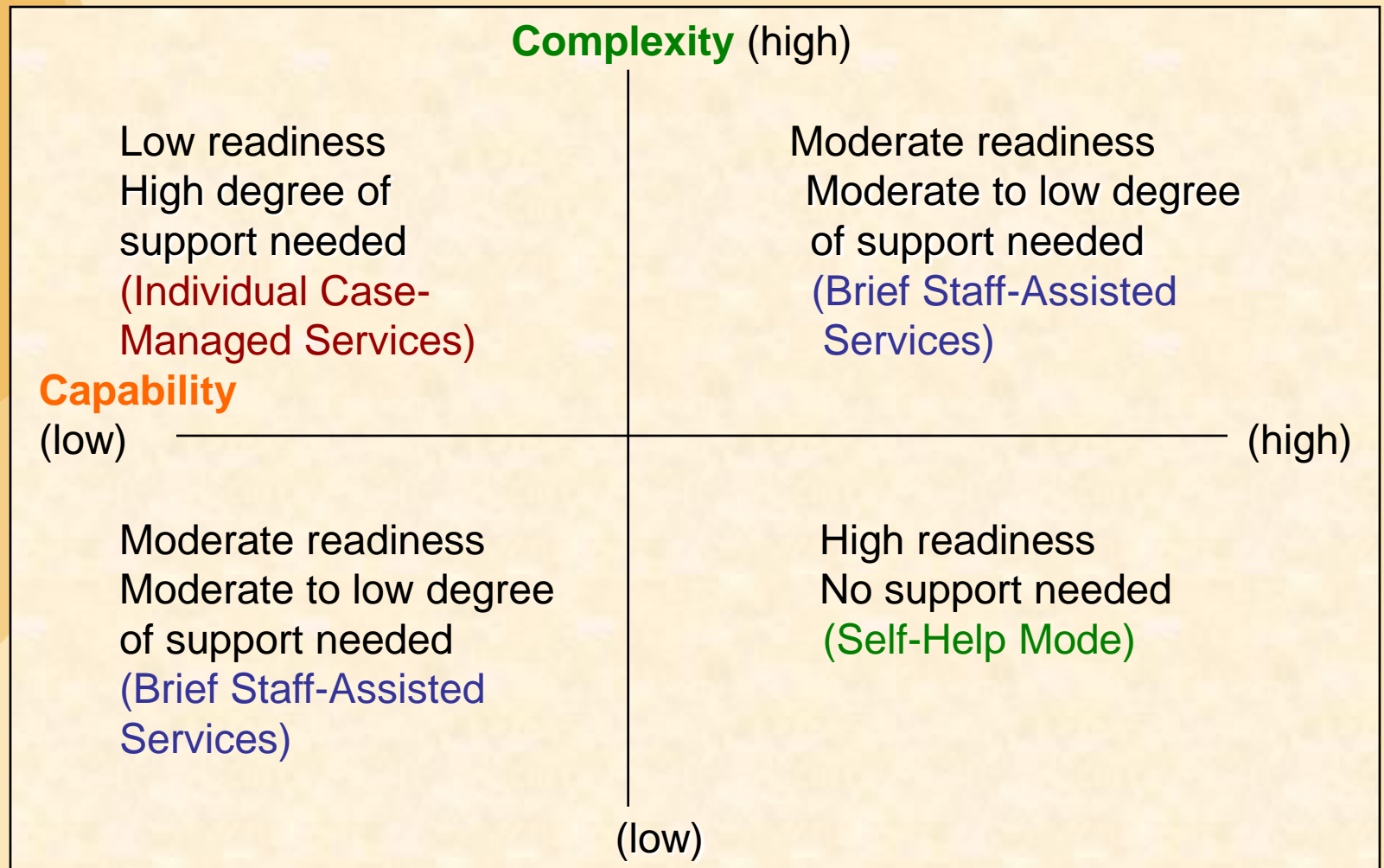
Self-Help Services

Brief Staff-Assisted Services

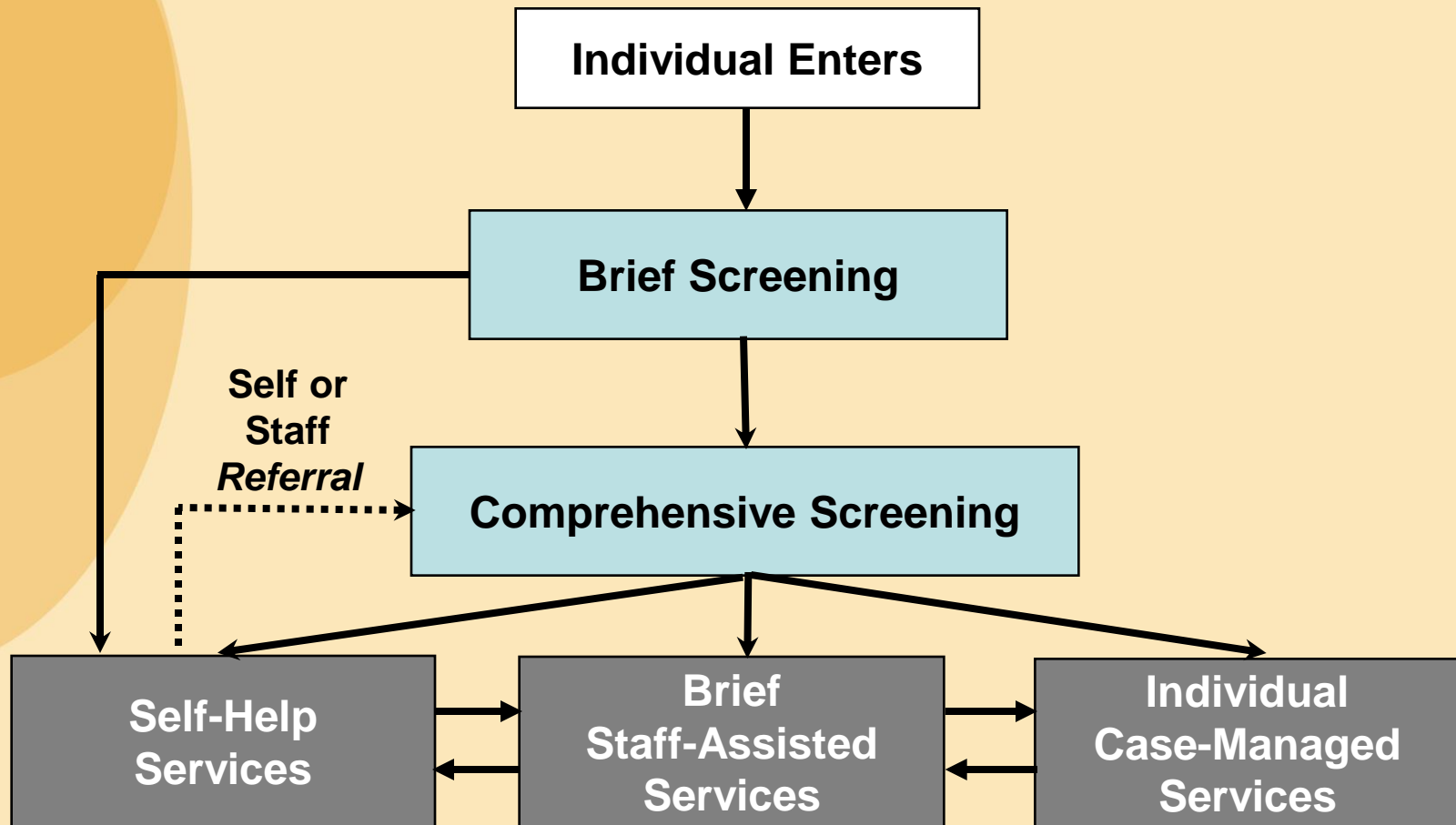
Individual Case-Managed  
Services



# CIP Readiness Model



# Differentiated Service Delivery Model



Complete differentiated model of delivering career resources and services

# 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

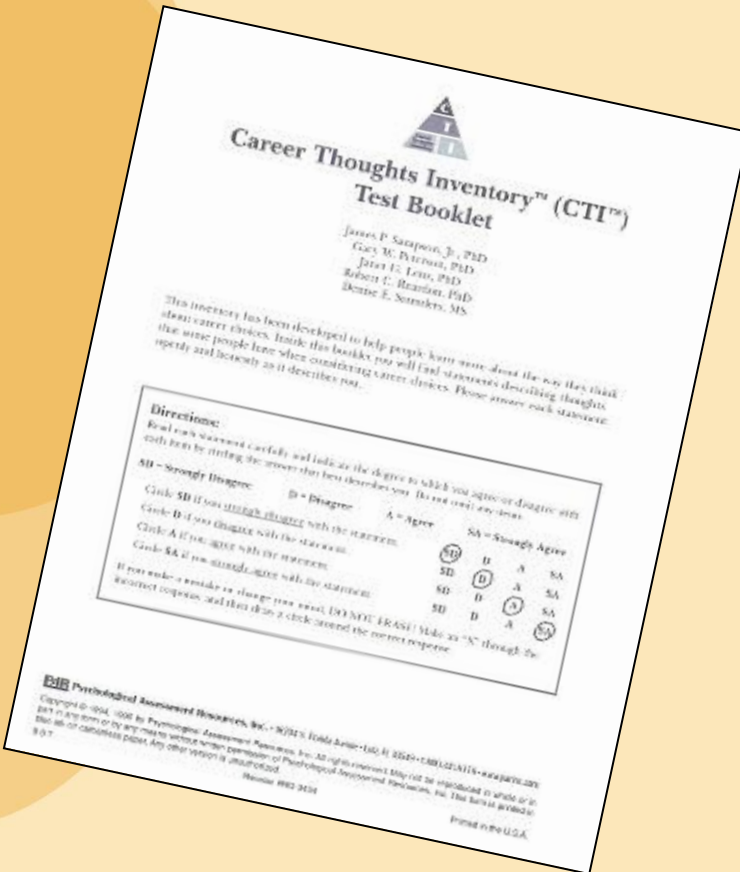
# Career Assessment Methods

|          |           | Response                                    |   |
|----------|-----------|---|---|
|          |           | clear                                       | ambiguous   |
| Stimulus | clear     | CTI<br>Self-Directed Search<br>CACG systems | Structured interview<br>Decision Space                        |
|          | ambiguous | Occupational Alter. Question (OAQ)          | Autobiography<br>Five Lives to Live<br>Unstructured interview |

Peterson, G. W., Sampson, J. P., & Reardon, R. C. (1991). *Career development and services: A cognitive approach*. Pacific Grove, CA: Brooks/Cole.

# Preliminary Assessment

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



Career Thoughts  
Inventory (CTI)  
Occup. Alternatives  
Question (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 Question (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)

## Occupational Alternatives Questionnaire (OAQ)

List all the occupations you are considering right now.

\_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_

\_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_

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

\_\_\_\_\_

How well satisfied are you with your first choice? (write in the number)..... \_\_\_\_\_

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

# OAAQ

## Scoring the OAAQ:

- 1 → 1<sup>st</sup> choice, no alternatives
- 2 → alternatives and a 1<sup>st</sup> choice
- 3 → alternatives, no 1<sup>st</sup> choice
- 4 → neither alternatives, nor 1<sup>st</sup> choice

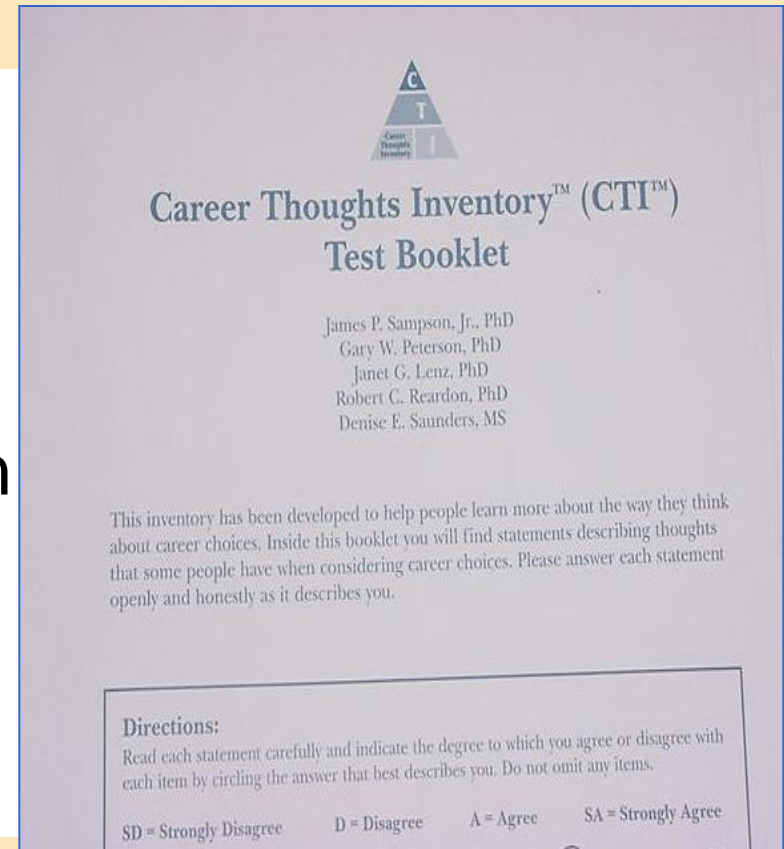
Note: this is an ordinal scale

## Correlates of OAAQ

- 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.”

# Where's the block?

DMC → CAS

forming options

EC → Valuing

who's in charge of the decision

CA → Execution

converting thoughts into action

# Mental health constructs directly correlated with dysfunctional career thoughts

indecision

neuroticism

anxiety

angry hostility

depression

self-consciousness

impulsivity

vulnerability

Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996). *Career Thoughts Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.





# **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)

## 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. \_\_\_\_\_

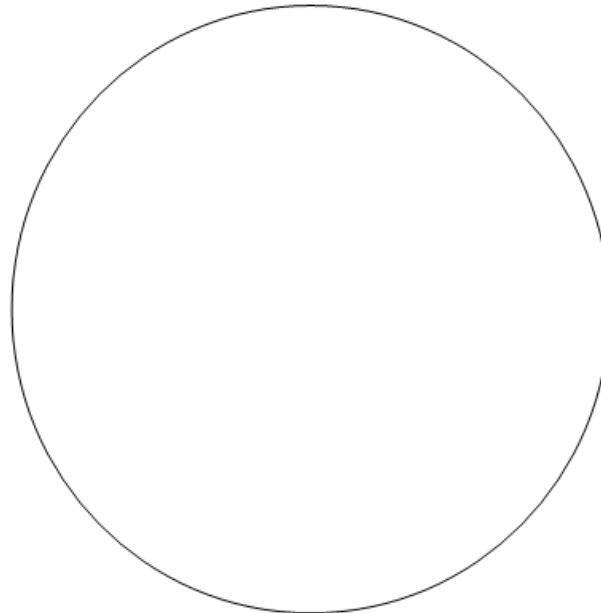
10. \_\_\_\_\_

# Decision Space Worksheet

## The Decision Space

**Directions:**

- The large circle below represents the total 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

# Decision Space Worksheet Activity

Complete the DSW for any decision at hand

Pair off and share your worksheet

Questions to ask:

how did you find the task?

was any part difficult?

what did you learn?

how do the top 3 elements bear on the decision?

what does open space represent?

# Typical Issues Revealed

Cognitive distortion

Disabling emotions

Financial

Family

Education

Interests

Self doubt

Employment

Quality of life

# 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



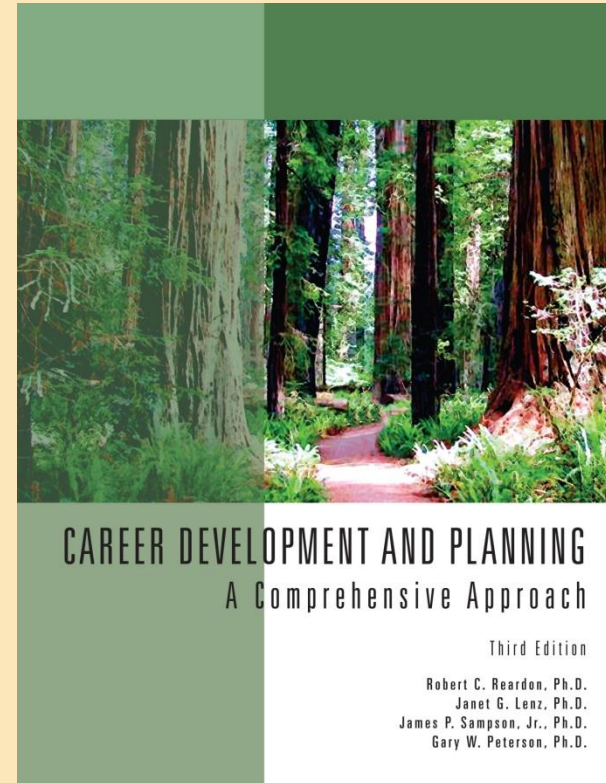
# CIP in Instruction

Theory-based undergraduate 3-credit career development class

CIP integrated into text, class lectures, small group activities

CTI used as **pre-posttest**

Study by Reed, Reardon, Lenz, & Leierer (2001) showed a significant decrease in students' negative career thoughts



# 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)



**Individual Career Learning Plan**

Goals: 1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_

| Activity | Purpose / Outcome | Time Needed | Goal # | Priority |
|----------|-------------------|-------------|--------|----------|
|          |                   |             |        |          |
|          |                   |             |        |          |
|          |                   |             |        |          |
|          |                   |             |        |          |
|          |                   |             |        |          |
|          |                   |             |        |          |
|          |                   |             |        |          |
|          |                   |             |        |          |
|          |                   |             |        |          |

This plan can be modified by either party based upon new information learned in the activities of the action plan. The purpose of the plan is to work toward a mutually agreed upon career goal. Activities may be added or subtracted as needed.

Student/Client \_\_\_\_\_ Date \_\_\_\_\_  
Career Advisor \_\_\_\_\_ Date \_\_\_\_\_

# 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

Occupational 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 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

# CIP in Program Development



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

Career workshop with secondary school students:

- “CIP approach...can be successfully applied to promote career development on an international scale” (Hirschi & Lage, 2007)

14-week career assistance program—male cricketers, ages 15-16; experimental group improved career goal decidedness and career awareness (AJCD, 2003)

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

# **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

CTI revision

Online delivery of CTI, CTI workbook, and CIP-based interventions

Further convergence of career & mental health counseling (e.g., Decision Space Worksheet, Beck Depression Inventory)

Spirituality & vocational choice (Valuing)

Enhanced 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

Career thoughts in relation to other constructs in vocational behavior, e.g., motivation, self-efficacy, career stress

# CIP Future Directions

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

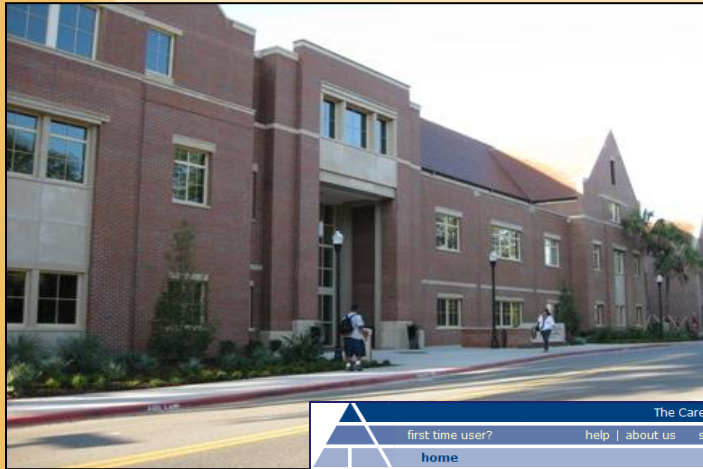
Examining cognitive career theories:  
Current status, future trends,  
implications for the development and  
implementation of guidance services

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The Career Center @ Florida State University

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home

**Center for the Study of Technology in Counseling and Career Development**  
*Welcome! What brings you here today?*

I am an: **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 a career development or planning course.

**Practitioner** delivering career services or creating career resources.

**Researcher or program evaluator** examining the delivery of career resources and services.

**Policy maker 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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**July 2010**  
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**April 2010**  
[Holland's Theory In an International Context: Applicability of RIASEC Structure and Assessments](#)

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