# What's New with CIP? A 20-Year Perspective of Cognitive Information Processing (CIP) Theory

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# Overview

- Context/History & purpose

- Applying CIP theory in practice

- CIP in program development

- CIP research & theory developments

- Question/answer

# The Context

- 4th largest state in the U.S.
- Tallahassee, FL--state capital
- Florida State University, 4-year, public research university, 40,000 students

# Center for the Study of Technology in Counseling and Career Development

A unit of the Florida State University
Career Center and College of Education

Integrating theory, research, and practice

Theory                Research                Practice

**www.career.fsu.edu/techcenter**

# History and Purpose

- Current staff includes:

  - Drs. Sampson & Lenz, Co-Directors

  - Drs. Peterson & Reardon, Senior Research Associates

  - Dr. Garis, Research Associate

  - Ms. Epstein, Librarian

  - Graduate Students

# History and Purpose

- ## CIP Initial Introduction—A Theoretical Shift

Sampson, J., Peterson, G., & Reardon, R. (1989). Counselor intervention strategies for computer-assisted career guidance: An information processing approach. *Journal of Career Development, 16*, 139-154.

- ## CIP/CTI Formal Introduction

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

Sampson, J., Peterson, G., Lenz, J., & Reardon, R. (1992). A cognitive approach to career services: Translating concepts into practice. *Career Development Quarterly, 41*, 67-74.

Sampson, J., Peterson, G., Lenz, J., Reardon, R., & Saunders, D. (1996). Career Thoughts Inventory (CTI). [Psychological Test] Odessa, FL: Psychological Assessment Resources, Inc.

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# History and Purpose

- Dissemination

*http://www.career.fsu.edu/techcenter Tech Center established in 1986

Peterson, G. W., Sampson, J. P., Jr., Lenz, J. L., & Reardon, R. C. (2002). A cognitive information processing approach in career problem solving and decision making. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 312-369). San Francisco: Jossey-Bass.

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

Reardon, R., Lenz, J., Sampson, J., & Peterson, G. (2009). *Career development and planning: A comprehensive approach* (3rd ed.). Mason, OH: Thomson Custom Solutions.

# History and Purpose

- CIP/CTI cited in:

Brown (2002), Brown (2007), Capuzzi & Stauffer (2006), Herr, Cramer & Niles (2004), Luzzo (2000), Niles & Harris-Bowlsbey (2005), Sharf (2005), Zunker (2006)

- CIP/CTI not cited in:

Andersen & Vandehey (2006), Brown & Lent (2000), Brown & Lent (2005), Gibson & Mitchell (2006)

# CIP Critiques

**Brown (2007):** little information relative to diverse groups; CTI is intrusive measure for some cultural groups; model applies to clients expecting to make their own decisions.

**Capuzzi & Stauffer (2006):** few empirical findings available yet; excellent for clients motivated to use linear decision making.

**Herr, Cramer, & Niles (2004):** a learning-approach and bridge to situational, sociological, and contextual approaches.

# CIP Critiques

Niles & Harris-Bowlsbey (2005): built on research in cognitive psychology, uses clear definitions of constructs, committed to practical applications; research growing but not extensive.

Sharf (2006): a prescriptive approach relatively new with little known relative to gender and diversity, an area of potential research.

Zunker (2006): strength is a practical application for solving career problems.

# History and Purpose

- Analyzing the CIP bibliography

  - 20 dissertations from 6 different universities

  - CIP applications:  About 45 citations

  - CTI research:  About 35 citations

  - About 50 refereed journal articles published

# History and Purpose

- CIP:

  - Is informed by scholarship and practice and vice versa

  - Is freely disseminated to practitioners and clients

  - Has origins in human learning events, information processing, career service delivery, and technology

  - Uses a systems approach to service delivery

  - Not limited to counseling interventions

# History and Purpose

- Since 1986, the FSU Career Center and Tech Center:

  - Have been visited by persons from 40 countries

  - Staff have presented and consulted in 28 countries

- Tech Center Web site visitors in 2008 are from more than 48 countries outside the U.S.

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# History and Purpose

- Contributions and traits of CIP principals:

    - Peterson—originator of ideas; CIP lead author; divergent thinker; cognitive scientist; researcher

    - Sampson—promoter; international consultant; CTI lead author; computer applications; service delivery options

    - Reardon—program development; undergraduate text lead author; self-help information; links RIASEC theory

    - Lenz—lead staff trainer; chief CIP implementer; links RIASEC theory; current group leader

    - Saunders—initial CTI researcher; mental health and career practitioner and consultant; program chair

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# CIP in Practice

- CIP provides a concrete application of how practitioners can be trained to apply theory in practice

- Career practitioners agree that CIP can be easily learned and applied

- Evidence of CIP replication in other settings

# CIP in Practice

- Experience has shown that CIP concepts can be successfully  applied in all forms of service delivery
  - Self help
  - Brief staff- assisted
  - Individual

# CIP in Practice

- CIP focus is on creating a learning event
- Goal: clients learn how to solve career problems and make decisions
- CIP approach can be easily explained to clients

# Using CIP & the CTI with Individual Clients

- Provides a framework/model for the career decision making process

- Allows clients to be involved in the process and identify areas to explore

- Builds on existing knowledge, utilizes clients' understanding of themselves

- Enhances the counseling relationship as counselor and client jointly work at career issues

# Using the CTI in Practice

- Allows for a holistic approach to the career decision making process
- Recognizes the complexity of career decision making
- Often provides clients with the awareness of things that have kept them "stuck"
- Provides an opportunity to relate this process to other life issues

# Challenges in Training & Practice

- Not all staff "buys in" to the approach
- Inconsistent use of CIP theory and associated tools
- Time pressures of drop-in services may impact use of CTI and CTI workbook
- Ongoing training and supervision needed for most effective use of CTI and CTI workbook

# CIP in Instruction

- 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
- 3rd edition of CIP-based undergraduate text to be published fall 2008

# New Developments in CIP

- Four steps in promoting effective use of Career Resources:
  1. Understanding
  2. Recommending
  3. Orienting
  4. Follow-up

Sampson, J. P., Jr. (2008). *Designing and implementing career programs: A handbook for effective practice*. Broken Arrow, OK: National Career Development Association.

# Four-Step Process

- Understanding
  - Clarifying the career assessment and information needs of an adolescent or adult

- Recommending
  - Suggestions about career assessments and information on the ILP that are appropriate for the needs of the adolescent or adult
  - Selecting
  - Sequencing
  - Pacing

# Four-Step Process

- Orienting
  - Preparing adolescents and adults to make effective use of career assessments and information

- Follow-Up
  - Checking that adolescents and adults have appropriately used the resources and services on their ILP and that they have a plan of action for the future

# CIP in Program Development

- International applications
- CIP as a "social justice" approach to career services
- Policy development & CIP
- Diverse populations, translation of materials globally

# 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*, March 2008)

# CIP/CTI Use

- Australia
- Bermuda
- Canada
- China
- Finland
- Great Britain
- Greece
- Guam
- Hong Kong
- Iceland

- India
- Indonesia
- Ireland
- Italy
- Japan
- Latvia
- Lithuania
- Malaysia
- Malta

# CIP/CTI Use

- Mexico
- New Zealand
- Northern Ireland
- Norway
- Pakistan
- Philippines
- Portugal
- Romania
- Scotland

- Singapore
- South Africa
- South Korea
- Spain
- Sweden
- Switzerland
- Taiwan
- Turkey
- United States

# CTI Translations

- Korean
- Finnish
- Turkish
- Icelandic
- Greek
- Portuguese*

# Developing National & State Systems for Career Services

- Awareness of the need for change

- Identify career service-delivery models

- Select a cost-effective model

- Develop an implementation plan

- Implement improved career resources and services

# Examples

- JobLink Centers in North Carolina

- Workforce Centers in Oklahoma

- Connexions Services in England

- Careers Scotland Centres

- Careers Service in Northern Ireland

Richmond Chambers Careers Service in Northern Ireland

# CIP Applications



Career Decision Making Tool (CDMT)
http://www.acrnetwork.org/decision.htm

# CIP Theory Development

- Validation through Structural Equation Modeling (SEM)

- Integrating disability into CIP

- Integrating mental health aspects

- Theory generalization

- Ongoing development of theory-based practice

# Future Directions

- CTI revision

- Training in use of CTI & CTI workbook

- Online delivery of CTI, CIP-based interventions

- Further convergence of career & mental health counseling (e.g., problem space worksheet)

-  Spirituality & vocational choice (Valuing)

# Future Directions

- Individual characteristics & effectiveness of CIP theory

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

- Learning styles & acquisition of career problem-solving & decision-making skills

# Summary

- Theory----practice----research----theory

- Client & learning-focused approach

- Paradigm shift in career theory

- Balancing theory in the study of vocational behavior with applying theory in the design & delivery of career services and resources

# Questions/Discussion

Visit us online at
[www.career.fsu.edu/techcenter](www.career.fsu.edu/techcenter) or come see us in our new facility, beginning September 2008