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Promoting research and reflective practice in career development

NICEC

NATIONAL INSTITUTE FOR CAREER EDUCATION AND COUNSELLING

NICEC STATEMENT

The Fellows of NICEC agreed the following statement in 2010.

'The National Institute for Career Education and Counselling (NICEC) was originally founded as a research institute in 1975. It now plays the role of a learned society for reflective practitioners in the broad field of career education, career guidance/counselling and career development. This includes individuals whose primary role relates to research, policy, consultancy, scholarship, service delivery or management. NICEC seeks to foster dialogue and innovation between these areas through events, networking, publications and projects.

NICEC is distinctive as a boundary-crossing network devoted to career education and counselling in education, in the workplace, and in the wider community. It seeks to integrate theory and practice in career development, stimulate intellectual diversity and encourage transdisciplinary dialogue. Through these activities, NICEC aims to develop research, inform policy and enhance service delivery.

Membership and fellowship are committed to serious thinking and innovation in career development work. Membership is open to all individuals and organisations connected with career education and counselling. Fellowship is an honour conferred by peer election and signals distinctive contribution to the field and commitment to the development of NICEC's work. Members and Fellows receive the NICEC journal and are invited to participate in all NICEC events.

NICEC does not operate as a professional association or commercial research institute, nor is it organisationally aligned with any specific institution. Although based in the UK, there is a strong international dimension to the work of NICEC and it seeks to support reflective practice in career education and counselling globally.'

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The official title of the journal for citation purposes is *Journal of the National Institute for Career Education and Counselling* (Print *ISSN 2046-1348; online* ISSN 2059-4879). It is widely and informally referred to as 'the NICEC journal'. Its former title was *Career Research and Development: the NICEC Journal*, ISSN 1472-6564, published by CRAC, and the final edition under this title was issue 25. To avoid confusion we have retained the numbering of editions used under the previous title.

AIMS AND SCOPE

The NICEC journal publishes articles on the broad theme of career development in any context including:

- Career development in the workplace: private and public sector, small, medium and large organisations, private practitioners.
- Career development in education: schools, colleges, universities, adult education, public career services.
- Career development in the community: third age, voluntary, charity, social organisations, independent contexts, public career services.

It is designed to be read by individuals who are involved in career development-related work in a wide range of settings including information, advice, counselling, guidance, advocacy, coaching, mentoring, psychotherapy, education, teaching, training, scholarship, research, consultancy, human resources, management or policy. The journal has a national and international readership.

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Manuscripts are welcomed focusing on any form of scholarship that can be related to the NICEC Statement. This could include, but is not confined to, papers focused on policy, theory-building, professional ethics, values, reflexivity, innovative practice, management issues and/or empirical research. Articles for the journal should be accessible and stimulating to an interested and wide readership across all areas of career development work. Innovative, analytical and/or evaluative contributions from both experienced contributors and first-time writers are welcomed. Main articles should normally be 3,000 to 3,500 words in length and should be submitted to one of the co-editors by email. Articles longer than 3,500 words can also be accepted by agreement. Shorter papers, opinion pieces or letters are also welcomed for the occasional 'debate' section. Please contact the relevant issue co-editor(s) prior to submission to discuss the appropriateness of the proposed article and to receive a copy of the NICEC style guidelines. Final decisions on inclusion are made following full manuscript submission and a process of peer review.

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Membership of NICEC is also available (£75 pa or £50 pa for full-time students). Members receive the journal, free attendance at NICEC events and other benefits.

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Overview of this issue

Welcome to the October 2018 issue of the NICEC journal. The articles below were contributed in response to an open call for papers. It is once again a pleasure to report that innovative, creative, and engaging scholarship is thriving in our field.

Peter Plant, Inger Marie Bakke and **Lyn Barham** get the ball rolling with a timely call for 'geronto guidance' for older people. They are particularly interested in the support that is available around retirement arguing it is currently something of a blind spot in terms of a genuinely lifelong guidance system.

The second article from **Lisa Law** continues the theme of age and change. It uses an action research strategy to evaluate the delivery of a workshop for older students at a UK university. The workshop demonstrates a creative and successful example of practice for this key client group.

Charles Jackson argues for the value of career surveys drawing from his work with trainee doctors and medical students. The surveys, it is suggested, highlight the importance of the human touch and talking directly with other people about career issues. The article finishes with a set of conclusions about the value of career surveys.

Steve Mowforth extends the use of survey to small-scale qualitative research with generation z students at a British university. He argues that contemporary scene has moved on from attitudes and beliefs associated with what he terms the industrial state.

Julia Yates reports on some contemporary techniques in career coaching. These include visual tools, role play tools, possible selves technique, passengers on the bus technique, pre-designed frameworks, and client-generated maps.

Debra Osborn and **V. Casey Dozier** argue for the value of cognitive information processing theory in relation to interventions. They provide two case studies to illustrate the approach.

Ingrid Bårdsdatter Bakke, Erik Haug and **Tristram Hooley** provide a timely update on guidance developments in Norway. They propose an innovative approach to combining face-to-face and online guidance based on career learning and instructional design.

Our final article by **Cathy Brown** and **Tracey Wond** is devoted to the topic of career capitals. Two contrasting conceptions of capital are critically assessed. Drawing from this, they propose some ideas for the development of career capital using a case study.

This issue concludes with a book review of *Graduate Employability in Context: Theory, Research and Debate* edited by Ciaran Burke and Fiona Christie.

Phil McCash, Editor

10.20856/jnicec.4107

Cognitive information processing theory: Applications in research and practice

V. Casey Dozier & Debra Osborn

Cognitive information processing (CIP) theory, in existence for over four decades, boasts over 150 evidence-based articles and close to 300 manuscripts in total that demonstrate its strength as a theory, fertile opportunity for research, and utility in practice across various settings and populations. In this manuscript, the authors will present the key components of CIP, summarize empirical evidence for the validity of the theory, and describe its applications in different settings. To demonstrate the differentiated model of career service delivery, two brief case scenarios will be provided.

Introduction

"How do you make a career decision? If you could do anything, what would you do? What is your dream job?" These are often questions posed during career interventions. However, these are big questions that can be difficult or overwhelming for many clients to answer. The reality is most people make dozens of decisions every day including what to eat, wear, and how to spend time, but not everyone is aware of their decision-making process or style because it is done with such automation. Are you an impulsive, methodical, or calculated decision maker? This question can give insight into one's decision making process, and ultimately tell a lot about the kind of information someone might need to learn more about themselves and their options. A primary goal of the Cognitive information processing (CIP) theory (Sampson, Reardon, Peterson, & Lenz, 2004; Osborn et al., in press) is to enhance one's awareness of their decision-making process and help practitioners, clients, researchers, and others learn how to make informed and careful choices. Four assumptions undergird CIP theory. First, while a major emphasis of the theory is on cognitions, the theory acknowledges the inextricable role that emotions and behavior play on career decision-making. Second, career decision-making is a complex task that requires not only knowledge about self and the world of work, but also a process for managing and applying that knowledge to the decision. Third, CIP states that this self and options knowledge fluctuates as a person interacts with and receives feedback from their surroundings. Fourth, career decision-making and career problem solving are teachable skills, subject to continued enhancement.

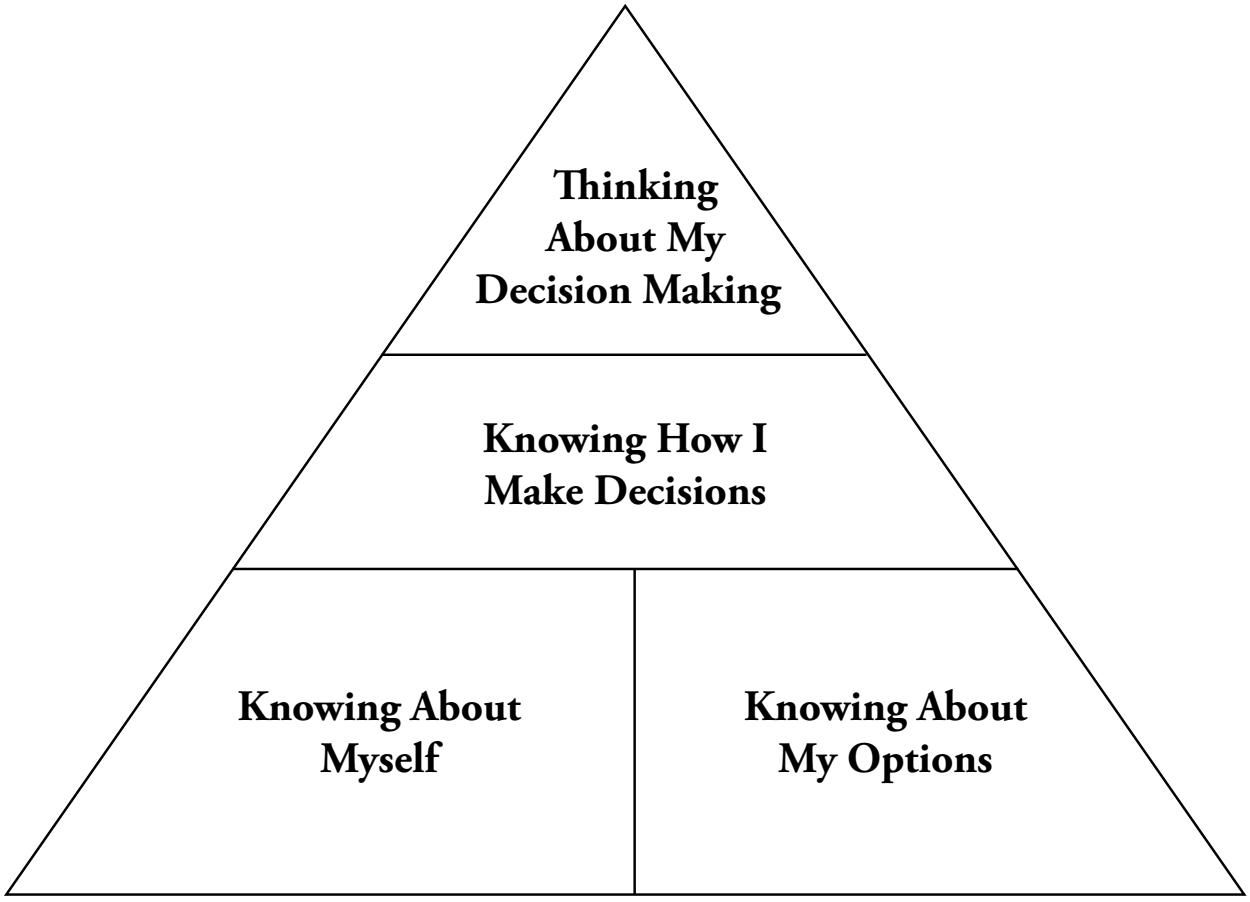
Key Components of CIP

As a learning theory, cognitive information processing (CIP) theory (Peterson, Sampson, Lenz, & Reardon, 2002; Sampson, Reardon, Peterson, & Lenz, 2004) provides a framework that teaches individuals how to make informed and careful choices which is a process that can be applied to decisions throughout one's life. CIP constructs include the Pyramid of Information Processing (Figure 1), the CASVE cycle (Figure 2), and the career readiness model (Figure 3). The pyramid includes three domains: knowledge, decision-making skills, and executive processing. The foundation of the pyramid includes self-knowledge (understanding values, interests, skills, and employment preferences) and options knowledge, which includes both knowledge of options as well as a schema for organizing information such as the world-of-work map or Holland's Hexagon.

The CASVE cycle is the middle of the pyramid and helps guide individuals during the decision-making process (Sampson et al., 2004). The sequential phases of the CASVE cycle include ***Communication***: the awareness of both internal (e.g., willingness to engage

Figure 1: What's involved in a career choice

A pyramid can be used to show what's involved in making a career choice

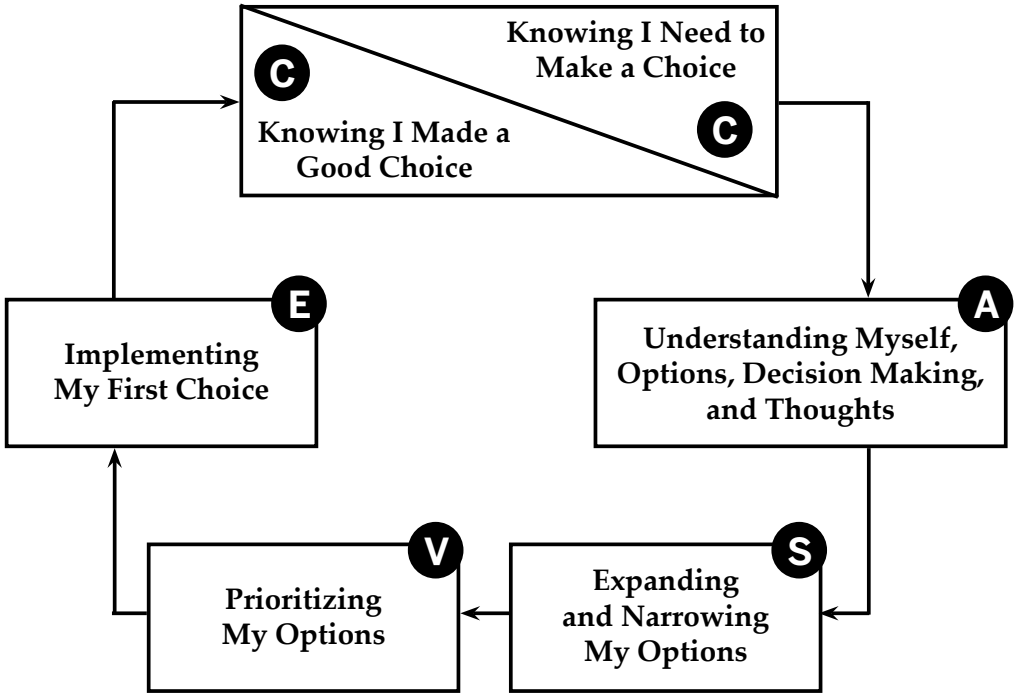


Adapted from: Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., & Reardon, R. C. (1992). A cognitive approach to career services: Translating concepts into practice. *Career Development Quarterly*, 41, 67-74.

in self-exploration, motivation, critical thinking about career problems, follow through with a plan of action, acceptance of personal responsibility, awareness of how negative thoughts impact one's process) and external (e.g., family, social, economic, and organizational) cues that signal a gap between one's current state and desired state of decidedness. Typically, a goal or a "gap" is formed at this stage. ***Analysis*** involves not only recognizing the connections between self and options knowledge, but also developing a model for decision making. It also involves understanding how important decisions are made and clarifying metacognitions or thinking about thinking. ***Synthesis*** includes the elaboration of potential options and then the crystallization (or narrowing) of options (typically to 3-5 choices) based upon information learned. ***Valuing*** means ranking options with tentative primary and secondary choices emerging at this stage. ***Execution*** involves putting a plan into action based upon the preferred choice. There is a return to the communication phase to reflect on whether or not the "gap" was closed. The CASVE cycle is cyclical in nature and as one career gap is resolved, the cycle often begins again.

The top of the pyramid includes self-talk (e.g., "I will *never* find a job" vs. "I am a qualified candidate," "job searching takes time, so I will keep on searching") self-awareness, and control and monitoring. These skills help one know when to gather more information to

Figure 2: A Guide to Good Decision Making



The CASVE Cycle

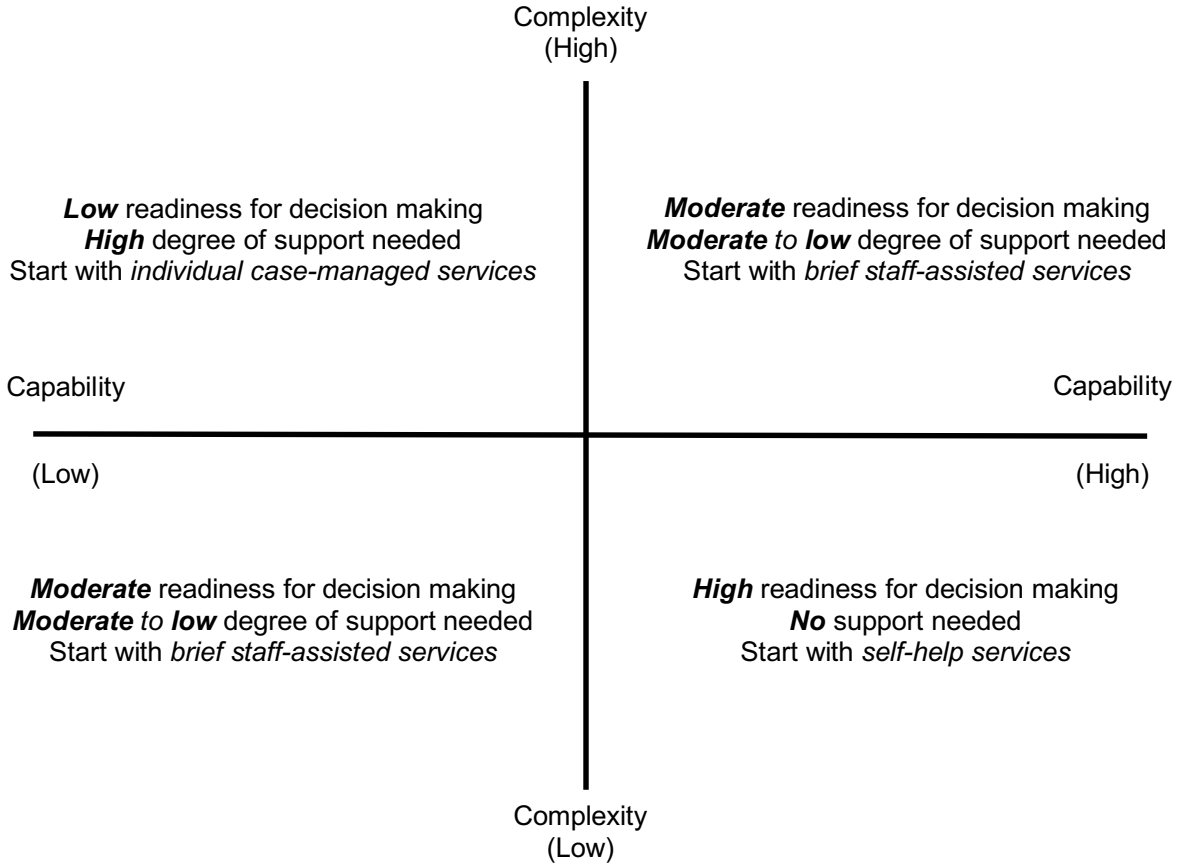
Communication, **A**nalysis, **S**ynthesis, **V**aluing, **E**xecution

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

successfully navigate the CASVE cycle. CIP proposes that this self-talk, and in particular, negative career thinking, impacts the other three elements, which in turn, impacts decision making and one's career decision status (i.e., decided, undecided, indecisive). For example, if a person thinks that they are not interested nor skilled in any activities, this will impact how they rate themselves on interest and skills assessments. Similarly, if an individual believes that all occupational information is biased, or that it's impossible to learn about all the jobs "out there," that will impact the options they are considering and how they evaluate and apply occupational information to themselves. If a person believes that they never make good decisions or are constantly afraid that they are overlooking an option, they might become "stuck" in the career decision making process. CIP theory posits that by identifying, evaluating and correcting negative career beliefs, a person's view of themselves, their options, and decision making ability will improve. Given the impact of negative thinking on the other key elements of career decision making, CIP encourages career practitioners to address negative career thoughts prior to using a career assessment or other interventions to build self and options knowledge, to avoid undue negative bias.

The CIP readiness model (See Figure 3) is comprised of two factors, and involves the capability (internal factors) of an individual to make a career decision while taking into account the complexity of their situation(external factors). Individuals might fall in one of four quadrants, that suggests the level of career support they need. A person with high capability and low complexity would most likely not need a great deal of career decision-making support, and could benefit from a self-directed approach, with minimal support from a career service provider, while someone

Figure 3: A two-dimensional model of decision-making readiness for selecting initial career interventions



Adapted from: Sampson, J. P., Peterson, G. W., Reardon, R. C. & Lenz, J. G. (2000). Using readiness assessment to improve career services: A cognitive information processing approach. *The Career Development Quarterly*, 49, 146-174. Used with permission.

with low capability and low complexity or someone with high complexity and high capability would most likely benefit from a brief-assisted career service, such as drop in career advising. Someone with high complexity and low capability would most likely need the greatest amount of support (as compared to the others), and thus would benefit from the traditional individual, case-managed approach. *The Career Thoughts Inventory* (CTI, Sampson, Peterson, Lenz, Reardon, & Saunders, 1996) is a 48 item readiness measure that assists in the career problem and decision making process as a means to pinpoint the nature of career problems/negative self-talk, and move towards desired goals in a timely and efficient manner. The CTI includes three specific areas of negative career thoughts, i.e., decision-making confusion, commitment anxiety, and external conflict. The CTI will be highlighted with two case scenarios at the end of this article.

Empirical Evidence for and Applications of CIP Theory

One of the criteria for determining what constitutes a theory is that it continues to generate research (Kramer, 2012). Since the 1970's, CIP theory has continued to generate research, currently boasting 181 articles focused on empirical evidence-based practice, with 23 (12%) of those being published since 2017 (Sampson et al., 2018). Brown (2015) stated that "probably the most widely studied career interventions have been those developed" from CIP theory (p. 62). The majority of the research has focused on CIP's unique contribution to career theories, i.e., the role of negative or dysfunctional career thinking (DCT) and its impact on career decision making. DCT has been found to be a major

predictor of career indecision in several studies (e.g., Bullock-Yowell et al., 2011; Kleiman et al., 2004). In addition, relationships between DCT and mental health have also been repeatedly demonstrated. Examples include depression (Saunders et al., 2000; Dieringer et al., 2017; Walker & Peterson, 2012), neuroticism (Edralin, 2018; Kelly & Shin, 2009); life stress (Bullock-Yowell et al., 2011); and somatic complaints (Finklea, 2016).

In addition to examining the components of CIP theory, other research (Kronholz, 2015; Osborn et al., 2016; Osborn & Reardon, 2006) has examined the theory's utility in service delivery. Osborn and Reardon (2006) used CIP to organize a six week group for middle school students, while Kronholz (2015) described a single case study of a drop in client using CIP's self-directed (not counselor-free) modality. Osborn et al. (2016) found the brief-assisted career service delivery model significantly improved knowledge and confidence of next steps and decreased anxiety associated with the career concern of 138 drop in clients. Supporting the theory's philosophy that the majority of clients could be served via the brief-assisted model, they found that following the brief interaction, 67% desired the brief-assisted model for their next interaction with a career advisor, 26% stated self-directed would be the modality needed, and only 6% desired individual, extended, one-on-one career counseling.

While the majority of CIP applications have been with college students (e.g., Edralin, 2018; Osborn et al., 2016; Osborn, Howard, & Leierer, 2007), CIP has been used with a variety of other populations, including middle school youth (Osborn & Reardon, 2006), veterans (Buzzetta, Hayden, & Ledwith, 2017), people with disabilities (Dipeulo & Keating, 2010; Lustig & Strauser, 2002), and female inmates (Railey & Peterson, 2002). CIP has also been used to design career courses, which have repeatedly shown their effectiveness in increasing positive career gains (Bertoch et al., 2014; Miller et al., in press; Osborn, Howard & Leierer, 2007). In addition, CIP theory has been applied internationally. Northern Ireland (Northern Ireland Department for Employment, 2008) recommended using CIP differentiated service delivery model on their career services website. Scotland (Fairwether, Govan, & McGlynn, 2006; The Scottish Government, 2011) similarly proposed the differentiated service delivery model for redesigning how they provide career information and career advising. Teuscher (2003) found that decision making tools that were applied to the CASVE Cycle were useful for 64 adolescent Swiss seeking to make career decisions. In each of these examples, CIP has been shown to yield positive outcomes across diverse populations.

Despite these positive outcomes, additional work is still needed to extend our understanding of the applicability of CIP theory to those from various cultures, socio-economic situations, job situations, educational levels, and so forth. Not all negative beliefs are dysfunctional. Discrimination does occur, poverty does exist, policies sometimes impede advancements in the career development field, and personal volition in career choices is not always achievable. One potential intervention to help address such complex issues from CIP theory is the *CTI Workbook* (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996). For example, there are specific steps to identify, challenge, alter, and act upon negative thoughts that might be impacting career decisions, which allows one to recognize the reality that discrimination exists, but make a plan for how to move forward despite past experiences. Additionally, other cognitive or career theories can be integrated to more fully explore presenting concerns depending on the client, the practitioner's theoretical framework, and the presenting issue.

Additionally, the readiness model identifies unique complexities individuals face in their career dilemma, which could include experiences with discrimination, poverty, and policies that impact their ability to make a career decision. Beyond affirming that these are issues, a next step in the readiness model would be to identify strategies to address these complexity factors. This should not be limited to the individual and their specific situation, but should extend to the system level as well. For example, given that options knowledge is one of the foundational legs of CIP theory, work-related learning opportunities such as shadowing, interning and part-time work should be championed to individuals, employers, career centers as ways to build that options knowledge. Funding could be sought to encourage and reward employers for

creating these types of opportunities.

Providing access to quality career information and career guidance is a guiding principle of CIP theory and an important value of our profession (Sampson, 2009), one that has guided career service delivery to change from the primary service delivery of traditional one hour appointment to a primary service delivery model of drop in clients, enabling the access of career advisors to expand to where 19,000 clients received career services in one year (Osborn et al., 2016). While this is impressive, what about the masses who are not in a university, who lack access? CIP theory provides many resources for free online, but a next step would be to promote CIP use in schools and employment centers where a larger impact could be made. Career education courses at the secondary and post-secondary levels, as well as national career guides, could incorporate these activities and interventions aimed to increase readiness, address real and perceived barriers, and improve career decision making. Outcome research could demonstrate the effectiveness of CIP at these macro levels. In the next section, we turn the discussion back to the micro level with the presentation of two brief case scenarios using CIP theory for conceptualization and intervention.

Case Scenarios

Two case scenarios will be described to illustrate the importance of readiness assessment and how capability and complexity can help assess a client's needs using the CIP theoretical readiness model (Sampson et al., 2004). Imagine working with two clients who are both approaching completion of their four-year undergraduate degree, concerned about transitioning into the workforce or obtaining a job, and who appear quite similar in demographics (e.g., both Hispanic, Cisgender, men). After learning more about each client, you learn that 'Jonathan' grew up in the United States, has tens of thousands of dollars in student loans, was the first in his family to attend college, and he works part-time to help support his six siblings and elderly parents. On the other hand, 'Luis' moved to the United States with his family ten years ago, he has built his savings account, graduating with no student loans, he has a supportive network among family and colleagues, and currently has multiple job interviews lined up.

Factors such as student debt or stressors related to supporting his family for Jonathan may increase his complexity, making individual career counseling or ongoing brief-staff interventions an appropriate intervention. Whereas social and/or financial support in Luis' case can be indicators of lower complexity, which may allow him to benefit from a few brief twenty to thirty-minute sessions (Osborn et al., 2016). The readiness model can help differentiate the level of service needed to help serve more individuals in a brief-staff assisted model. These clients will now be conceptualized in more detail from a CIP theoretical framework. (Note: Special acknowledgment is given to Joshua Morgan for his presentation helped inspire some of the ideas for the case study presented).

Knowledge domains: Jonathan is a Mechanical Engineer major, but he is not really sure why he chose that major other than "everyone said it would be a stable job." He excelled in his courses, but now seems unsure if he truly has the passion to remain in the field. He is uncertain what to do. It appears as if Jonathan chose that major with little self-reflection of his own values, interests, and skills, but rather made the decision based upon the views of important people around him. On the other hand, Luis visited multiple advisors around campus, took self-assessment inventories, expanded his options and then narrowed his choices before selecting Business with a concentration in Marketing. He is pleased with his decision and excited about his upcoming interviews.

Decision-making skills: Jonathan is concerned that he quickly chose a major and jumped to the execution phase of the CASVE cycle without fully exploring his options during the analysis and synthesis phases. By engaging in some self-exploration, Jonathan learned that he values money, but not as much as his family. He is still interested in working in Mechanical Engineering, but he wants to work with a company that focuses on protecting the public health and the environment because he values helping others while also making money to help provide for his family. Luis is pleased with his decision-making progress regarding his Marketing major and upcoming interviews, however, he realized that all the interviews he has lined up are due to personal connections, so he has not yet evaluated how the companies fit with his own personal values of helping others, autonomy, and

a flexible schedule. Luis plans to rank order his values to help him better evaluate his options, should he have multiple job offers.

Metacognitions: Jonathan's *Career Thoughts Inventory* scores were above the mean in all areas (Decision Making Confusion, Commitment Anxiety, and External Conflict), and his highest scores were Decision Making Confusion and External Conflict, which indicates that he is uncertain how to get started in his decision-making process with evaluating himself and his options and he has some external influences (likely his family) impacting his decisions. Luis' Career Thoughts Inventory scores were within the average range except for his scores on the Commitment Anxiety scale, which were elevated above the mean, which is consistent with his concerns about prioritizing his values and choosing one option.

Career Interventions

The comparison of Jonathan and Luis' similar but distinct circumstances highlight how the CIP readiness model, conceptualization, and *Career Thoughts Inventory* can help assess a client's needs to provide tailored interventions to deliver cost-effective services (Osborn et al., 2016). More specifically, a practitioner would likely talk with both Jonathan and Luis about the *Career Thoughts Inventory Workbook*, which has many useful metaphors to help clients visualize how negative thoughts such as "I don't know what to do, I will *never* make a decision," can act as a stone wall or barrier to making a choice. Such negative thoughts can act like mud, and lead to clients feeling stuck.

The *Career Thoughts Inventory Workbook* has numerous interventions to facilitate discussions about reframing negative self-talk, remaining positive during career decisions, and includes activities that can be completed during session or assigned as interventions to be completed between sessions. The activities are theory-based and can help identify where a client has gaps in knowledge (e.g., self-knowledge, options knowledge, decision making skills, or metacognitive skills).

Once negative self-talk is identified and reframed, the practitioner may utilize self-assessment inventories or a computer assisted career guidance system to help Jonathan learn more about himself, prioritize his values, and begin connecting his self-knowledge with his options to identify whether or not he would like to remain in his current field of study. Luis was able to list his values, but he is not currently able to rank order his values or describe them in detail, so a practitioner might further discuss what helping others, autonomy, and a flexible schedule means to Luis to better understand each value and the impact they have on Luis' career decision. One potential intervention is to have Luis list the factors impacting his decision on a Decision Space Worksheet, which is a projective intervention that allows clients to rank how important each factor is to the decision in question. The larger the circle, the larger the influence of that particular thought, feeling, or factor.

More information about the Decision Space Worksheet is available at https://career.fsu.edu/tech-center/resources/service-delivery-handouts.

Summary

Cognitive information processing theory has continued to evolve since its inception in the 1970s. Research has shown the relationship of dysfunctional career thinking to career indecision as well as mental health concerns, and CIP has supported the use of brief-assisted and self-directed service delivery models. In addition, CIP has been applied to multiple populations and settings. CIP continues to be relevant for career service providers and career decision makers due to the ongoing relationship among CIP theorists, researchers, and practitioners.

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