

Key Elements of the CIP Approach to Designing Career Services

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Since 1971, an approach to career service delivery has evolved at Florida State University drawing from the interaction among theory, practice, and research. This approach (referred to hereafter as the CIP approach) applies Cognitive Information Processing Theory to the acquisition of career problem solving and decision making skills (Peterson, Sampson, & Reardon, 1991; Peterson, Sampson, Reardon, & Lenz, 1996; Sampson, Lenz, Reardon, & Peterson, 1999; Sampson, Peterson, Reardon, & Lenz, 2000a; Peterson, Sampson, Lenz, & Reardon, 2002; Sampson, Reardon, Peterson, & Lenz, 2004) and builds upon the self-directed career service delivery strategies developed at Florida State University (Reardon, 1996; Reardon & Minor, 1975). Two core constructs in the CIP approach include: (1) the pyramid of information processing domains (the content of career problem solving and decision making involving, self-knowledge, occupational knowledge, decision-making skills, and metacognitions); and (2) the CASVE cycle (the process of career problem solving and decision making, involving the phases of communication, analysis, synthesis, valuing, and execution).

With these two constructs, content and process (or knowing and doing), as a foundation, strategies and resources for service delivery have been developed. The CIP approach has been used in a variety of settings and has been described in several case studies. Additional information on the this approach are cited in two bibliographies.

Strategies for service delivery include:

- Readiness assessment (Sampson, Peterson, Reardon, & Lenz, 2000a; 2000b);
- Intervention planning (Peterson, Sampson, & Reardon, 1991; Peterson, Sampson, Reardon, & Lenz, 1996; Peterson, Sampson, & Reardon, in press; Sampson, Peterson, Reardon, & Lenz, 2000a; Peterson, Sampson, Lenz, & Reardon, 2002; Sampson, Reardon, Peterson, & Lenz, 2004);
- Career assessment (Peterson, Sampson, & Reardon, 1991; Peterson, 1998; Reardon, Sampson, & Lenz, 2000);
- Counseling (Peterson, Lumsden, Sampson, Reardon, & Lenz, in press; Peterson, Sampson, & Reardon, 1991; Peterson, Sampson, Reardon, & Lenz, 1996; Sampson, Reardon, & Lenz, in press; Reardon & Lenz, 1998; Peterson, Sampson, Lenz, & Reardon, 2002; Sampson, Reardon, Peterson, & Lenz, 2004);
- Information use (Peterson, Sampson, & Reardon, 1991);
- Computer-assisted career guidance (Sampson, Peterson, & Reardon, 1989; Sampson, 1997);

- Employment problem solving and decision making (Sampson, Lenz, Reardon, & Peterson, 1999);
- Career resource room design (Peterson, Sampson, & Reardon, 1991; Sampson, 1999);
- Staff training (Lenz, 2000; Saunders, Reardon, & Lenz, 1999);
- Program development and evaluation (Lenz, Reardon, Peterson, & Sampson, in press; Peterson, Sampson, Lenz, & Reardon, 1999; Peterson, Sampson, & Reardon, 1991; Vernick, Garis, & Reardon, 2000); and
- International collaboration in theory application (Sampson, Watts, Palmer, & Hughes, 2000).

Resources to apply CIP theory to practice have included:

- A readiness assessment instrument – the Career Thoughts Inventory (CTI; Sampson, Peterson, Lenz, Reardon, & Saunders, 1996a; 1998);
- A workbook for cognitive restructuring of negative career thoughts (CTI Workbook; Sampson, Peterson, Lenz, Reardon, & Saunders, 1996b);
- A career assessment card sort (Peterson, 1998);
- Instruction for credit courses (Reardon, Lenz, Sampson, & Peterson, 2000a; 2000b); and
- Counseling handouts and exercises (Sampson, Peterson, Lenz, & Reardon, 1992).

Settings where the CIP approach has been applied include:

- Higher education (Reardon & Wright, 1999);
- Community services (Lenz, 1998);
- One-stop career centers (Sampson & Reardon, 1998);
- Secondary schools (Peterson, Sampson, & Reardon, 1991);
- Correctional institutions (Railey & Peterson, 2000); and
- Adults (Peterson, Lumsden, Sampson, Reardon, & Lenz, 2002; Peterson, Sampson, Lenz, & Reardon, 2002).

Case studies are available that describe how the CIP approach is used in practice (Peterson, Sampson, & Reardon, 1991; Peterson, Sampson, Reardon, & Lenz, 1996; Sampson, Peterson, Lenz, Reardon, & Saunders, 1996c; Reardon & Wright, 1999; Watson & Lenz, in press).

Bibliographies providing citations of research and evaluation on the CIP approach may be found in Reardon (1998) and Sampson, Peterson, Reardon, and Lenz (2003).

Using the above literature as a foundation, seven key elements of the CIP approach can be identified that are essential to the successful application of this approach in practice. These key elements of the CIP approach to designing careers services are as follows:

[Screen individuals for career decision making readiness before delivering services](#)

[Match levels of staff assistance to identified individual needs](#)

[Use career theory to help individuals understand and manage career decision making](#)

[Use the career resource room and Internet web site with all levels of service delivery](#)

[Use career resources that are appropriate for diverse individual learners](#)

[Use staff teamwork in delivering services to individuals](#)

[Provide common staff training for delivering resources and services](#)

Details of each of these key elements are described below.

Key Elements of the Cognitive Information Processing Approach

Key elements of the CIP approach are based on the assumptions that multiple staff members are involved in service delivery, a variety of career resources and services are available, and career resources and services are delivered both in a career center and on an Internet web site. Services with one or two staff members, services with limited career resources, and services without Internet web sites would need to adapt the application of the CIP approach to their setting. The organizational affiliation of the career service, the qualifications of staff, and the nature of individuals served may require further adaptation of the CIP approach in order to effectively integrate this approach with existing career services.

1. Screen Individuals for Career Decision Making Readiness Before Delivering Services

Individuals vary in their readiness for making career decisions (Phillips & Blustein, 1994). Numerous theoretical constructs have evolved to explain why some individuals have difficulty in career decision making such as, vocational maturity (Super, 1974), career maturity (Crites, 1996), career adaptability (Super, 1983; Savickas, 1994), vocational identity (Holland, 1997), decision-making self-efficacy (Lent & Hackett, 1987), career beliefs (Krumboltz, 1983), and dysfunctional career thinking (Sampson et al., 1998; Peterson, et al., 2002). If individuals are not screened prior to receiving career services, those individuals with low readiness for decision making may be underserved by staff who are unaware of their substantial need for assistance, while high readiness individuals may be overserved by staff who deliver expensive individualized interventions when less expensive approaches would likely be equally effective (Sampson, et al., 2000a).

In the CIP approach, screening individuals at the outset of service delivery increases the likelihood that the services delivered are congruent with individual needs. As a result of better allocation of scarce staff resources, staff will have time to serve more individuals with briefer interventions or will have more time to deliver intensive individualized interventions to assist individuals with extensive needs. The screening process may be as simple as asking individuals to articulate their reasons for seeking assistance and judging readiness based on their response. If this brief screening question indicates a concrete request for information exists and that no potential problems exist, then no further screening is needed at that time and a referral is made to self-help resources. If this brief screening question indicates that no concrete request for information exists and that potential problems exist (such as uncertainty when a decision needs to be made, confusion, or disabling emotions), then more comprehensive screening is likely needed. A readiness assessment measure, such as the Career Thoughts Inventory (Sampson et al., 1996a) may be used to assist staff in making a judgment about individuals' readiness for career decision making (Sampson, et al. 2000a, 2004; Peterson, et al. 2002). The use of a comprehensive screening measure provides individuals and practitioners with an easily understood, common frame of reference for discussing readiness. It is important to emphasize that staff members' judgments about individuals' readiness for career decision making should be based on test results and interaction with the individual, as opposed to a relying on a simple score on an assessment instrument. The goal of readiness assessment is to help both individuals and practitioners make informed, collaborative decisions about the level of staff assistance that is most likely to meet their needs.

2. Match Levels of Staff Assistance to Identified Individual Needs

Given that one of the goals of the CIP approach is to avoid overserving and underserving individuals, the screening process described above is used in selecting an appropriate level of staff assistance in relation to individuals' need for assistance. Three levels of service delivery are included in the CIP approach: (1) self-help services, (2) brief staff-assisted services, and (3) individual case-managed services (Sampson et al., 2000a, 2004; Peterson et al., 2002).

Individuals who are initially judged by staff to have a high level of readiness for decision making are referred to self-help career services. In the CIP approach, career resource rooms and Internet web sites are designed to assist individuals in selecting, locating, sequencing, and using needed resources with little or no assistance from staff.

Individuals who are initially judged by staff to have a moderate level of readiness for decision making are referred to brief staff-assisted services. This includes self-directed career decision making, involving practitioner-guided use of career resources and services in a career resource room by individuals with adequate decision-making readiness to effectively learn in this environment. Staff teamwork and the continuity offered by the use of an individual learning plan (ILP), allows individuals to work with one or more staff members of their choosing and to decide how quickly they will proceed. An ILP helps clients and practitioners to collaboratively plan the use of resources and services necessary to solve a career problem. The written individual plan includes client goals and prioritized learning activities with related outcomes. Other brief staff-assisted services include shorter-term group counseling (less than 6 sessions), career courses with large-group interaction, and workshops. In each of these group interventions, the opportunity for interaction among participants is minimal to moderate.

Individuals who are initially judged by staff to have a low level of readiness for decision making are ideally referred to individual case-managed services. This includes individual counseling, longer-term group counseling (more than 6 sessions), and career courses with small group interaction. By having a greater amount of time available for service delivery, staff can proceed at a pace slow enough for low-readiness individuals to process information more effectively and to deal with a diverse range of issues that make decision making difficult. Group interventions in this category allow maximum opportunity for interaction among participants.

The resulting net effect of the CIP approach is to limit expensive services (in terms of staff resources) to individuals with more extensive needs. The effectiveness of this approach is dependent on staff briefly checking with individuals receiving self-help and brief interventions to ensure that their needs are being met and increasing the level of staff assistance when it becomes apparent that additional assistance is needed (Sampson et al., 2000a, 2004; Peterson, et al., 2002).

The CIP approach also assumes that practitioners may have diverse training and qualifications. The use of a team approach (with paraprofessionals, professionals-in-training, and professionals working collaboratively) has been shown to contribute to the cost-effectiveness of career service delivery (Reardon, 1996). Practitioners delivering services to low readiness individuals need specific training in individual case-managed interventions that may include the integration of career and mental health issues.

3. Use Career Theory to Help Individuals Understand and Manage Career Decision Making

Career theory serves two purposes in the CIP approach. First, career theory helps the practitioner decide how much and what type of assistance individuals will need in order to solve career problems and make career decisions. Second, career theory helps individuals understand the content of career decision making (What individuals need to know) and the process of career decision making (What individuals need to do). This understanding can help individuals create a cognitive framework or schema for career choice that reduces ambiguity in the career choice process, better manage the overwhelming amount of career choice information that is available, and provides clear criteria for self-monitoring of progress in decision making.

In order for individuals to use theory to better understand and manage career decision making, theoretical constructs need to be translated into terminology that individuals can readily comprehend. Several strategies have been used in the CIP approach to translate theoretical constructs for use by individuals using resources and receiving services. The language of the original constructs developed by

Peterson et al., (1991) was translated by Sampson, Peterson, Lenz, and Reardon (1992) to avoid professional jargon and improve clarity. These revised constructs are presented to individuals on handouts as part of self-help services, brief staff-assisted services, and individual case managed services to help individuals understand and manage career decision making. These translated concepts, supported by several metaphors, are also used in an instructional workbook designed to restructure negative cognition and enhance competence in career decision making (Sampson et al., 1996b).

4. Use the Career Resource Room and Internet Web Site with All Levels of Service Delivery

In the CIP approach, career resource rooms and Internet web sites play a key role in the delivery of resources and services. As mentioned previously, career resource rooms and web sites provide individuals with self-help access to resources that meet identified learning needs. The career resource room is an open space within the career center having a reception area, bookshelves and files for maintaining resources, tables and computer work stations for the use of resources, and adjacent group rooms and staff offices. The Internet web site is the distance guidance component of the career service (Sampson, 1999). The effectiveness of self-help services delivered in career resource rooms is dependent on having:

- (a) an easy to understand classification schema for organizing resources;
- (b) an index to identify available resources;
- (c) resource guides to help individuals select resources that meet their needs;
- (d) clear signage to physically locate resources; and
- (e) a comfortable and attractive place to use resources and receive services (Peterson et al., 1991).

The effectiveness of self-help services delivered via Internet web sites is dependent on having:

- (a) the site designed to help users select appropriate resources by linking individuals' needs to resources and external links;
- (b) suggestions provided on how to sequence and use the resources and links that are available;
- (c) assessment, information, and instruction that has been validated for self-help use; and
- (d) a description of the circumstances when help from a practitioner is typically needed to meet needs (Sampson, 1999).

The career resource room can also be effectively used in brief staff-assisted services by having staff assist individuals select, locate, sequence, and use resources based on the creation and regular review of ILPs.

Similarly, the career resource room can be effectively used in individual case-managed services by bringing clients into the resource room during a session to use resources under the supervision of the practitioner. In this way, learning can be enhanced by taking advantage of the "teachable moment" to immediately clarify and apply what has been learned, or to identify dysfunctional thoughts that inhibit learning and decision making, without having to wait for the next scheduled appointment with a practitioner.

The Internet web site can also be used in the career resource room or staff offices as part of brief staff-assisted or individual case-managed services to model and reinforce information-seeking behavior. Low readiness clients who have difficulty processing information may still be effective Internet web site users if appropriate assistance is provided by a practitioner in the use of the web site.

5. Use Career Resources that are Appropriate for Diverse Individual Learners

The CIP approach recognizes that individuals vary in terms of their verbal aptitude, motivation, and learning style (Peterson et al., 1991, 2002; Sampson, et al., 2004). Ideally, the career resources available in the career resource room and on the Internet web site should be appropriate for the inherent diversity in individuals' verbal aptitude, motivation, and learning style. In terms of verbal aptitude, it is particularly important for resources to be available in a range of readability. Many career resources are written at secondary school or college reading level, which may lead to failed interventions for adolescents and adults with limited reading ability.

Advertising that a wide range of individuals can be served in a career service, when in fact only highly verbal individuals can successfully use the resources available, may result in failure experiences for individuals with limited reading skills and make them reluctant to seek further career assistance. In terms of motivation and learning style, traditional text-based resources (which may include simple text-based Internet web sites) need to be supplemented with video and interactive computer-based resources that may be more reinforcing for some learners (Peterson et al., 1991, Sampson, et al., 2004). Care also needs to be taken that individuals' physical disabilities do not prevent them from accessing resources in career resource rooms. Similarly, Internet web sites should be accessible through text readers for persons with visual disabilities.

6. Use Staff Teamwork in Delivering Services to Individuals

An essential brief staff-assisted service in the CIP approach described previously is self-directed career decision making. As stated previously, this intervention involves practitioner-guided use of career resources and services in a career resource room by individuals with adequate decision-making readiness to effectively learn in this environment. The assumption is that continuity in service delivery resides in the collaboratively developed written ILP, as opposed to the behavior of any single staff member. This results in two benefits to the individual. First, the individual is not restricted to the available appointment times of any one practitioner. Second, individuals are also able to decide how quickly they will use available resources and services. Individuals can choose to spend considerable time working on their career problem with several staff members or they can choose to work with one staff member during his or her assigned times in the career resource room if they value the relationship with one particular practitioner (Sampson & Reardon, 1998). For this approach to be effective, however, staff teamwork is essential. Staff members must be able to quickly establish helping relationships, clarify client progress in completing the ILP, and subsequently revise the ILP if new needs emerge.

7. Provide Common Staff Training for Delivering Resources and Services

Another factor in the success of the self-directed career decision-making intervention described above is common staff training (Sampson & Reardon, 1998). Common training experiences among staff are needed to reduce the likelihood of inconsistent or disjointed service delivery when multiple staff serve one individual. Individuals may become confused and discouraged if some staff are unable to help them effectively use the resources and services included on their ILP.

There is a content and process dimension to common staff training. In terms of the content dimension, all staff need to be familiar with the theoretical basis of service delivery in order to assist clients in understanding and managing the career decision-making process. All staff also need to be competent in the use of core assessment, information, and instructional resources. In terms of the process dimension, all staff need to be competent in the readiness assessment and intervention planning elements of the CIP approach. This includes competence in the use of one or two common readiness assessment instruments, as well as the use of readiness assessment data in selecting an appropriate type and amount of staff intervention and in collaboratively designing an ILP to adequately meet client needs.

In terms of staff training, career resources can be categorized as core or specialized resources. Core career resources and services are those judged to be relevant to common career problems with all staff expected to be competent in their use or delivery. Specialized career resources and services are those judged to be relevant to less common career problems with specific staff having expertise in assisting individuals or other staff in their use or delivery.

Conclusion

This paper has highlighted seven key elements of the cognitive information processing approach to career problem solving and decision making. By concentrating on the essential elements of the CIP approach, it is hoped that practitioners will be more successful in translating theory into practice, ultimately contributing to improved career problem solving and decision making among individuals seeking career resources and services.

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