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Author(s): Sampson, James P. Jr.; Reardon, Robert C.; Peterson, Gary W.; Lenz, Janet G.; Bullock-Yowell, Emily; Reid Marks, Laura; Vuorinen, Raimo; Lerkkanen, Jukka; Kettunen, Jaana

Title: Introduction and Context for CIP Theory

Year: 2023

Version: Published version

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Please cite the original version:

Sampson, J. P. J., Reardon, R. C., Peterson, G. W., Lenz, J. G., Bullock-Yowell, E., Reid Marks, L., Vuorinen, R., Lerkkanen, J., & Kettunen, J. (2023). Introduction and Context for CIP Theory. In J. P. J. Sampson, J. G. Lenz, E. Bullock-Yowell, D. S. Osborn, & S. C. W. Hayden (Eds.), *Cognitive Information Processing : Career Theory, Research, and Practice* (pp. 33-62). Florida State Open Publishing. https://doi.org/10.33009/fsop_sampson1123.ch01

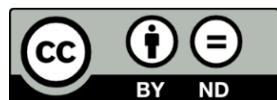
CHAPTER 1 INTRODUCTION AND CONTEXT FOR CIP THEORY

James P. Sampson, Jr.
Robert C. Reardon
Gary W. Peterson
Janet G. Lenz
Emily Bullock-Yowell
Laura Reid Marks
Raimo Vuorinen
Jukka Lerkkanen
Jaana Kettunen

APA Style (7th ed.) reference citation for this chapter:

Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., Lenz, J. G., Bullock-Yowell, E., Reid Marks, L., Vuorinen, R., Lerkkanen, J., & Kettunen, J. (2023). Introduction and context for CIP Theory. In J. P. Sampson, Jr., J. G. Lenz, E. Bullock-Yowell, D. S. Osborn, & S. C. W. Hayden (Eds.). *Cognitive information processing: Career theory, research, and practice*. Florida State Open Publishing.
https://doi.org/10.33009/fsop_sampson1123.ch01

Correspondence concerning this chapter should be addressed to James P. Sampson, Jr. at jsampson@fsu.edu.



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This chapter describes the nature of career decisions, career problems, and career interventions, and the integration of theory, research, and practice, as well as the evolution, core constructs, aims, assumptions, philosophical foundations, potential benefits, and terminology associated with cognitive information processing (CIP) theory. CIP theory applies general

principles of cognitive information processing to making and implementing current career choices, as well as to fostering future career problem solving and decision-making skills. After reviewing this chapter, the reader should have a foundation for understanding and applying the theory-based practice strategies described in the remainder of the book.

The Nature of Career Decisions, Career Problems, and Career Interventions¹

This section provides the context for the remaining chapters in this book. After describing the nature of the career decisions people make in their lives and the career problems they face, a definition of career intervention is presented.

Nature of Career Decisions

Career decisions concerning occupations, education, training, employment, and leisure involve a series of choices over a lifetime (Sampson et al., 2004; 2020b; 2023) and reflect individuals' vocational behavior. The focus and sequencing of these decisions vary over time and among individuals. For example, an individual may decide to become an accountant (occupational choice), major in accounting in college (educational choice), apply for and obtain a position as an accountant in a manufacturing business (employment choice), and then complete training in international tax regulations to improve their chances for promotion and travel (training choice). Another individual may make an educational choice to major in psychology (educational choice) without a clear occupational goal in mind and then subsequently apply for and obtain a position as a marketing research analyst (occupational choice) in an on-line retail company (employment choice). Another individual may decide to work in the family's home appliance business as a home appliance installer (employment choice and occupational choice) while completing on-the-job training (training choice), followed by completing a part-time Associate degree in business management at a local community college (educational choice), leading to a subsequent position as manager of the appliance business (occupational and employment choice). For most individuals, occupational, educational, and training choices ultimately lead to paid or unpaid employment choices.

Opportunities and the resulting alternatives available to individuals vary considerably. Some persons have seemingly unlimited opportunities and have few barriers to overcome, while others have limited opportunities and experience many personal or societal barriers to obtaining education, training, and employment. Regardless of the opportunities available, choices ultimately need to be made from among the opportunities that do exist. Time that does not involve paid employment may include time spent in family, leisure, or community activities, and these activities interact with career choices (Sampson et al., 2004; Sampson, Osborn, et al., 2020b, Sampson et al., 2023). For almost all persons in our society, life entails making a series of decisions that have consequences, which in turn influence future decisions (Sampson, Osborn, et al., 2020a).

Career Problems

In CIP theory, a problem to be solved is understood as a gap between an existing and desired state of affairs, or between where you are and where you want to be (Sampson et al.,

¹ Content in this section was used or adapted from Sampson et al., (2020b). Used or adapted with permission.

2004; Sampson, Osborn, et al., 2020b, Sampson et al., 2023). A career problem involves a gap between a person's current career situation and a future career situation that they desire (Sampson et al., 2004; Sampson, Osborn, et al., 2020b; Sampson et al., 2023). An example could be an overworked and underpaid single parent who is seeking a better paying job with fewer hours to spend more time with their children. Problems are not necessarily negative, as when a person is offered a promotion at work and needs to decide if the extra salary is worth the added responsibilities. The aim of a CIP theory-based career intervention is to assist individuals in solving an immediate career problem while also better preparing them to solve inevitable future career problems by enhancing their understanding of problem solving and decision-making (Sampson et al., 2004). Career choices are ultimately expressed as behaviors as most individuals typically must decide each day to show up for class, training, or work. While it is true that some individuals have favorable life circumstances that allow them multiple options to choose from, and others with unfavorable life circumstances may have minimal options to choose from, a decision is still unavoidable. When unplanned events, such as pandemics or natural disasters occur, choices may be extremely limited for all persons. Choosing not to decide (and therefore not act) is still a decision. Even if limited options are available, learning to become a better career problem solver in making the choice at hand better prepares individuals for a future where more and/or superior options are hopefully available (Sampson et al., 2004; Sampson, Osborn, et al., 2020b). Additional information on career problems may be found later in this chapter, as well as in Chapters 2, 3, 4, and 6 of this book.

Career Interventions

Practitioners offer a wide range of career interventions to assist individuals in making occupational, educational, training, and employment choices. Some individuals receive individual or group-based career interventions to assist them in making decisions from public and private sector service providers. Some individuals seek self-help career interventions in making choices. Both self-help and practitioner-supported career interventions typically involve the use of career assessments and information resources. Some of these interventions and resources are provided without cost, while others require paying a fee. Some educational institutions proactively provide career interventions to assist students in making successful transitions through career education and experiential learning programs, while also providing reactive interventions in response to student requests for career services. Employment services provide interventions in response to requests from individuals or as part of requirements to receive public assistance. Some employers proactively provide career interventions to assist employees in selecting positions, education, and training that benefits both the employer and employee. These interventions are often sought or provided at various times of transition, such as when transitioning from one educational level to another, when transitioning from education or training to employment, when transitioning from employment back to education or training, and when transitioning from one employment position to another (Sampson et al., 2004; Sampson, Osborn, et al., 2020b).

The specific type of career interventions and resources individuals receive are typically influenced by the type of career decision they are making, the type of barriers they are confronted with in making the choice, and the setting where the intervention is provided. Some individuals have more difficulty in making career decisions than others and, as a result, require more assistance from practitioners. Other individuals have less difficulty in making decisions and, as a result, require little or no assistance from practitioners (Sampson et al., 2004; Sampson,

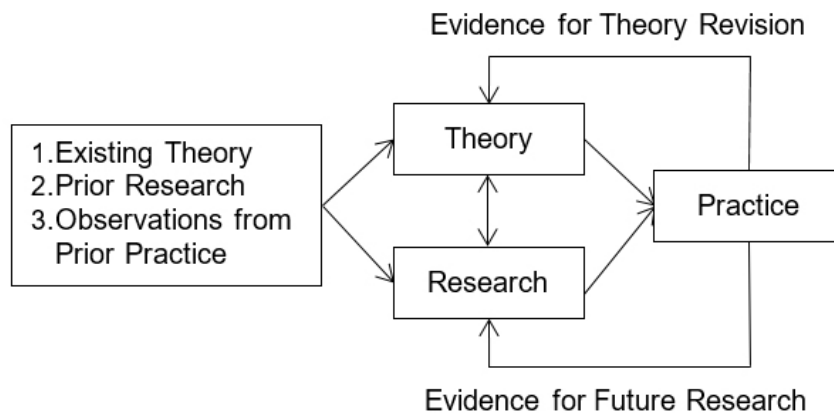
Osborn, et al., 2020b, Sampson et al., 2023). Although the effectiveness of career interventions varies by type, setting, and individuals served, career interventions have been generally shown to be effective in helping individuals make career choices (Brown et al., 2003; Brown & Ryan Krane, 2000; Sampson, Osborn, et al., 2020b; Whiston & James, 2013; Whiston et al., 2017).

When persons receive assistance in making decisions, career interventions are provided by practitioners with titles that fit their training, experience, credentials, and work setting. These practitioners include psychologists, counselors, career counselors, guidance specialists, vocational rehabilitation specialists, career development facilitators, teachers/faculty/academic advisers, career coaches, career advisors, librarians, human resource specialists, and social workers. Persons receiving assistance with a career decision may be referred to as clients, students/advisees, customers, patrons, and employees depending on where they receive career services (Sampson, 2008). In this paper, we refer to persons delivering career interventions as “practitioners,” while persons receiving career interventions are referred to as “clients” when they receive practitioner support and “individuals” if they use a self-help intervention (Sampson et al., 2004; Sampson, Osborn, et al., 2020b; Sampson et al., 2023). Additional information on career interventions may be found in Chapters 7, 8, 9, 10, and 11 of this book. Examples of interventions may be found in case studies presented in Chapters 12, 13, and 14.

The Integration of Theory, Research, and Practice in Career Intervention²

The development and application of CIP theory is grounded in the integration of theory, research, and practice (Osborn, et. al, 2019). Our understanding of individuals’ vocational behavior and the efficacy of career interventions benefit from the integration of theory, research, and practice (Sampson et al., 2014). Theory, research, and practice interact in several ways. Theory guides research by suggesting research questions, by offering a basis for creating measures, and by providing a basis for interpreting results (Sampson et al., 2014). Theory guides practice by offering a basis for conceptualizing individuals’ concerns, by creating interventions for specific needs, and by providing a foundation for creating assessment, information, and instructional resources. Research can be used in the revision of current theory and enhances practice by providing an evidence base for determining what works best for which individual needs. In turn, practice contributes to theory revision and the creation of future research questions (Sampson, 2017). Over time, CIP theory has evolved, as depicted in Figure 1.1. While CIP theory’s original conceptualization (Peterson et al., 1991) was based on existing theory, prior research, and observations from practice, subsequent presentations of the theory were based on ongoing research and practice, as discussed in the following section on CIP theory’s evolution.

² Content in this section was used or adapted from Sampson et al., (2020b). Used or adapted with permission.

Figure 1.1*Integrating Theory, Research, and Practice*

Note. Adapted from “Annual review: A content analysis of career development theory, research, and practice - 2013,” by J. P. Sampson, P. C. Hou, J. Kronholz, C. Dozier, M. C. McClain, M. Buzzetta, E. Pawley, T. Finklea, G. W. Peterson, J. G. Lenz, R. C. Reardon, D. S. Osborn, S. C. W. Hayden, G. P. Colvin, and E. L. Kennelly, 2014, *The Career Development Quarterly*, 62(4), p. 295. <https://doi.org/10.1002/j.2161-0045.2014.00085.x>. Copyright 2014 by the National Career Development Association. Adapted with permission.

The Evolution of CIP Theory: Fifty Years of Theory, Research, and Practice³

Since 1971, an approach to delivering career services has evolved at Florida State University from the interaction among theory, practice, and research. As stated at the beginning of this chapter, CIP theory applies general principles of cognitive information processing to making and implementing current career choices, as well as to fostering future career problem solving and decision-making skill (Peterson et al., 1991; 1996; Sampson, 2008, Sampson et al., 2023; Sampson et al., 1999; Sampson et al., 1992; Sampson, Osborn, et al., 2020b; Sampson et al., 2000, Sampson et al., 2004). CIP theory also builds on the self-directed career service delivery strategies developed at Florida State University (Reardon, 1996; Reardon, 2017; Reardon & Minor, 1975). Peterson et al. (1991) noted that since its inception, CIP theory has been used to guide career interventions and promote understanding of vocational behavior. The theory’s name has evolved over time from the cognitive information processing approach to career problem solving and decision-making to simply CIP theory and includes both a theory of vocational behavior and a theory of career intervention (Sampson, 2017). In CIP theory, the study of vocational behavior is defined as, “the examination of individual cognition, affect, and action, which combine with family, social, economic, and organizational factors, to influence the occupational, educational, training, employment, and leisure choices of individuals over a lifetime” (Sampson et al., 2020b, p. 6), whereas *career intervention* involves the delivery of career resources (assessment, information, and instruction) and services (self-help, brief staff-assisted, and individual case-managed) designed to help individuals make informed and careful

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career choices (Sampson, 2008). Theoretical assumptions for both vocational behavior and career intervention are presented later in this chapter.

Three factors have influenced the evolution of CIP theory. First, the Florida State University (FSU) Career Center has provided a laboratory for creating theory and related career interventions, which also offered opportunities for students and community members to volunteer as research participants for numerous studies (Sampson, 2017). Second, FSU faculty, FSU students, FSU Career Center staff members, and FSU graduates have created a community of practice for CIP theory. This CIP community of practice is based upon: (a) shared interests; (b) joint activities, exchange of information, and mutual support; and (c) shared practice in experiences, tools, and problem solving (Sampson, 2017; Wenger-Trayner & Wenger-Trayner, 2015). Third, CIP theory has benefited from the inclusion of other theory, such as RIASEC theory (Holland, 1997) to promote understanding of vocational behavior and the creation of career interventions (Reardon & Lenz, 2015), theoretical elements from cognitive therapy (Beck, et al., 1985) to support the development of the Career Thoughts Inventory (CTI) and CTI Workbook (Sampson et al., 1998), and a theory of learning and instruction (Gagné, 1985; Driscoll & Burner, 2022) to support the design of learning resources used in career interventions.

Although the term “CIP theory” has over time come to identify the work completed at Florida State University, the theory is most accurately described as the application of cognitive information processing theory to career problem solving and decision-making (Peterson et al., 1991). Cognitive information processing theory was chosen as a foundation because information processing is key to human learning, and learning is essential in the understanding of self and options required to make occupational, educational, training, and employment choices. Important elements of information processing theory that are included in CIP-based career interventions include: (a) how persons use schemata (knowledge structures) to organize, add to, and revise knowledge they have about themselves and their options; (b) the rational and intuitive processes persons apply to use what they know to arrive at a decision, and (c) the metacognitive processes persons use to manage problem solving (Peterson et al., 1991; Sampson et al., 2004). A CIP-based career intervention should help persons improve the quantity and validity of their knowledge, better understand how and when to use their knowledge in decision-making and improve their capacity to recognize and alter negative career thoughts that can compromise decision-making. Ultimately, a CIP theory-based career intervention should help persons to arrive at informed and careful career choices. An important point made in Chapter 2 is to avoid the misconception that CIP theory overemphasizes cognition as emotions and behavior play an important role in the theory.

Evolution of Core Constructs

CIP theory includes four core constructs (Sampson et al., 2020b; Sampson et al., 2023). The first CIP core construct is the *pyramid of information processing domains* (the “content” of career problem solving and decision-making which involves self-knowledge, options knowledge, decision-making skills, and metacognitions). The second CIP theory core construct is the *CASVE cycle* (the “process” of career problem solving and decision-making which involves the phases of communication, analysis, synthesis, valuing, and execution). Chapter 2 explains these constructs and presents figures showing practitioner and client versions of the pyramid and the CASVE cycle. These CIP constructs can be used by themselves or used to organize the application of other career theories and related resources, such as Holland's RIASEC theory (1997) and the

Self-Directed Search (Holland & Messer, 2017). Chapter 3 focuses on the pyramid and CASVE cycle in relation to employment decision-making. The third CIP core construct is readiness for career decision-making and is explained in Chapter 4. This construct includes capability and complexity in a two-dimensional model of decision-making readiness, based in part on the pyramid and CASVE cycle (Sampson et al., 2004; Sampson et al., 2020b, Sampson et al., 2023). The fourth core CIP theory construct is differentiated service delivery and is explained in Chapter 7. The differentiated service delivery maximizes the cost-effectiveness of career interventions by optimizing the level of staff support in relation to individual readiness for career decision-making (Sampson et al., 2004; Sampson et al., 2020b, Sampson et al., 2023). Complete citations on the theory, research, and practice associated with CIP theory may be found in the [CIP Bibliography](#) (Sampson et al., 2022). A discussion of CIP theory applications is presented in Chapter 7 of this book.

Aims of CIP Theory⁴

The aims of CIP theory are to help persons make informed and careful current career choices and, while doing so, to learn improved problem-solving and decision-making skills that they will need for future choices (Peterson et al., 1991; Sampson et al., 2004; 2020b). These aims reflect the wisdom of the oft-repeated metaphor, "Give people a fish and they eat for a day but teach them how to fish and they eat for a lifetime." The dynamic nature of the job market in an information-based, global economy makes this adage even more relevant today.

Theoretical Assumptions about Career Problem Solving and Decision-Making⁵

The career problem solving and decision-making features of CIP theory are based on the following four theoretical assumptions (Peterson et al., 1991; Sampson et al., 2004; 2020b):

1. Career choices engage our emotions (affect), thoughts (cognition), and actions (behavior). Despite the term cognitive being used in the name of this theory, cognition, affect, and behavior are viewed as inseparable in career choice.
2. Effective career choices involve both knowledge (the content of choice or what we need to know) and a process for thinking about the knowledge we have gained (the process of choice or what we need to do).
3. Knowledge of ourselves and the world we live in is constantly evolving and interacting. As we learn from life experience, we organize our knowledge in more complex ways. Career resources and services can help us think about and organize our knowledge, assisting us in sorting through the large amount of information available, and then using the most relevant information in making choices.
4. Career problem solving and decision-making are skills, and similar to any other skill, learning and practice can improve our ability to make choices. Career resources and services can be used to help us learn about and practice the information processing skills needed to become more effective at making career choices.

⁴ Content in this section was used or adapted from Peterson et al., 1991; Sampson et al., 2004; 2020b). Used or adapted with permission.

⁵ Content in this section was used or adapted from Sampson et al., (2004; 2020b). Used or adapted with permission.

Theoretical Assumptions about Career Intervention⁶

The career intervention features of CIP theory are based on the following four theoretical assumptions (Peterson et al., 1991; Sampson & Reardon, 1998; Sampson et al., 2000, Sampson et al., 2004, Sampson, 2008; Sampson et al., 2013):

1. The affective, cognitive, and behavioral factors that influence informed and careful career problem solving and decision-making also influence the efficacy of career interventions. In particular, career interventions are more effective when they address the affective, cognitive, and behavioral aspects of decision-making and when individuals understand the goals, functioning, and potential outcomes of career interventions.
2. Readiness for career problem solving and decision-making and readiness for career intervention varies among individuals and can be measured. By matching the level of readiness (high, medium, and low) to the respective level of career intervention (self-help, brief staff-assisted, and individual case-managed), career intervention efficacy can be improved.
3. In brief staff-assisted and individual case-managed career interventions, the efficacy of career interventions is enhanced by practitioner skills in relationship development, screening, assessment, diagnosis, goal setting, intervention planning, intervention, information, and instruction.
4. Diversity and social justice factors that influence the effectiveness of an individual's career problem solving and decision-making, also influence the effectiveness of career interventions and need to be taken into account in the design and delivery of career resources and services.

CIP Theory and the Philosophy of Science

Structured theories and interventions, such as those associated with CIP theory which are aimed at impacting an individual's career decision-making and career development, are often categorized as modern. Those approaches that are less objective assessment focused and have a more malleable structure are often categorized as post-modern (Bussaca & Rehfluss, 2017). Given that post-modern philosophy values the individual's viewpoint and issues such as cultural inclusion (Kahn & Lourenco, 1999), we argue that CIP theory meets these post-modern stipulations as well. Despite how we categorize theory or intervention tools, McMahan and Watson (2012) have recognized there is an "uneasy relationship" (p. 441) between career intervention tools considered as having a modern foundation (e.g., the Self-Directed Search) and constructivist philosophies. In Sampson's (2009) article specifically addressing the issue of the modern and postmodern debate in career interventions, he urges us to make intervention decisions based on individual needs and cost-effectiveness. Further, Sampson emphasized that both the modern and postmodern approaches have specific benefits and limitations that can allow them to be compatible at times. Bullock-Yowell and Reardon (2021) provided an example of marrying the modern and post-modern through the use of the SDS in the Career Construction Interview (Savickas, 2019).

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We extend these ideas to consider the issue of effectiveness. Are the philosophical underpinnings of an intervention vital if an intervention is effective? As scientists, we prefer assumptions about intervention effectiveness to be tested empirically. Many of the critical ingredients of career intervention have been identified through research. Chapter 7 discusses these critical ingredients in depth and how they are addressed through CIP theory-based career interventions. These ingredients are what research supports as necessary for an intervention to be effective. We encourage practitioners to consider if the approach they are using with clients includes these critical ingredients. In this way, practitioners can assure that their theory-based career interventions are both philosophically appropriate and empirically sound. Whether you view CIP as most grounded in modern or post-modern philosophy, evidence exists that CIP theory addresses most, if not all, of these critical ingredients in its interventions. The effective integration of theory, research, and practice is what CIP practitioners, theorists, and researchers choose to value rather than focusing on the modern vs. post-modern philosophical debate.

Potential Benefits of Effective Career Intervention

Prior to discussing the specific benefits of CIP theory-based interventions, we discuss the general positive impact of career interventions in a broader content, including benefits beyond. In addition to potentially benefitting individuals with career problems, international reviews of career guidance policy (e.g., Barnes et al., 2020; OECD, 2004; Watts, 2014) have observed that effective career interventions contribute to wider public policy objectives. On the one hand, career assistance can be described as an individual right that guarantees access to a good life. On the other hand, it can be viewed by governments as a “soft policy instrument” and as a mechanism for the wider transformation of society as a whole (e.g., Arthur, 2008; Haug et al., 2020; Hooley et al., 2018; Sultana, 2017).

As individuals today stay in education longer than before and face more complex structures of education, work and personal life, career interventions play a vital role in supporting individuals and helping them remain resilient during different transition phases. Career interventions help *individuals* by enabling them to cope with and gain optimal benefit from the complex range of available occupational, educational, training, and employment choices. Effective career development activities and interventions can help individuals to acquire lifelong career management skills as an explicit competence (Cedefop, 2011; European Council, 2004, 2008; OECD, 2004). This competence leads to a better understanding of the relationship between education and employment, broadens their career aspirations and helps them develop a more informed understanding of what they need to do to achieve their goals.

In addition, career interventions, such as individual or group-based interventions, career education, job shadowing and attending job fairs, are positively associated with a broader range of career aspirations. Career interventions motivate individuals to stay in school, increasing their knowledge, skills, and capacity to manage their career choices through their lives and develop abilities to adapt to changing circumstances over time. Career interventions support individuals to increase their awareness of the skills they have acquired informally, or through validation, and consider how these skills can best be deployed. At an individual level, long-term outcomes include resilience and career adaptability, leading to more sustainable employment or further engagement in learning.

Career intervention may have a positive impact on *education and training providers*. In addition to individual learning outcomes, career interventions are connected to the efficiency of

education and training systems by reducing dropout rates and increasing graduation rates. Career interventions can help learners affiliate with programs that meet their needs and contributes to co-creation of institutional culture which focuses on students' support (Lerikkanen, 2002; Vuorinen, 2006). As a long-term outcome, it plays a central role in supporting lifelong learning (for both youth and adults) and the development of human resources to support national and individual economic growth. According to Mann et al. (2020), individuals who participate in career development activities through their schooling can mostly expect positive changes in their educational success and later working lives.

Education and career assistance are fundamental to motivate disadvantaged youth to stay in school and obtain qualifications for the labor market (Cedefop, 2014; Sultana, 2012). The extended role (range of services, frequency of meetings) in career assistance in second change provision seem to be significant in terms of dealing with at-risk-students' everyday problems and career-related issues (Schmitsek, 2019). Hanley et al. (2017) provided evidence on psychosocial outcomes of assistance, noting that individual school-based counselling in secondary schools results in reduction of psychological distress and helps young people move closer to their goals. According Redekopp and Huston (2019), career assistance contributes to individuals' wellbeing through helping them choose and find work that fits them and is located in the healthiest workplaces possible (i.e., finding “good work”), and develop abilities to continuously adapt to changing circumstances.

Turning to the labor market, career interventions may benefit *employers* and improve labor mobility and labor force adaptability by supporting individuals in transitions to and within the labor market. These career interventions may help employers identify employees whose skills and motivation are congruent with the employers' requirements. Career interventions are important in helping to deal with an ageing society or reducing early retirement. By helping to improve the match between supply and demand and assisting active labor market policies, career interventions can reduce individual dependency on income support. As a long-term outcome, career interventions improve labor market efficiency and can help to reduce the effects of unemployment and labor market destabilization (OECD, 2004). For the economy, longer-term outcomes of career interventions can include productivity gains, reductions in skills gaps and shortages, reduced unemployment, and enhanced income levels.

For *governments*, career interventions play a significant role in active labor market policies by engaging with unemployed adults and helping those on career breaks to return to the labor market following different kinds of career breaks. Career interventions have added value as they help employees maintain their employability and gain a better qualification through relevant training or validation of their learning experience. It supports both the individual and enterprises in upskilling in adapting to changes in the labor market in managing the transitions from one job to another. For employers, career intervention serves as a tool for human resource development and maintaining productivity (ELGPN, 2015).

Career interventions are seen to contribute to *wider social equity goals* in education and in the labor market (OECD, 2004). The OECD skills survey (2013) gave particular attention to the low skills trap of low-paid employment with limited access to further education and training which is needed for individuals to develop and maintain skills over the working life and beyond. A recent analysis of PISA 2018 data (Mann et al., 2020) shows that young people from families of higher socio-economic status (SES) have higher career aspirations than those from families of lower SES. This suggests that integrating career interventions in education can help to level the

playing field by addressing systemic inequalities in access to reliable information (Mann et al., 2020). Work-related learning, integrated with career interventions, can promote social mobility of less advantaged students and help them to acquire skills at the work site, which have implications for their future career paths. This is one way that schools can address the social capital needs of their disadvantaged and marginalized students. Data from USA suggest that contact with a career professional can be beneficial in promoting successful college transition especially for low socioeconomic status students (Carey & Martin, 2015).

Countries around the world continue to face ongoing crises associated with the influx of migrants, refugees, and asylum seekers. These individuals often face discrimination and lack of systemic support for securing employment as countries are trying to manage the growing volume of individuals seeking immediate support. The recognition of the skills of these workers is a challenge, because education and training systems and qualifications frameworks differ greatly between countries. Asylum seekers and refugees often experience even greater obstacles than migrants, who can prepare for the recognition process in the country they choose to live and work, while refugees often leave in a hurry and are not always able to bring all their diplomas and certificates with them and/or cannot access the institutions in their host countries that issued their documents (ECRE, 2007). According to Cedefop (2014), career assistance plays an important role for both migrants and for the receiving countries. Induction programs to introduce immigrants, migrants, and asylum seekers to local systems and institutions are a first step in successful integration. The International Association for Educational and Vocational Guidance (IAEVG, 2015) noted that career assistance can support displaced individuals to identify their skills, increase their confidence and hope for the future.

Potential Benefits of CIP Theory-Based Career Interventions

CIP theory-based career interventions have the potential to contribute to the wider public policy objectives described above in three ways. First, as stated earlier in the chapter, the aim of a CIP theory-based career intervention is to assist individuals in solving an immediate career problem while also better preparing them to solve inevitable future career problems by enhancing their understanding of problem solving and decision-making (Sampson et al., 2004). Improving the career management skills of citizens over time allows some individuals to receive less assistance, allowing the reallocation of resources to younger persons and individuals with more extensive needs. Second, the client versions of the pyramid of information processing domains and the CASVE cycle (see Chapter 7) can provide a common schema across educational institutions, government agencies, and employers to facilitate decision-making, allowing citizens to apply what they have learned in one setting to a subsequent setting, potentially contributing to improved efficiency and effectiveness. Third, the differentiated service-delivery model (see Chapter 7) can promote social justice by maximizing citizen access to career interventions by more effectively matching the needs of citizens to a type and level of career service that is most likely to be effective (Sampson et al., 2020b).

Key Terms in CIP Theory⁷

Various key terms are used in this book that relate to helping people make career choices. Because authors differ in their use of terms in the career field, it is important to understand what

⁷ Content in this section was used or adapted from Sampson et al., (2004). Used or adapted with permission.

we mean by the terms we use in this book. Understanding the definitions of various terms will make it easier to read and understand the remainder of the book. After an overview of key terms presented in Table 1-1, this section begins with a review of terms associated with the *nature* of the career choice event and continues with *how* persons seek assistance, *how* career assistance is provided, *who* delivers career resources and services, and *where* career resources and services are provided.

Table 1.1

Overview of Key Terms in the CIP Approach

- Nature of the Career Choice Event
 - Problem
 - Career problem
 - Problem solving
 - Decision-making
 - Career development
 - Lifestyle development
 - Work
 - Career
 - Occupation
 - Job
 - Position
 - Leisure
 - Career decisions
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Nature of the Career Choice Event

As stated previously, almost all individuals in our society are engaged in some form of paid or unpaid work during their lifetimes. Whether an individual makes plans or responds to serendipitous events, a recurring sequence of career choices occurs. Providing assistance with career choice is concerned with helping persons to become more effective in solving career problems and making career decisions. But what is a career problem? What are the components of a career decision? It is important to understand the nature of career problem solving and decision-making before we design resources and services to help people make career choices. This section includes definitions of a problem, career problem, problem solving, decision-making, career development, lifestyle development, work, career, occupation, job, position, leisure, and career decision making.

Problem

A *problem* is defined as a gap between an existing and a desired state of affairs (Peterson et al., 1991; 1996; Sampson et al., 2004, 2020b; 2023). Or simply stated, a gap is the difference between where you are and where you want to be (Sampson et al., 2004). Awareness of this gap helps you know that there is a problem that needs to be solved. Awareness of the gap provides a source of motivation to engage in problem solving (Peterson et al., 1996). A problem is not always something negative and is often positive--for example, choosing between two good employment offers, deciding how to invest a bonus, or considering leisure options as part of retirement planning.

Career Problem

A *career problem* involves a gap between a person's current career situation and a future career situation that they desire (Sampson et al., 2004; 2020b; 2023). For example, a person may be unhappy with their current job and want to have a job that is satisfying and provides enough

income to meet their needs. The gap can also involve problems with the work itself or the gap can be between work and various personal, social, and family factors. For example, a person's work may be very rewarding, but the amount of travel required may make it difficult to arrange childcare.

Although career problems share many similarities with other problems we encounter in life, some important differences exist. Career problems are sometimes more complicated than other types of problems we face for the following reasons:

- Career problems involve self-knowledge that we remember from past events in our life. The difficulty is that these memories may change from day to day as a result of our current thoughts and feelings.
- We may have difficulty reconciling our opinion of what is best for us with the opinions of family, friends, and our cultural group about our best course of action.
- We may be overwhelmed with the amount of career information available to us in considering our options. Information is available from people we know, the media, the Internet, schools, employers, and organizations.
- An increasingly rapid rate of change in our society and our economy makes it more difficult to predict the outcomes of our decisions. What was true in the past may not necessarily be true today, much less tomorrow.
- Whereas some decisions have a clear pathway to reach a goal, other decisions have several paths available to reach the goal, with each path having specific advantages and disadvantages.
- A career choice often presents a subsequent set of problems that needs to be solved in order to make the initial decision effective.

Given these reasons, it is easy to see why some persons may become overwhelmed, confused, and anxious about career choices. These powerful emotions can make it more difficult to concentrate and remember important facts during problem solving. As a result, individuals need concrete and easy-to-understand career choice models to help them understand and manage the career choice process (Sampson et al., 1996b; Sampson, Osborn, et al., 2020b; Sampson et al., 2023).

Problem Solving

Problem solving involves a series of thought processes in which information about a problem is used to arrive at a plan of action necessary to remove the gap between an existing and a desired state of affairs. The outcome of problem solving is a choice that has a reasonable chance of closing the gap between where a person is and where they want to be (Peterson et al., 1996; 2002; Sampson et al., 2004; Sampson, Osborn, et al., 2020b). For example, problem solving involves thinking about your job-satisfaction problem and selecting an employment option that has a good chance of providing more satisfaction.

Decision-Making

Decision-making includes problem solving, along with the cognitive and affective processes needed to develop a plan for implementing the solution and taking the risks involved

in following through to complete the plan. The outcome of decision-making is personal behavior that is necessary to solve the problem (Peterson et al., 1996; 2002; Sampson et al., 2004). For example, now that you have made a choice of one or two new employment options (the problem-solving process described previously), you need to plan how you will make the transition.

Career Development

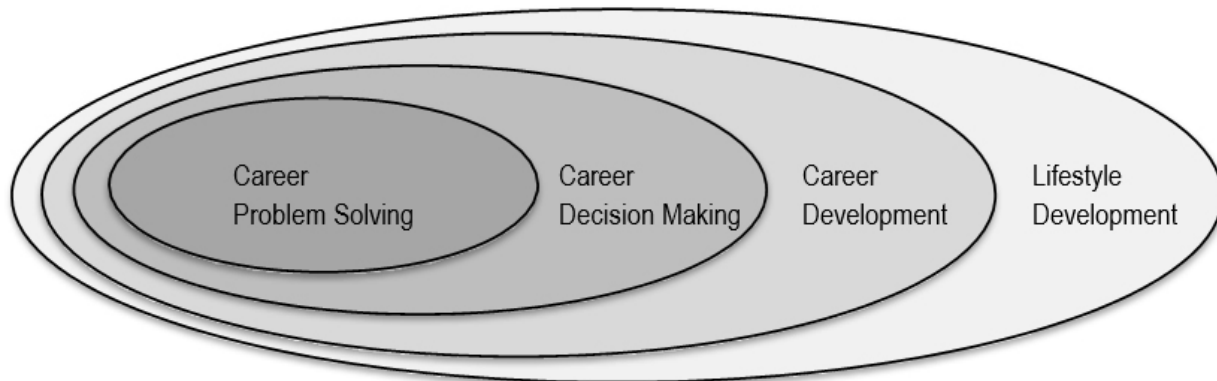
Career development involves the implementation of a series of integrated career decisions over a person's life span (Peterson et al., 1996; 2002; Sampson et al., 2004). Career development is also defined as "the total constellation of economic, sociological, psychological, educational, physical, and chance factors that combine to shape one's career" (Sears, 1982, p. 139). For example, career development can involve the experiences and decisions that resulted in the development of a successful business and the subsequent interest in government lobbying to promote private enterprise.

Lifestyle Development

Lifestyle development involves the integration of career, relationship, spiritual, and leisure decisions that contribute to a guiding purpose, meaning, and direction in one's life. Effective lifestyle development is dependent on effective career development, which, in turn, is dependent on effective decision-making, which is further dependent on effective problem solving (Peterson et al., 1996; 2002; Sampson et al., 2004). For example, a couple may decide to start a business together that is consistent with their spiritual beliefs and provides adequate time for them to pursue the outdoor activities they enjoy. Figure 1.2 graphically depicts these relationships. Consider the following metaphor. Problem solving is the land where a building sits, decision-making is the foundation for the building, career development represents the walls, and lifestyle development is the roof. For the roof to remain, the walls must be strong and sit on a stable foundation, which is dug into secure ground. The success of each element is dependent on the success of the element below. Ultimately then, success in life is at least partially dependent on successful career problem solving.

Figure 1.2

Interdependence of Problem Solving, Decision Making, Career Development, and Lifestyle Development



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Work

Work is defined as “an activity that produces something of value for oneself or others” (Reardon et al., 2022, p. 6). Work can be a paid or an unpaid activity. For example, work can involve analyzing a person’s income tax liability or donating time to help a public charity invest the profit earned from a recent fund-raising event.

Career

Career is defined as “time extended working out of a purposeful life pattern through work undertaken by the person” (Reardon et al., 2022, p. 5). For example, a person can have a career as a business entrepreneur, politician, and active community member in the community where their family has lived for several generations. However, some individuals are less intentional in their work and respond to employment and leisure opportunities as they become available. In this sense, career is best understood in retrospective.

Occupation

An *occupation* is defined as “a group of similar positions found in different industries or professions” (Reardon et al., 2022, p. 6). For example, a person may major in accounting in college and then become credentialed as a certified public accountant.

Job

A *job* is defined as “a paid position requiring some similar traits or attributes held by a person” (Reardon et al., 2022, p. 7). For example, a person may have a job as an accountant in a large manufacturing company.

Position

A *position* is defined as “a group of tasks performed in an organization, a unit of work with a recurring or continuous set of tasks. A task is a unit of job behavior with a beginning point and an ending point performed in a matter of hours rather than days” (Reardon et al., 2022, p. 6). For example, a position exists as the accounting supervisor in the purchasing department of a large manufacturing company.

Leisure

Leisure is defined as “Relatively self-determined nonpaid activities and experiences that are available due to discretionary income, time, and social behavior; the activity may be physical, intellectual, volunteer, creative, or some combination of all four” (Reardon et al., 2022, p. 42). Leisure activities may satisfy values, interests, and skills not met by paid employment or they may complement paid employment (Kelly, 2009). For example, an accountant may participate in a softball league and volunteer to assist low-income persons complete their income tax forms.

Career Decisions

Career decisions include choices individuals make about occupations, education, training, employment, and leisure (Sampson et al., 2004; Sampson, Osborn, et al., 2020b; Sampson et al., 2023). Although decisions about occupations, education, training, and employment may be related over time, a specific career decision may involve only one or two of these elements. The sequence and number of these decisions will vary among individuals depending on their situation. *Occupational decisions* involve choosing one occupation or a small group of related occupations as a focal point for making subsequent decisions about education, training, and employment. *Educational and training decisions* involve choosing a college major, program of study, or training opportunity that allows an individual to gain the general competencies (e.g., problem-solving skills, communication skills), specific competencies (e.g., work-related skills), knowledge base, and credentials necessary to obtain or maintain employment. *Employment decisions* involve choosing and applying for a position with an employer in an industry in a sector of the economy. An employment decision is both the ultimate outcome of career decision-making and the starting point for ongoing choices about occupations, education, training, and employment. For example, a person may decide to become an accountant and major in accounting on the way to becoming a certified public accountant with a state government agency. As a second example, a student may major in accounting and then consider various occupations and related employment opportunities close to the time of their graduation. *Leisure decisions* involve choosing self-determined nonpaid activities and experiences that may satisfy values, interests, and skills use not met by employment.

How Persons Seek Career Assistance

Persons assume different roles as they seek career assistance: individuals, clients, students/advisees, customers, patrons, and employees. The experience a person has receiving career assistance, including the amount and type of help they receive, is often influenced by the type of organization where the help is provided. Persons may begin the process of seeking assistance with career problems as “career shoppers” (Reardon et al., 2000). In this book, we generally refer to those who are seeking career assistance as “persons” unless the circumstances

make another term more appropriate, such as being a “client” receiving career counseling in individual case-managed services, or “individuals” if they use self-help interventions.

Career Shoppers

Career shoppers are exploring and evaluating available options for obtaining career assistance. Each source of potential career assistance differs by cost and the nature of the help provided. Cost can be evaluated in terms of the financial resources required or the time and effort involved in receiving assistance. The nature of the help provided can range from anonymous over the Internet to personalized, individual counseling or range from brief involvement in a one-session workshop to intense involvement in a one-semester course. Persons may select the first source of career assistance they find, or they may comparison shop for some time before they select a source of assistance that provides the best chance of meeting their needs at an acceptable cost (Reardon et al., 2000).

Individuals

Individuals receive career assistance by using self-help career resources available in books, magazines, DVDs, videos, audiotapes, apps, and websites. Significant others (e.g., family, friends/peers) can also be a source of self-help information. Individuals can identify which resources meet their needs, locate the resources, sequence the appropriate order for using the resources they have obtained, and use the resource effectively. Individuals may also evaluate whether or not their needs have been met by resource use. If their needs have not been adequately met, they may select additional resources or seek assistance from a practitioner delivering career services.

Clients

Clients use career assessment, information, and instructional resources within the context of a counseling relationship with a career practitioner. These practitioners typically help clients select, locate, sequence, and use career resources. The practitioner varies the pace of resource use to fit the client’s career decision-making readiness, as well as monitoring client progress and recommending other service providers that may be needed by the client. Career counseling can be provided in a variety of educational, agency, private, or organizational settings.

Students and Advisees

Students use career assessment, information, and instructional resources within the context of a learning relationship with an instructor in an educational setting. The instructor is typically responsible for selecting, locating, sequencing, and using career resources for groups of students, as well as evaluating student outcomes. Students may voluntarily seek a career course in college to help them in solving a career problem, or they may be required to participate in a curricular intervention in school to meet their anticipated career development needs. *Advisees* may develop similar helping relationships with academic advisers, except that the advisers may not be delivering instruction and evaluating class performance.

Customers

Customers use career assessment, information, and instructional resources within the context of a helping relationship with a practitioner in an agency setting (such as a one-stop

career center). Although the roles of the customer and the practitioner are similar to the roles of the client and counselor described previously, the use of the term customer represents an important philosophical shift in some career services delivery settings, particularly governmental agencies. Use of the term customer is meant to imply a greater emphasis on the person's ability to select the resources and services that the person perceives will best meet their needs. Customer also implies greater responsibility for the person to take an active part in the service delivery process (Sampson & Reardon, 1998).

Patrons

Patrons use career information resources in a self-help context with support provided by a librarian, media, or information specialist in response to requests for assistance made in a library or similar resource center. On the basis of a reference information request, library staff members can assist patrons in locating information resources. With appropriate training, information resource managers may also help patrons select, sequence, and use resources, as well as make appropriate referrals to other resources or career service providers. In some libraries, self-assessment and instructional resources may also be available (Johnson & Sampson, 1985). (Chapter 18 provides additional information on how career information resources might be used in library like settings.)

Employees

Employees use career assessment, information, and instructional resources within the context of a helping relationship with a human resource practitioner affiliated with their employer. Similar to clients and customers, employees are responsible for using resources and their service providers (e.g., human resource practitioners) who assist employees in selecting, locating, sequencing, and using resources. Employees may also have the additional option of receiving assistance from human resources practitioners or talent development specialists in negotiating internal training and employment opportunities not available to the general public.

How Career Assistance Is Provided

Career assistance involves providing career resources and career services to persons seeking help in making career choices. Almost all persons seeking assistance use some type of career resource. Some persons need and receive more personalized assistance through a particular career service setting.

Career Resources

Career resources can include assessments, information sources, and instruction (Sampson, 1999; Sampson, 2008; Sampson & Lenz, 2023). The intended outcome of career resource use is learning, but the learning that results is not an isolated event. What is learned from one resource can promote learning from previous and subsequent resources. For example, reading career information can cause persons to reconsider their prior responses to a values assessment in a computer-assisted career guidance system, leading to a more refined search for occupational alternatives.

Career Assessment. *Career assessments* can be used to help persons clarify their self-knowledge (Osborn & Zunker, 2015). This enhanced self-knowledge often helps persons focus on the most relevant aspects of career information and evaluate the benefits and costs associated

with various options. Some career assessments also generate occupational and educational options based on user responses to the construct being measured--for example, interests (Sampson et al., 2004).

Career assessments can be categorized as self-assessment or practitioner assisted. *Self-assessment* resources, such as the Self-Directed Search (Holland & Messer, 2017), are designed to be used without the assistance of a practitioner to select, administer, score, profile, and interpret the measure, assuming the self-assessment has been validated for self-help use. Self-assessments include objective instruments and structured exercises and are available in paper-based and Internet-based versions. This type of assessment is appropriate for individuals with high decision-making readiness who are seeking independent use of career resources.

Practitioner-assisted assessments, such as the Career Thoughts Inventory (CTI) (Sampson et al., 1996a), are designed for use within the context of a helping relationship with a qualified practitioner. The person being served and the practitioner providing assistance collaboratively select an appropriate assessment, with the practitioner supervising or providing administration, scoring, profiling, and interpretation. Practitioner-assisted assessments include objective instruments, structured exercises, card sorts, and interviews (both structured and unstructured). Practitioner-assisted assessments are also available in paper-based, personal computer-based, and Internet-based versions. These types of assessments are appropriate for clients, students, customers, patrons, and employees with moderate to low decision-making readiness who are using career resources with assistance from a practitioner. Even though self-assessment measures can be used effectively in a practitioner-assisted environment, it is unethical to use counselor-assisted assessments in a self-help environment because these measures are not typically validated for this type of use.

Career Information. *Career information* can be used to help persons clarify their knowledge of occupational, educational, training, and employment options. This enhanced knowledge of alternatives can provide a basis for narrowing occupational and educational options generated by career assessments, helping persons evaluate the benefits and costs associated with various alternatives and providing a foundation for developing a plan of action for implementing a choice. Learning about occupations, educational institutions, training opportunities, and employment options can also help persons clarify their values, interests, skills, and employment preferences. Visualizing successful work behaviors (learned by using career information) can help to motivate the person to complete the education and training that is often necessary for employment. Career information is the most commonly available type of career resource.

Career information describes the characteristics of occupations, education, training, and employment that individuals use to clarify their knowledge of career options in problem solving and decision making. *Occupational information* describes the nature of work, the nature of employment, and the requirements for employment for individual occupations (e.g., accountant) and categories of occupations (e.g., Holland RIASEC types). Occupational information is also used to choose and learn about job targets in employment decision making. *Educational and training information* describes the nature of education or training, the nature of the institution or training provider, and admissions for individual institutions or categories of institutions (e.g., community colleges), as well as admissions for individual training providers or categories of training providers. *Employment information* describes sectors, industries, employers, and

positions in the job market. *Leisure information* describes the characteristics of various leisure options and the potential outcomes of leisure activities.

Instruction. *Instruction* is also used to help persons clarify their knowledge of self, of their options, and of the decision-making process. In this way instruction is similar to career assessment and career information described previously, although several differences also exist. For example, instruction integrates several sources of data in a meaningful sequence designed to achieve a specific learning outcome. Instruction also includes some type of evaluation of how well persons have mastered the intended learning objectives. In comparison with career assessment and career information, instruction is a less commonly available type of career resource.

Career Services

Career services typically include a variety of practitioner interventions designed to provide persons with the type of assistance (e.g., counseling, career course, or workshop) and the amount of assistance (e.g., brief staff-assisted or individual case-managed services) they need to effectively solve career problems and make career decisions (Sampson, 1999). These are described more fully in the following sections.

Self-Help Services. *Self-help services* involve self-guided use of assessment, information, and instructional resources in a library-like or Internet-based remote setting where resources have been designed for independent use by individuals with a high readiness for career decision making (Sampson et al., 2000; Sampson et al., 2020b). There is a difference between self-help resources and self-help services. Self-help resources are used independently by a person without help from a practitioner. Self-help services involve a person's self-guided use of resources in an actual setting (career center) or a virtual setting (web site or app) where it is possible to ask questions and receive support when needed.

Brief Staff-Assisted Services. *Brief staff-assisted services* involve practitioner-guided use of assessment, information, and instructional resources in a library-like, classroom, or group setting for clients with moderate readiness for career decision-making. Categories of brief staff-assisted services include (a) drop-in services, (b) career courses with large group interaction, (c) short-term group counseling, and (d) workshops (Sampson et al., 2000). Brief staff-assisted services can be delivered both face-to-face and at a distance.

Individual Case-Managed Services. *Individual case-managed services* involve practitioner-guided use of assessment, information, and instructional resources in an individual office, classroom, or group setting for clients with low readiness for career decision-making. This type of intervention provides the most substantial amount of assistance possible for persons with the greatest need for help. Categories of individual case-managed services include (a) individual counseling, (b) career courses with small group interaction, and (c) long-term group counseling (Sampson et al., 2000). As with brief staff-assisted services, individual case-managed services can be delivered both face-to-face and at a distance.

Service Delivery Tools

Service-delivery tools include signage, maps, resource guides, diagnostic assessment, individual learning plans, and information handouts to help individuals use career resources in a way that best meets their needs (Sampson, 2008). Signage and maps assist individuals in locating

career resources in career resource rooms or career libraries. *Resource guides* identify specific resources (such as assessments and information) and services (such as workshops and individual counseling) that are related to questions commonly asked by individuals. *Information handouts* provide brief, consumable, and easy to use sources of information in a consistent format that can be printed for distribution in a career resource room or disseminated as document files from a website or app. *Diagnostic assessment* includes diagnostic measures and diagnostic interviews that are designed to clarify a person’s needs so that an appropriate starting point can be determined for delivering career services. A person having difficulty in making a career choice who completes a diagnostic measure and/or a diagnostic interview is most likely to receive brief staff-assisted or individual case-managed services from a practitioner. Individual learning plans (ILPs) are collaboratively used by practitioners and clients to assist in the planning and use of career resources and services to meet individuals’ goals.⁸

Who Delivers Resources and Services

The delivery of career resources and services typically involves a team effort by practitioners and support staff. In large service delivery organizations, staff tend to be more specialized, whereas in small organizations, staff tend to be generalists performing a variety of functions.

Practitioners

Practitioners include professionals and paraprofessionals from a variety of fields. *Professionals* include counselors, psychologists, vocational rehabilitation specialists, teachers/faculty/academic advisers, librarians and media specialists, human resources specialists, and social workers. *Paraprofessionals* include parent and community volunteers, career development facilitators, professionals-in-training, and student peer counselors. Both practitioners and paraprofessionals are limited to practice within the boundaries of their qualifications, training, and experience. In this book, we generally refer to those who are providing career assistance as “practitioners” unless the circumstances make another term more appropriate, such as being a “counselor” delivering career counseling in individual case-managed services.

Support Staff

Support staff may include receptionists, secretaries, program assistants, and clerks who interact with persons being served and provide various organizational functions that make the delivery of resources and services possible. Many support staff have considerable interaction with persons being served, answering questions and helping persons locate and use resources. It is important to make a distinction between professionals and professionalism. Many support staff exhibit considerable professionalism in their work even though their occupation does not have the credentialing or membership organizations typically associated with professions.

Where Resources and Services Are Provided

Career resources and career services are available in both actual physical and virtual settings. Actual physical settings include career and counseling centers in various organizations,

⁸ Adapted with permission from Sampson et al. (2020b).

and virtual settings include websites, apps, secure videoconferencing, and social media platforms.

Career Centers

Career centers in educational and government agency settings deliver resources and services to individuals seeking assistance with occupational, educational, training, and employment decision-making (Sampson, 1999; Sampson & Lenz, 2023). These centers tend to emphasize the full range of career decisions that persons make from exploring occupations through seeking employment. As stated previously, some career center functions are available to patrons in some libraries and to employees in some organizations. Also, some functions are available to persons via multi-professional [one-stop centers](https://www.careeronestop.org/LocalHelp/AmericanJobCenters/find-american-job-centers.aspx). (<https://www.careeronestop.org/LocalHelp/AmericanJobCenters/find-american-job-centers.aspx>)

Counseling Centers

Counseling centers are most commonly found in higher education institutions and in private-practice settings. These centers tend to emphasize occupational and educational decision-making and the integration of personal, social, and family issues in career choice.

Resource and Service Delivery at a Distance

Web sites and mobile apps are playing an increasingly important role in the distance delivery of resources and services by career centers and counseling centers. Both necessity and convenience are driving factors in the increases in distance delivery (Sampson, Kettunen, et al., 2020b). Living with a disability that limits mobility or living in a remote location that limits access to career resources and services, makes distance delivery a necessity. The convenience of accessing Internet-based career resources and practitioners at more times of the day has further expanded access, making distance service delivery an essential element of career intervention. The value of distance provision has been firmly established during the recent COVID pandemic. This topic is examined in more detail in the section of Chapter 7 entitled, “Face-to-Face and Distance Delivery of Career Interventions.”

Chapter 1 Summary

This chapter introduced cognitive information processing theory for providing career assistance to persons solving career problems and making career decisions. After examining the nature of career decisions, career problems, and career interventions, and the integration of theory, research, and practice, the development of CIP theory at Florida State University was briefly described. The aims of CIP theory in helping persons make current and future career choices were explained. Basic assumptions of the theory for career choice and career intervention were then briefly described. CIP theory and the philosophy of science and the potential benefits of career intervention were also examined. The remainder of the chapter explained our definition of key terms that are used throughout the book. Table 1-1 presented an overview of key terms showing how concepts are categorized. Figure 1.2 showed the connection between problem solving, decision-making, career development, and lifestyle development. The next chapter explores what people need to know and do in order to make appropriate choices about occupational, educational, and training options.

Getting the Most Benefit from Reading Chapter 1

To effectively learn the material in this chapter, complete one or more of the following activities:

- In your own words, write the aims of CIP theory, including the adage about fishing.
- Briefly paraphrase the assumptions of CIP theory for career choice and career intervention, and state whether you agree or disagree with each assumption. If you disagree, how would you change the assumption?
- Briefly state your opinion of the position we took regarding the philosophy of science and CIP theory.
- Write out the terms in Table 1.1 and show how the concepts are categorized.
- Draw and label Figure 1.1.
- Draw a picture of the house metaphor that was used to describe the relationships in Figure 1.2.
- Where possible, think of personal examples for the terms presented in this chapter.
- Think about your own experience with using career resources and career services. Have you benefited from using these resources and services? How could your experience have been improved?
- Talk with a friend about how the concepts you learned in this chapter apply to your life.

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