

Measuring Career Development: Current Status and Future Directions

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Donald E. Super's work to linguistically explicate and operationally define career development and its central processes has strongly influenced how counselors throughout the world comprehend and guide their clients' vocational behavior. Starting at midcentury, Super conceptualized career development in terms of life stages and developmental tasks. He proposed that counselors measure career maturity, globally, by comparing chronological age with developmental task being encountered, and that they measure career maturity, specifically, by identifying the coping methods used in facing a task. Super advanced counselors' abilities to understand and counsel adolescents who are trying to specify educational and vocational choices by explaining the importance of career choice readiness and by devising measures of career maturity. To complement the construct of maturation as the central process in adolescent career development, Super proffered the construct of adaptability as the central process in adult career development and also devised a measure of this process.

The storied landscape of Donald E. Super's path through vocational psychology includes reports of many important contributions. To me, the most impressive contributions coalesce into one theme; namely, his often used talent for transforming innovative ideas about vocational behavior into tests and inventories that measure variations in career development. To prepare each published inventory, Super invested years of hard work in traversing the course from new concept to linguistic explication and then to operational definition. Moreover, he used this psychometric work as a laboratory for testing and refining theoretical constructs and segments of his theory. Examples of Super transforming innovative ideas into inventories include turning a concern with work values (see Zytowski, 1994) into the Work Values Inventory (Super, 1970, 1973) and later the Values

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Scale (Super & Nevill, 1986a). He turned his curiosity about the rainbow-of-life roles into the Salience Inventory (Super & Nevill, 1986b). Each of these achievements marked a milestone in the history of vocational psychology and career counseling. Nevertheless, the contribution that impressed me the most continues to be Super's work to linguistically explicate and operationally define career development, as epitomized in the Career Development Inventory (Super, Thompson, Lindeman, Jordaan, & Myers, 1981) and the Adult Career Concerns Inventory (Super, Thompson, Lindeman, Myers, & Jordaan, 1986).

Super has commented several times over the years that many counselors do not make precise distinctions when they deal with career development. This is indeed a shame, because he has provided the counseling field with an impressive collection of distinctions and ideas. I believe that it would be beneficial to re-examine his ideas about career development and its measurement and then relate these accomplishments to the current scene as a means of reducing conceptual confusion and furthering the attack on contemporary research problems. Toward this end, this article describes the origins and current status of Super's work on the theoretical conceptualization and empirical measurement of career development. After this discussion, attention turns to current examples of and ideas for future investigations rooted in Super's programmatic research on career development. The article concludes with examples of contemporary applications of this research to the practice of career intervention.

CAREER DEVELOPMENT: SOCIAL TASKS AND INDIVIDUAL RESPONSES

Crites (1969) advised counselors that career development is "inferred from the systematic changes that can be observed in vocational behavior over time" (p. 17). Counselors cannot directly observe development in a single encounter with a client because development occurs across time. For the first part of this century, counselors did not attend to career development, instead they concentrated on career choice and work adjustment. One reason for this gap in practice was that clients' career development was not immediately obvious. An even more important reason was that counselors could not see that for which they had no words. One of Super's most important contributions was to change this situation by drawing counselors' attention to the processes of career development. Super was the single individual most responsible for prompting counselors to add concern about how a client might change over time to their longstanding concern with how that client resembles individuals in different occupations. Super accomplished this essentially by providing a systematic language, along with operational definitions, that explicates vocational behavior during the life cycle. That language clearly and comprehensively denotes and makes explicit the social

expectation that during his or her life cycle each member of a community should prepare for the work role, then become a productive worker, and eventually reflect upon a productive work life.

In 1957, Super and his students defined career development as the process of growth and learning that results in increases and modifications of a person's repertoire for vocational behavior. Super adapted Charlotte Buehler's (1933) framework of life stages to organize vocational behavior across the life cycle. He found that conceptualizing career development was easier than measuring those concepts. The assessment of career development posed several difficult problems. Super's ingenious solution was to define a person's developmental progress in two different ways.

Career maturity I (CM1) is assessed by determining which developmental tasks a person is encountering and then comparing the actual degree of progress along the continuum of vocational development with the degree expected, based on the individual's chronological age. Career maturity II (CM2) deals with task coping. Coping with career development tasks denotes the behaviors instrumental to satisfactorily responding to these social expectations. The appraisal of CM2, however, consists of comparing an individual's methods of coping with a task to the typical behaviors of a group coping with the same task. As a person progresses along a circumscribed portion of the CM1 continuum (for example, the Exploration stage), the vocational task coping behaviors used to address the tasks within that stage should become more independent, realistic, and purposeful.

Super proceeded to use these definitions of CM1 and CM2 in designing the Career Pattern Study (CPS), his monumental, longitudinal study of vocational behavior and career development. His conceptualization for the CPS rested on the assumption that most people deal with the developmental tasks of their chronological life stage, so by holding life stage (CM1) constant, researchers can use methods for coping (CM2) as a more refined measure of career development. This assumption held true in the CPS segment that dealt with adolescence. The adolescent participants in the study did share a concern with the Exploration stage tasks of crystallizing field and level preferences and then specifying an occupational choice. Accordingly, the CPS was able to concentrate on individual differences between participants in how they coped with the crystallization and specification tasks. The CPS eventually identified the adaptive behavioral responses to the tasks along with the attitudes and competencies that structure the more effective behaviors. These attitudes and decisional competencies are collectively referred to as the dimensions of career maturity. As originally conceived, career maturity simply meant "readiness" to make educational and vocational choices, or more simply "decision-making readiness" (see Phillips & Blustein, 1994). In more technical terms, it meant readiness of individuals to emit effective behaviors in response to the social expectation that they crystallize preferences and specify a choice. In retrospect, it might have been wiser to stick with concrete terms like "career choice readiness" or "decision-

making readiness" given the problems subsequently occasioned by use of the more abstract term "career maturity" (Savickas, 1984, 1993).

Developing a trait-like measure for the structure of career maturity attitudes and competencies needed to specify a fitting career choice was one of Super's more remarkable accomplishments. It involved identifying the dimensions of adolescent career maturity and then writing and refining items that validly measure those dimensions. The resulting Career Development Inventory measures four dimensions: attitudes toward planning and exploring, and competence in career knowledge and in decision making.

In the excitement about the Career Development Inventory (CDI) and similar measures such as the Career Maturity Inventory (CMI; Crites, 1973), counselors (forgetting that these inventories were constructed to measure readiness for career choice, CM2, or methods for coping with the specification task) tried to use them as measures of career development with college students and adults. It quickly became apparent that the CDI and CMI had limited usefulness with adults. If a college sophomore or adult seeking to change careers was dealing with the tasks of crystallization or specification, then these measures worked well, as one might expect they would. If, however, the adult was dealing with implementing a choice or stabilizing in an occupational position, then the measures lacked face validity to the client and pertinence to the task or problem under investigation. These experiences led to the conclusion that in assessing heterogeneous groups of adults, counselors need a CM1 measure to determine the task of current concern to the person. Differences in the types of tasks that adults may face preclude comparing adults on a scale of vocational behavior that was constructed to measure coping with the specification task. Moreover, counselors need distinct measures of CM2 for each specific stage (and maybe substages in some instances) of career development.

MEASURING CAREER DEVELOPMENT

A pivotal point in this research to construct a global measure of career development (CM1) was the publication of Super's 1963 chapter that described the career development tasks of the Exploration and Establishment stages. In that chapter, Super presented a refined and revised list of career development tasks. For each task, Super wrote an extended linguistic explication, which later served as item-generating formulas in devising measures of the tasks. Moreover, he listed the attitudes and behaviors associated with each task. For each task, the first attitude listed was awareness of the need to perform the task. In the last paragraph of that article, Super (1963, p. 93) observed that awareness is the common characteristic that connects all the tasks. This observation proved to be critical in constructing a measure of career development.

To assess career development (CM1), Super and his colleagues (Super, Zerkowicz, & Thompson, 1975; Zerkowicz, 1974) constructed the Career Development Inventory-Adult Form (CDI-A). The CDI-

A consists of scales that measure the Exploration, Establishment, Maintenance, and Disengagement stages of career development. It does not include a scale to measure the Growth stage. Each scale in the CDI-A has three subscales that address the developmental tasks of that stage. These subscales each contain five items that operationally define a task. It was extremely astute to assess CM1 in this manner. Nevertheless, the method presented several problems, the most serious of which was the item response categories. The response options consisted of five statements about behavior that ranged from "I have not yet thought much about it" to "I have already done this." This behavioral response metric worked extremely well with adolescents and young adults who were facing the career development tasks for the first time. It did not work as well with adults in midlife who were recycling through the Exploration stage tasks in preparation for midcareer change of occupational field. For example, someone who was 35-years old and seeking to switch occupational fields from sales to teaching would respond to exploration items by checking "I am now doing what needs to be done." Although that individual's profile on the CDI-A would indicate that he or she was at the Exploration stage of development, the individual would actually be using exploratory behavior to deal with the maintenance stage task of breaking new ground in an effort to redirect their career at midlife. In short, the individual would be concerned with exploratory behavior but not in the Exploration stage of career development.

A major problem, then, in assessing career maturity in adults has been that adults vary in their degree of development and thus the type of task that they face. With adults, counselors cannot assume homogeneity in tasks faced and simply deal with measuring heterogeneity in coping methods, as had been done with adolescents. For adults, counselors need to assess both degree of development (CM1) and method of coping (CM2) before selecting career interventions.

In formally addressing this problem, Super and Knasel (1981) concluded that the construct of career *maturation*, the central process in adolescent career development, should not be extended to adults because decision-making readiness may not increase with age and the developmental tasks being encountered vary widely among heterogeneous groups of adults. Instead of maturation, Super and Knasel (1981) proposed *adaptability* as the central process in adult career development (see Goodman, 1994). Adaptation emphasizes the interaction between the individual and the environmental context and thus shifts attention from maturation as readiness for decision making to adaptability as readiness to cope with changing work and work conditions (Super, Thompson, & Lindemann, 1988).

This shift in theoretical emphasis from maturation to adaptation caused Super and Thompson (1981) to modify the CDI-A from a measure of development (CM1) to a measure of adaptability (CM2). They accomplished this task, not by changing the CDI-A items, but by changing the response options from a behavioral scale to an

attitudinal scale that asked individuals to indicate the degree of concern that they currently experience in relation to specified career relevant tasks. Recall that in his 1963 chapter, Super recognized awareness as the common characteristic that connects all of the tasks of career development. In other words, the first step in mastering a task is to become aware that the task must be faced. In Super's structural model of career maturity during adolescence, the first dimension is "planfulness" which consists of awareness and time perspective. Similarly, for each adult task, awareness is the first component of adaptability. To adapt, individuals must become aware of the task, meaning become familiar with it and orient oneself to it. The opposite condition is to be unaware and disoriented, a complaint presented by many career counseling clients.

Super and Thompson capitalized on recognition of awareness as the common factor in adaptability to all vocational development tasks of adulthood by changing the CDI-A, a measure of CM1, into the Adult Career Concerns Inventory (ACCI). They devised an attitudinal response scale: five levels of concern ranging from *no concern* to *great concern*. Thus, rather than measuring career development (CM1), the ACCI measures "planfulness and foresight in looking and thinking ahead about one's work and working life" (Super, et al., 1988, p. 5). The ACCI's four scale scores purport to indicate amount of concern. Subscale scores indicate task concern, that is, amount of concern relative to adapting to each task. The subscale with the highest score indicates the task of most concern to the individual and thus identifies the focus of adaptability concern. The focus of concern, for instance in the aforementioned example, is interpreted to mean that the client is concerned with exploration, not in the Exploration career stage. This shift from degree of development to awareness and planful attitudes allows the ACCI to be given to a client of any age.

The ACCI does not measure degree of career development, nor is it intended to. It measures awareness concerning adaptation to changes in work or working conditions. These novel or unpredicted changes, in contrast to developmental tasks, bear little or no relation to age and do not occur in a linear progression. The ACCI measures concern with tasks at issue (CM2) because of requirements or opportunities to develop, adapt, or change. The ACCI does not indicate whether these issues arise from development, adaptive problem solving, or occupational change (Savickas, Passen, & Jarjoura, 1988). A high exploration concern score could reasonably be attained by an adolescent trying to specify a choice, a worker entering a new career stage, a floundering employee trying to figure out why she or he cannot stabilize, and a "recycler" wishing to start over.

In constructing and validating the ACCI, Super and his colleagues produced a useful assessment inventory that counselors can readily administer and interpret to clients in individual career counseling. Furthermore, the ACCI is a unique resource for surveying large groups of individuals regarding their career development needs. College counselors can inexpensively use the ACCI in assessing the career development needs of entire college classes (i.e., freshmen,

sophomores). In a similar manner, organization development specialists can survey a company's employees regarding their career development needs. Beyond its use in individual assessment and group need surveys, the ACCI is an important tool in education. Career educators who work in high schools and instructors of college career development courses can use the ACCI items to orient their students to the developmental tasks that they can anticipate and the coping attitudes and behaviors that they could cultivate. Professors who teach graduate courses can use the ACCI items to show students operational definitions for the stages and tasks in Super's theory of career development (Savickas, 1992). Despite its great usefulness in a variety of situations, the ACCI has one shortcoming. The ACCI does not accomplish the original goal set for the CDI-A, that is, to measure career development.

BACK TO THE FUTURE: MEASURING CAREER DEVELOPMENT

To me, the conversion of the CDI-A from a measure of career development (CM1) into a measure of career concerns (CM2) has always been unfortunate in one respect. Problems in using the CDI-A occurred when counselors used it with individuals who had left school or college many years earlier. These problems did not occur in using the CDI-A with students. On the contrary, the CDI-A worked extremely well in measuring the career development of high school and college students who were under 25 years of age. For students, the behavioral response scale of the CDI-A produced a very useful profile that indicated whether students were anticipating, coping with, or finished with the career development tasks of crystallization, specification, implementation, and stabilization. Based on this profile of development (CM1), a counselor could attend to fostering the coping methods (CM2) most appropriate to the students' degrees of development. In addition to its counseling use, the CDI-A had the potential to be a superb measure of decidedness in research on career decision making. Decidedness has typically been measured with a single item, often with no validity evidence provided (Savickas, Carden, Toman, & Jarjoura, 1992). The CDI-A specification subscale presents an interesting alternative to these single item measures as well as to the popular two-item Certainty Scale in the Career Decision Scale (Osipow, Carney, & Barak, 1976).

Recognizing that the CDI-A, with its behavioral response options, may still have a unique contribution to make has prompted Super and Savickas to resurrect it, while trying to avoid reencountering the earlier problems described herein. Savickas and Super (1993) have been working to create a Student Career Concerns Inventory (SCCI) that uses behavioral response options. The SCCI uses the same items that appear in the first four ACCI subscales and adds five items from the original CDI-A item pool to each of these subscales to produce four 10-item subscales. In addition, Super and

Savickas have devised a set of subscales to measure the developmental tasks in the Growth stage, thus extending the original CDI-A and the current ACCI downward. The Growth Stage items emerged from a literature review on the development of work attitudes and behaviors during childhood (e.g., Goodnow, 1988), research on Erikson's construct of industry (e.g., Kowaz & Marcia, 1991; Vaillant & Vaillant, 1981), the experimental psychology construct of industriousness (e.g., Eisenberger, 1993), and Super's (1990, p. 232) "web model" for the psychological bases of career development and maturity. Having empirically refined the items, Super and Savickas have been field testing a research form of the SCCI. The goal of the field tests is to produce a unique instrument that scales career development of students enrolled in junior high schools, high schools, and colleges.

Work on the SCCI is only one project that flows from Super's astute ideas on measuring career development. Other researchers are studying the possibility of adding ACCI items that measure a renewal substage following the advancement substage; constructing measures of coping methods (CM2) for the establishment and maintenance stages; devising measures of the implementation task to be used in studies of the school-to-work transition; refining the ACCI's "concern" response scale to take account of intensity and duration of concern; designing mentoring programs linked to ACCI scores; exploring the construct of career adaptability in adulthood, especially in an economy that offers serial employment and urges transferable skills.

Super's work on conceptualizing and measuring career development provides a remarkable, and timely, springboard into the future for career development theory, research, and intervention. The counseling field is deeply indebted to Super for his creative, persistent, and productive work to linguistically explicate and operationally define career development along with its central processes of maturation and adaptability.

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