

Career Maturity: The Construct and its Measurement

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The growing number of career maturity instruments has outstripped counselors' understanding of these increasingly sophisticated and complex measures. The differences among measures bearing similar titles is often confusing (Jepsen & Prediger, 1981; Stenner & Rohlf, 1982) and has led to their misapplication or misinterpretation. This article is intended to assist counselors in identifying what the various instruments measure. In the discussion that follows, an analysis of the construct "career maturity" leads to a framework for distinguishing the measures of career maturity. This framework organizes the subsequent presentation of career measures.

Career maturity can be defined as readiness to cope with vocational development tasks. In the initial effort to appraise career maturity, Super and Overstreet (1960) separated the *task* and *coping* aspects of this definition into Vocational Maturity I and II. Vocational Maturity I (VM I) focuses on developmental tasks. Vocational development tasks are societal expectations that characterize each stage of vocational life. For instance, parents and teachers expect adolescents to crystallize, specify, and implement a vocational choice (Super, 1963). The tasks proceed in an orderly manner and constitute a unidimensional continuum of vocational development. The appraisal of VM I consists of determining which developmental tasks a person is encountering and then comparing the *actual* degree of progress along the continuum of vocational development to the *expected* degree.

Vocational Maturity II (VM II) focuses on task coping. Coping with vocational development tasks denotes the behaviors instrumental to satisfactory and satisfying response to these tasks. As a person progresses along the developmental task continuum, vocational coping behavior should become more independent, realistic, and purposeful. The appraisal of VM II consists of comparing an *individual's* methods of coping with a task

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to the typical behaviors of a *group* coping with the same task. In contrast to VM I, VM II is multidimensional because it includes behaviors that can be grouped into distinct dimensions. For example, gathering occupational information and making educational plans are two different sets of behaviors that deal with the task of crystallizing a tentative career preference.

In addition to coping behaviors, indices of VM II often include characteristics of the person. It is useful, however, to distinguish career development activities from more stable characteristics of the actor. In the study of human learning, variables have been classified as stimulus, intervening, and response. This classification scheme is applicable to the construct of career maturity. In the following discussion career maturity variables that are vocational development tasks will be considered stimulus (S) variables, coping behaviors will be considered response (R) variables, and person characteristics that mediate coping responses will be considered intervening or organismic (O) variables. The justification for using a "stimulus-organism-response" (S-O-R) paradigm in analyzing career maturity is that it allows consideration of the variables in an orderly fashion. The coherence provided by this classification scheme facilitates understanding of the different variables measured by career maturity instruments.

The intervening (O) variables of career maturity are personal characteristics that connect vocational coping responses to developmental task stimuli. The characteristics include attitudes toward vocational development tasks and decisional competencies acquired prior to encountering a vocational task. The attitudes mediate readiness to cope with tasks whereas the competencies structure coping responses. For instance, when faced with expectations that one should choose (S) a senior-year elective, a person with mature attitudes (O) toward career exploration is more likely to respond by talking (R) with an advisor about alternative courses. Also, a person who has skill in self-evaluation and knows the principles of decision making can use these competencies (O) to decide on a more satisfactory and satisfying choice (R) in response to the demand to choose an elective.

The heuristic value of an S-O-R analysis of career maturity variables is beginning to be seen in the literature. For example, Ware (1980) concluded that individuals with more mature attitudes toward choice respond differently to career stimuli than do those with less mature attitudes. Specifically, he reported that differences in maturity level mediate the influence of models and direct reinforcement on career preferences. Also, Gribbons and Lohnes (1982) reported that individuals with a high degree of career maturity are more willing than are those with a low degree of career maturity to change plans and move to new career paths in order to increase the congruence of their career choice.

As the S-O-R paradigm can be used to study career maturity variables, it can also be used to organize the appraisal of a client's career maturity. A comprehensive career maturity appraisal should address all three classes

of variables: vocational tasks (S), intervening characteristics (O), and coping behavior (R). The following three questions fashion a comprehensive appraisal of a client's career maturity and problems in vocational development.

Tasks: What is the client's degree of vocational development?

Identify the tasks the client is confronting and ready to encounter.

Identify the tasks the client is unaware of or actively avoiding.

Characteristics: What are the client's career development attitudes and competencies?

Identify the critical attitudes mediating the client's interpretation of and readiness to cope with vocational development tasks.

Identify the client's decision-making strategy and competencies.

Coping Behaviors: How is the client dealing with vocational development tasks:?

Identify the client's reflective and active responses to current vocational development tasks.

Identify the missing behaviors that should be added to the client's repertoire to facilitate coping with vocational development tasks.

The counselor organizes the answers to these three questions to formulate the career maturity appraisal. Based on this appraisal of how a client approaches vocational tasks, the counselor selects counseling goals and prescribes interventions. If the appraisal indicates that a client is having difficulty dealing with vocational tasks, the counselor acts as a *process consultant* to help the client modify methods of encountering the tasks. If the appraisal indicates that a client is ready to deal realistically with vocational development tasks, the counselor acts as a *content guide* to help the client focus on the content of choice, that is, which occupation the client intends to enter. Typically, the counselor bases content guidance on the results of interest, ability, and work value inventories.

MEASURES

In the following discussion, the S-O-R framework is used to organize the presentation of career maturity measures. Some instruments with similar names measure different aspects of career maturity whereas other instruments with dissimilar names measure similar aspects. The confusion created by inventory titles is avoided by classifying instruments according to whether they measure task, intervening, or response variables. Only measures for the exploration stage of vocational development are included.

Task Variable Measures

Measures of task variables appraise a client's developmental status. The measures focus on degree or rate of development. *Degree* refers to the

point along the vocational development task continuum marked by the tasks a client has completed and is facing. *Rate* refers to the extent to which a client has dealt with a specific task in comparison to a reference group dealing with the same task. Task measures are available for the complete life-cycle, a single stage, or a specified task within a stage.

The Career Development Inventory-Adult Form (Super, 1977) is a global measure of degree of development. The Career Development Inventory-Adult Form (CDI-Adult) provides 12 scores, one for each of three tasks in the exploration, establishment, maintenance, and decline stages. For example, the three exploration stage scores indicate a client's status relative to the tasks of crystallizing, specifying, and implementing a vocational choice. The CDI-Adult is the instrument of choice for screening heterogeneous groups of clients to determine their degree of vocational development.

If the counselor already knows a client's general degree of development, a more focused instrument may be used. Some measures assess several tasks within a stage but not a whole stage. For instance, the Assessment of Career Decision Making (Harren, 1978) deals with tasks undergraduate college students in the typical age range face. The instrument appraises degree of development with respect to three tasks: implementing the choice to attend college, choosing a college major, and specifying a future occupation. Assessment of Career Decision Making (ACDM) is limited to a particular developmental period and to specific tasks encountered by a homogeneous population. In contrast to the CDI-Adult, which offers an extensive analysis of the continuum, the ACDM offers an intensive analysis of a single stage.

The Placement Readiness Scale (Stevens, 1973) takes another approach. It focuses on one task through different periods of the exploration stage. The Placement Readiness Scale is a 10-dimensional, 5-point scale that an interviewer uses to rate a client's readiness for placement. It is based on Ginzberg, Ginsburg, Axelrad, and Herma's (1951) developmental theory of occupational choice. The scale appraises the development of job-seeking behavior along the continuum of fantasy, tentative, and realistic periods.

Measures that focus on only one task are becoming increasingly popular. These instruments deal with a single task in order to measure quantitative differences in clients expected to be encountering that task. Rather than determining which tasks a client is dealing with, single-task inventories measure individual differences in degree of development relative to only one task. Comparing a client's score to that of a norm group facing the same task indicates that client's rate of vocational development (Crites, 1961).

The most highly developed single-task or rate measures deal with the task of specifying a career choice. They share a common origin in research on vocational indecision. The scales measure a client's progress, compared to a reference group, toward "possession of a clear and stable picture of one's goals, interests, and talents" (Holland, Gottfredson, & Power, 1980, p. 1191). Three measures of this type are My Vocational Situation (Hol-

land, Daiger, & Power, 1980), the Vocational Decision Scale (Jones & Chenery, 1980), and the Career Decision Scale (Osipow, Carney, & Barak, 1976). Although there are differences among these scales, they all assess reasons clients use to explain their difficulty in specifying a vocational choice. Each measure assesses personal problems and environmental barriers thwarting vocational decidedness. Looking at a client's item responses and subscale scores usually uncovers the reasons behind the client's career indecision.

Intervening Variable Measures

Measures of the second class of career maturity variables appraise personal characteristics that are thought to mediate between a client's understanding of and response to the tasks. They are the most familiar career maturity instruments and are more widely used than are task and response instruments. These measures can be further classified according to the type of intervening variable they assess: motivation, structure, or content (Endler, 1983).

Motivation. Motivation scales measure the intervening variables concerned with the awareness, direction, and maintenance of coping behavior. For example, two unifactor motivation scales measure readiness. The Readiness for Career Planning Scale (Gibbons & Lohnes, 1982) measures a syndrome of eight indices of career maturity. It requires a structured interview, the results of which are coded according to details described in the scoring manual. The second readiness measure is the Adult Career Concerns Inventory (Super & Thompson, 1980), which assesses a client's readiness for dealing with vocational development tasks. Despite its title, the Adult Career Concerns Inventory can be used effectively with adolescents.

The most popular motivation measure is the Career Maturity Inventory Attitude Scale (Crites, 1973). Although frequently used as an index of global career maturity, the Career Maturity Inventory Attitude Scale (CMI-At) measures only one aspect of career maturity, namely attitudes toward career decision making. The CMI-At is available in a 50-item screening form (Form A) that yields only a total score and in a 75-item counseling form (Form B) that provides subscale scores for five attitudes toward career decision making: involvement, orientation, independence, compromise, and decisiveness.

Structure. Structural variables denote cognitive schemes used to organize experiences. Measures of the structural intervening variables in career maturity assess competencies or cognitive abilities that are resources for career decision making. They are tests, rather than scales or inventories, because their items have correct answers. The Career Maturity Inventory Competence Test (CMI-CT) measures "comprehension and problem-solving abilities as they pertain to the vocational choice process" (Crites, 1965, p. 7). The CMI-CT has five 20-item subtests that measure five competencies bearing on the decision-making process: self-

appraisal, occupational information, goal selection, planning, and problem solving. The CMI-CT is not widely used because clients may require 2 hours to complete it. Another structural test is the Cognitive Vocational Maturity Test (Westbrook & Parry-Hill, 1975), which measures knowledge of occupations. The test includes six subscales that correspond to the typical objectives of occupational information curricula in career education programs: fields of work, job selection, work conditions, education required, attributes required, and duties.

Content. Content intervening variables denote the material being processed by the mediating system. Content variables in career development include interests, work values, and educational/occupational alternatives. The consistency and realism of the career content (e.g., preferred college majors or occupations) being processed by a person can index career maturity because the alternatives being considered usually become increasingly coherent and practical when a person engages in self and occupational exploration or tries to implement a choice. These indices are largely irrelevant in the early high school years (Super, 1974), so they are not widely used.

The most familiar index of consistency (Holland, 1979) requires eliciting two or more occupational preferences from a client, coding each preference according to Holland's occupational typology, and comparing the relative location of the codes on a hexagon to derive an index of a client's consistency. The most practical index of realism (Crites, 1969, Ch. 7) requires an occupational preference, an ability test score, and results of an interest inventory. The three are then combined using Roe's occupational classification scheme to derive a diagnosis of realistic, unrealistic, unfulfilled, or coerced. Although they have not devised a measure, Salomone and McKenna (1982) have formulated a conceptualization of unrealism that is useful in appraising the causes of unrealistic vocational aspirations.

A seldom used but viable alternative to indices of consistency and realism is the Occupational Plans Questionnaire (Hershenson, 1964). Clients write a few sentences describing their occupational preference and then respond to 22 questions concerning that preference. The questions assess degree of occupational fit between self-identity and the preferred occupation. In addition to a total score, six subscores are available: commitment to stated occupational choice; experience relevant to that occupation; consistency of the chosen occupation with abilities, interests, and values; anticipated potential in the occupation; alternative choices; and the place of the occupation in the client's life.

A unique instrument, the Career Development Inventory (Super & Thompson, 1979), measures all three types of intervening variables. The inventory has five scales. The first two 20-item scales measure motivation variables: attitudes toward career planning and attitudes toward using resources for career planning information and guidance. Two other 20-item scales measure structural variables: the ability to apply decision-making principles to solving career-choice problems and information about

the world of work. The final scale, a 40-item content variable measure, appraises clients' knowledge of their preferred occupational field. The Career Development Inventory (CDI) is available in both a high school and a college form. The CDI is the most comprehensive measure of intervening career maturity variables because it measures all three types of intervening variables.

Response Variable Measures

Intervening variables process environmental demands and opportunities in shaping a person's response to vocational development tasks. The actual response variables are the thoughts and actions aimed at coping with the tasks. These coping responses deal with societal expectations and produce a psychological sense of mastery over one's career.

Measures of response variables share a common origin in social-learning theory. They appraise the responses that precede making a career choice. The antecedent behaviors are the thoughts and actions included in self-evaluation, values clarification, goal setting, information seeking, generating alternatives, and evaluating alternatives. These behaviors, which constitute the decision-making process, are responses to the task of making a career choice.

Two response measures focus on career information-seeking responses. The Vocational Exploration Behavior Checklist (Krumboltz & Thoresen, 1964) elicits self-reports of information-seeking behavior. Twelve questions (e.g., "writing to request a college pamphlet") produce two scores: frequency and variety of information-seeking behavior. The Vocational Checklist (Aiken & Johnston, 1973) is a 71-item behavioral scale surveying the specific information-seeking responses a client emitted during the preceding 3 weeks. It provides a score for behavioral or active responses (sample item: "Discussed with my father various choices") and a score for cognitive or thought responses (sample item: "Considered the social status implications of different career choices").

Whereas the above two checklists focus on information-seeking behavior, the Career Exploration Survey (Stumpf, Colarelli, & Hartman, 1983) measures exploratory behavior. Its 62 items measure 16 dimensions of career exploration. The 16 scales cluster into three groups. The first group includes seven scales concerned with career search behaviors (e.g., environment exploration, self-exploration). The second group includes three scales concerned with reactions to exploration (e.g., exploration stress, satisfaction with information). The six remaining scales deal with beliefs about future exploration (e.g., method instrumentality, certainty of exploration outcomes).

Responses to the task of implementing a career choice are assessed by the Assertive Job-Hunting Survey (Becker, 1980). The 25-item questionnaire elicits self-reported job-hunting assertiveness. Sample items include "Hesitate to ask questions when interviewed" and "Reluctant to ask for recommendations." Effectiveness of problem-solving behavior relative to

course selection and vocational choice can be appraised with the Checklist for Solving Problems in Real Life (Jones, 1976). Clients respond to 10 statements by indicating how accurately each statement reflects their typical problem-solving behavior.

CHOOSING AN INSTRUMENT

The basic consideration in choosing an instrument is identifying what it measures (Helmstadter, 1964). This has been difficult to do with career maturity instruments because of the complexity of career maturity variables and the confusing titles of some instruments. This difficulty seems to be resolved by organizing career maturity variables and their measures according to the S-O-R paradigm. Counselors may use the framework presented in this article to identify which career maturity instruments suit their assessment needs.

After identifying a group of appropriate instruments, counselors must choose the best instrument for their needs. For example, counselors wishing to assess why a client finds it difficult to make a career choice might use the Career Decision Scale, the Vocational Decision Scale, or My Vocational Situation. Each of these scales suits the intended purpose, yet there are differences among them that should be evaluated. Practical considerations and personal judgement are a part of this evaluation; however, the major basis of evaluation is the technical quality of the instruments (Womer, 1982).

Evaluating the technical quality of career maturity instruments requires more data about them than is currently available. In reviewing the existing instruments, Super (1974) suggested that they should be used cautiously until more data about their psychometric characteristics have been accumulated. Caution is still required today because data about the instruments' reliability and validity continue to be inadequate (Westbrook, 1983). Further research is needed to clarify the career maturity variables being measured, the technical quality of the instruments, and how the instruments should be interpreted to clients. Although career maturity instruments seem to be valuable tools for career counseling and program evaluation, counselors should keep abreast of new information about the instruments they use. The responsibility for their valid use rests not with test makers and researchers, but with counselors who interpret them to clients.

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