

## A MODEL, SPECIFICATIONS AND SAMPLE ITEMS FOR A MEASURE OF CAREER ADAPTABILITY IN YOUNG BLUE-COLLAR WORKERS

EDWARD G. KNASEL

*National Institute for Careers Education and Counselling,  
Hertford, England*

### *Abstract*

This paper describes the development of specifications, illustrated by sample items, for an instrument designed to assess career adaptability (vocational maturity) among young adult blue-collar workers. The specifications and sample items were based on a review of the relevant literature and a series of semi-structured interviews. They were designed to make it possible for a Canadian team to develop and validate an indigenous instrument, suitable for use in either counselling practice or in research. Recommendations are made concerning future areas of research and development.

This paper arises out of a project, commissioned by the Canada Employment and Immigration Commission, concerned with the development of specifications and sample items for a measure of career adaptability (vocational maturity particularly appropriate to young blue-collar workers) (Super & Knasel, 1979). Many people falling into this group had been found, in employment counselling and in placement work, to be unready to cope with the career-development tasks of young adulthood. The concept of vocational maturity, or career decision-making readiness, originated in the context of adolescent career development (see Super, Crites, Hummel, Moser, Overstreet & Warnath, 1957). The establishment of models particularly appropriate to adult workers is a comparatively recent development and, as described by Super (1977), presents special problems, many of which are associated with the greater heterogeneity of adult working experience. Acknowledging these problems, Super and Kidd (1979) have advocated the development of models particularly appropriate to homogeneous sub-groups, defined in terms of such factors as age or socio-economic status. This project represents the first attempt to produce such a model.

A number of conceptual problems concerning the term "vocational maturity" emerged during the course of the project, and resulted in the introduction of the substitute term "career adaptability": this is to be reported separately (Super and Knasel, in preparation). The objective of the present paper is to describe the process of model development, and to present the proposed instrument specifications and sample items.

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### *The Implications of the Existing Literature*

The starting point for the project was the model of vocational maturity in mid-career proposed by Super (1977), which is summarized in Table 1.

Table 1  
Super's Theoretical Model of Vocational Maturity in Mid-Career

- I. *Planfulness or Time Perspective*
  - A. Past: Exploration
    1. Crystallizing
    2. Specifying
    3. Implementing
  - B. Present and immediate future: Establishment
    4. Stabilizing
    5. Consolidation
    6. Advancement
  - C. Intermediate future — Maintenance
    7. Holding one's own
    8. Keeping up with developments
    9. Breaking new ground
  - D. Distant future — Decline
    10. Tapering off
    11. Preparing for retirement
    12. Retiring
- II. *Exploration*
  - E. Querying
    1. Self
      - a. in time perspective
      - b. in space (organizational, geographical)
    2. Situation
      - a. in time perspective
      - b. in space (organizational, geographical)
  - F. Resources (attitudes towards)
    1. Awareness of
    2. Valuation of
  - G. Participation (use of resources)
    1. In-house resources (sponsored)
    2. Community resources (sought-out)

### III. Information

- H. Life stages
  1. Time spans
  2. Characteristics
  3. Developmental tasks
- I. Coping behaviors — Repertoire
  4. Options in coping with vocational development tasks
  5. Appropriateness of options for self-in-situation
- J. Occupational outlets for self-in-situation
- K. Job outlets for self-in-situation
- L. Implementation: Means of access to opportunities
- M. Outcomes probabilities

### IV. Decision-making

- N. Principles
  1. Knowledge of
  2. Valuation of (utility)
- O. Practice
  3. Use of in past
  4. Use of at present

### V. Reality Orientation

- P. Self-knowledge
  1. Agreement self-estimated and measured traits
  2. Agreement self-estimated and other estimated traits
- Q. Realism
  3. Agreement self and employer-evaluated proficiency
  4. Agreement self and employer-evaluated prospects
- R. Consistency of occupational preferences
  5. Current
  6. Over time
- S. Crystallization
  7. Clarity of vocational self-concepts
  8. Certainty of career goals
- T. Work Experience
  9. Floundering vs. stabilizing in mid-career
  10. Stabilizing or maintaining vs. declining in mid-career

It was decided to modify and refine this model to describe the career attitudes and competencies of the particular target group considered in this study, and to do so by obtaining information from two sources: firstly, a consideration of relevant existing models, measures and research, and secondly, a series of interviews with people in the target population.

One important implication emerged from the review of literature. This was that Autonomy, or Sense of Agency, should be introduced into the model at an early stage in the development process. Law (in press) emphasizes the stress which much recent literature has placed on the importance of the individual's Sense of Agency or Au-

tonomy as a factor in career development (see e.g., Bazalgette, 1978; Fleming and Lavercombe, 1978; Law and Watts, 1977). Indeed, Heath (1965; 1976) and Sheppard (1971) both included factors in their models of vocational maturity in adulthood which appear to refer to this topic.

Given this contemporary emphasis, it was decided to include Autonomy within the model on a provisional basis. This step was in line with that taken in recent revisions of Super's adolescent model of vocational maturity (Kidd, 1978; Kidd, in press; Super, 1979).

#### *The Interview Study*

In an attempt to obtain more direct, vivid, and rewarding observations of the problems faced by this target population than could be gained simply by reading the available literature, it was decided to carry out a series of semi-structured interviews with a sample of people employed, or formerly employed, in unskilled or semi-skilled work. The principal objective was to generate material, qualitative rather than quantitative, which could be matched against the existing model, suggesting where refinements were needed, pointing to more detailed specifications, and providing material for item writing.

The conduct of this illustrative study involved four phases. Firstly, a structured interview guide was prepared consisting of questions designed to tap the factors that comprised the existing model of adult career adaptability. Secondly, this was used with subjects who had occupational experience within the scope of this project. Such interviews were carried out in England and in Canada, there being 26 English subjects and 22 Canadian (for details of these subjects, see Table 2). All interviews were tape-recorded with the interviewee's consent. Thirdly, a method of analysis was adopted whereby excerpts of the interviews which appeared to have a direct bearing on the individual's career experience were selected, and, where possible, were sorted into categories derived from the model. Excerpts which did not appear to fall into any of these model categories were assigned to an open category. Finally, the contents of this open category were analysed into a series of data-derived categories. The objective was that this analysis should have implications for further model refinement and would provide a qualitative data-base for the better definition of instrument specifications.

#### *Model Refinement*

Further modifications and refinements were made to the model suggested by Super (1977) on the basis of the material obtained through the interviews.

Table 2  
Age and Employment Status of Interview Samples

		MALE			FEMALE			BOTH SEXES		
		UK	CANADA	POOLED TOTAL	UK	CANADA	POOLED TOTAL	UK	CANADA	POOLED TOTAL
AGES	17-21	4	5	5	1	1	2	5	6	11
	21-25	3	3	8	5	5	10	8	8	16
	25-29	2	4	7	4	1	5	6	5	11
	30+	5	1	7	2	2	4	7	3	10
EMPLOYED		10	10	20	9	6	15	19	16	35
UNEMPLOYED		4	3	7	3	3	6	7	6	13
T O T A L S		14	13	27	12	9	21	26	22	48

The retention of three of the major categories in the original model (Planfulness, Exploration, Decision-Making) was clearly justified by the interview analysis on the basis of the numbers of items assigned to them, their relevance to the theoretical constructs which they were supposed to amplify (i.e., their face validity), and the conceptual cohesiveness of the items. The retention of the "new" category of Autonomy was also justified on these grounds. Rather more difficulties were anticipated in the development of Information items and also in the development of Decision-Making items, but, nevertheless, it was decided that the inclusion of these categories within the model was justified on a provisional basis.

The most far-reaching implications concerned the Reality Orientation category. It was decided that the sub-categories of Realism and Clarity should be omitted from the instrument-development model. There were two reasons for this: firstly, only small numbers of items were assigned to these categories; secondly, and more crucially, it was argued that both terms are very difficult to operationalize, and that in fact they refer to a significantly different level of conceptualisation from other categories of the theoretical model. It was decided that these constructs should, instead, be used as qualifying meta-dimensions. Hence a planful or exploratory action could be qualified as being more or less 'clear' or 'realistic'.

Analysis of those interview statements assigned to the "open" analysis category suggested the inclusion of two additional item-generation categories: Work Values and Work Salience, and Reflection on Experience.

A significant number of subjects in the interview study made statements which suggested that the meaning which work had for them, in terms either of the rewards which they sought from it or of the importance which they assigned to it relative to other activities, had played a significant role in their careers. It was therefore decided to include Work Values and Work Salience as a category within the revised model.

Among the Canadian interview sample, a large number of subjects referred to ways in which their occupational experience had interacted with changes which they saw in themselves. The following two examples are typical:

"I learned a great deal in those 2 years. I think I grew a lot. I mean I'm glad to have this political knowledge. I'm glad to know that MP stands for Member of Parliament. I learned a great deal about life's hypocrisy".

"I think every job to me was an experience, it was a different experience. And you have your ups and downs, but I'm glad I did have the chance to do all these jobs."

These statements seem to refer to the individuals' awareness of their career as a developmental process in which they are involved. They point to an awareness, if not always of progression, cer-

tainly of change or of direction. They contrast markedly with statements — originally assigned to the Reality Orientation sub-category 'Floundering versus Stability' — which were characterised by a perception of aimlessness or lack of direction, e.g.:

"I've never been so inspired by a job that I desperately want to hang on to it for all that I'm worth. I don't even consider that as a career. You could make the post office a career. But then I get a bit panic-stricken about settling in a rut."

"I guess I hadn't really questioned so much about why I was in those jobs, and realised how much I was just floating with the tide, instead of making progress (...) how I would apply for one job, and if I got it that was the job I would take."

These two kinds of statement suggest the inclusion of a new item-generation category concerned with the individual's evaluation of his or her past experience. "Reflection on Experience" is proposed as a label for this factor, defined as the awareness or lack of awareness of development, progression, or direction in one's working life, and distinguished from Planfulness which is concerned with a sense of *future* direction.

Assuming that this category is seen as having some conceptual validity, there may be good reasons behind its emergence from a study of adult, rather than of adolescent, development. For individuals to learn from their experiences, or to structure them, it is first necessary for them to have experiences to examine. Adolescents have such experience only in a limited and special sense. It is highly likely that they will exhibit varying degrees of awareness of change only in the context of their educational experience. Eighteen to thirty year-olds, on the other hand, do have an occupational history which they may or may not see as showing change or development.

A final implication for item development concerned the individuals' perceptions of their educational experience. No positive sentiments were expressed about education, but many subjects commented on the handicap imposed by a lack of sufficient education. Below are two examples:

"I left school without any qualification at all. Pretty dim. So there wasn't really a lot left open to me."

"I think a bad decision was quitting school. I've got grade 11 education (...), but, ah, it was the stupidest decision of my life."

These subjects saw their lack of education as an important handicap to their subsequent career. A measure designed for this socio-economic group should include some items which reflect this. It was decided that the most appropriate procedure would be to devise items dealing with level of education which were spread over a number of different model categories. Hence, items might be written which examine the effect which an individual's lack of education has on planning or exploration.

Taken together, these findings give rise to the following 7-dimensional model career adaptability in young adult blue-collar workers:

Work Values and Work Salience  
Autonomy or Sense of Agency  
Planfulness or Future Perspective  
Exploration and Establishment  
Information  
Decision-Making  
Reflection on Experience

It is instructive to compare the categories of this new model with those of the 1977 original. The proposed 7-dimensional model retains four factors from the original system and identifies three additional ones. The inclusion of two of these factors may be seen as reflecting the fact that this is an *adult* model which has been modified in the light of adult data. These are Reflection on Experience, and Work Values and Work Salience. Both of these factors can be seen as becoming increasingly real, and hence important, once the individual has actually entered the world of work. It is further proposed that any measure should include items, within the 7-dimensional structure of the model, which reflect the importance which the subjects involved in the study attach to education. This would further emphasize the special focus of the measure. The two models are compared in Table 3.

#### *Specifications and Sample Items*

The specifications were intended to fulfil two functions. They should provide a guide to the production of instrument items, giving an item-writer sufficient information to decide on the inclusion or exclusion of items in the development of a prototype instrument. They should also act as explicit operational definitions for the model categories. In drafting these specifications, extensive reference was made to the interview extracts relevant to each category. Reference was also made, where appropriate, to already existing specifications, and particular attention was given to those developed by Kidd (1978; in press) and by Super (1979).

It was intended that the sample items should act as a further clarification of the specifications and, perhaps, as models for later instrument development. It was not within the objective of this project to produce a prototype instrument; accordingly, the intention was to produce sufficient items to further clarify the specifications. The sample items presented here were prepared paying attention to the extracts isolated in the interview analysis and to already existing measures, in particular to Super's Career Development Inventory and to the Work Values Inventory (Super et al., 1978). The CDI Adult Form was especially useful in preparing the Planfulness, Exploration and Establishment items. Efforts were made to keep the level of

Table 3

Super's 1977 theoretical model of vocational maturity in mid-career	Proposed instrument-development model of career adaptability in young adult blue-collar workers
	WORK VALUES AND WORK SALIENCE
	AUTONOMY OR SENSE OF AGENCY
PLANFULNESS OR TIME PERSPECTIVE	PLANFULNESS OR FUTURE PERSPECTIVE
EXPLORATION	EXPLORATION AND ESTABLISHMENT
INFORMATION	INFORMATION
DECISION-MAKING	DECISION-MAKING
	REFLECTION ON EXPERIENCE
REALITY ORIENTATION	

the vocabulary employed fairly low, and to observe normal psychometric criteria, such as the necessity to ensure that each item was as unambiguous as possible and contained only one substantive idea. In line with the recommendation arising from the interview study, three items refer to the respondent's level of education.

The specifications and sample items are presented in Table 4. In each case the specifications are broken down into a series of numbered areas which items should examine. One item is presented to illustrate each of these areas. The format adopted for these illustrative items is that of statements with which the respondent is asked to agree or disagree. This is not intended to be prescriptive: the choice of format rests of necessity with the producer of a measure.

Table 4  
Specifications and Sample Items

1. *Work Values and Work Salience*

*Specifications* — The importance which an individual describes to his or her working career, and the values sought through it. Items should examine:

- a. The position among the individual's constellation of roles given to that of worker.
- b. The goals or satisfaction which the individual values in his or her career.
- c. The individual's perception of good or proper behaviour in a work setting.

*Sample items:*

- a. A good marriage is more important to me than a good job.
- b. The good thing about my job is that people respect my work.
- c. I think that an employer has a right to expect a fair day's work for a fair day's pay.

2. *Autonomy or Sense of Agency*

*Specifications* — The individual's sense of agency and individuality.

Items should refer to attitudes and behaviour illustrating:

- a. The extent to which the individual ascribes control to self rather than to others.
- b. The responsibility taken for making decisions and carrying out plans.
- c. The acceptance of responsibility for the consequence of own actions.

*Sample items:*

- a. If other people had not given me good advice, I would never have got my first job.
- b. I don't really believe in luck in finding a job, I think that you make your own luck.
- c. I have made mistakes in my career, but there is no one to blame but myself.

3. *Planfulness or Future Perspective*

*Specifications* — The individual's orientation to the future, the ability to identify steps to be taken in the future and to seek opportunities for their implementation.

Items should refer to attitudes and behaviour emphasising the short, medium and long term plans illustrating the extent to which the individual:

- a. Allows for change in his or her needs.
- b. Recognizes impending personal development tasks.
- c. Takes into account the changing nature of opportunity structures.

*Sample items:*

- a. I hope that during the next five years I shall find an opportunity to get the kind of job I shall need to support a family.
- b. As I get older, I shall need to settle down in a job that I can really settle with.
- c. I plan to specialize in a job that really has a future.

4. *Exploration and Establishment*

*Specifications* — The individual's examination of a variety of occupations, initially considering a wide range

and later concentrating on selected occupations in depth, followed by seeking to become established in one of them.

Items should refer to attitudes and behaviour illustrating:

- a. Willingness to consider a range of occupations.
- b. Efforts to seek a better understanding of particular occupations.
- c. The use of appropriate resources (e.g., people, materials, activities).

And, in older subjects

- d. Attempts to become established in a particular occupation.

*Sample items:*

- a. I think that it is important to learn about the various kinds of job opportunities which might be open to you.
- b. Recently I have been putting a lot of energy into finding out more about the occupations which are open to someone with my level of education.
- c. When I have wanted to change jobs, I have gone to Manpower to find out what kind of vacancies there were.
- d. Right now, I'm doing things that will help me stay in my chosen job.

### 5. Information

*Specifications* — The individual's knowledge of the world of work in general and of his or her own field of employment in particular.

Items should examine knowledge of:

- a. Possible change in the labour market.
- b. The general availability of blue-collar jobs.
- c. Training and re-training opportunities.
- d. Entry requirements, benefits, conditions and opportunities for advancement in particular occupations.

*Sample items:*

- a. In the future, less and less people are going to be employed in the manufacturing industries.
- b. Semi-skilled jobs are getting harder to come by.
- c. I would need more schooling to qualify for a training course for a more skilled job than I already have.
- d. The working hours in my job are better than in most others giving the same pay.

### 6. Decision-Making

*Specifications* — The individual's ability to make career decisions wisely.

Items should examine:

- a. The factors which influence an individual's decisions.
- b. The relationship of these factors to the individual's needs or objectives.
- c. The extent to which the individual employs decision making styles, appropriate to particular kinds of career decisions.

*Sample items:*

- a. I chose my job because it would give me some worthwhile skills.
- b. I've needed a job with regular hours, but the ones that I've found haven't given me them.
- c. When I have to make an important decision, I try to talk it over with someone that I trust.

### 7. Reflection on Experience, or Past-Perspective

*Specifications* — The individual's orientation to the past.

The awareness of and tendency to analyze past experience.

Items should examine the perception of past occupational experience, positive or negative, as:

- a. Being a coherent career rather than a succession of unrelated jobs.
- b. Having taught something.
- c. Having been worthwhile.

*Sample items:*

- a. I can look back at my jobs and see a progression.
- b. I've learnt a great deal from doing my present job.
- c. Every job that I have done has been a different experience.

### *Recommendations for Further Research and Development*

- (1) This project has re-emphasized the difficulties associated with the development of items to assess occupational information among adults. The writing of a variety of information items according to the specifications in Table 4, and their field trial as part of a multi-dimensional instrument intended for a small number of occupationally homogeneous groups, is recommended as a first step toward throwing more light on the feasibility of developing one information test with several occupational scoring keys.
- (2) Decision-making has been included as an item-generation category, defined as the individual's ability to make career decisions wisely. Much recent work (e.g., Arroba, 1977; Harren, 1978; Jepson, 1974; Super, 1979), has emphasized the importance of decision-making styles as a determinant of career development. However, until more detailed data on the relationship between career decision-making styles and influences on the one hand, and career outcomes on the other, are available, exactly how career decisions are wisely made cannot be specified. Longitudinal studies relating the influences used in decision-making and the styles with which the decisions are made to measures of job-satisfaction and job-satisfactoriness are required for a comprehensive model of career adaptability.
- (3) Research into the predictive significance of Reflection on Experience is required to justify its inclusion in a model of career adaptability. Its emergence from this interview study indicates that utility as a way of characterizing certain statements made by young-adult blue-collar workers about their careers, but this does not say anything about its utility for predictive purposes.
- (4) Autonomy or Sense of Agency was introduced into the model used in this project at an early stage, and its retention in the instrument-development model was justified

by the interview analysis. As Law (in press) has emphasized, however, theoretical conceptions of Autonomy have been many, and considerable work is required to forge these diverse contributions into a coherent whole. Further, the empirical study of the relationship between Autonomy and career development has been limited and research on this topic with young-adult blue-collar workers is essential.

- (5) Once an exploratory study of the development of an instrument appropriate to a particular sub-population of the adult work force has been successfully completed, it would be advisable to carry out a parallel study of a distinctly different sub-group. The comparison of the resulting models would allow a more informed decision to be made about the wisdom of developing a number of specialized measures of career adaptability, and the feasibility of developing a general, refined model of adult career adaptability.

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