

===== ESTUDIOS =====

**THE CAREER INTEREST TEST.
A BRIEF, STANDARDISED ASSESSMENT OF
INTERESTS FOR USE IN EDUCATIONAL AND
VOCATIONAL GUIDANCE**

**EL TEST DE INTERESES PROFESIONALES.
UN INSTRUMENTO DE DIAGNÓSTICO BREVE Y ESTANDARIZADO PARA
SU USO EN ORIENTACIÓN EDUCATIVA Y PROFESIONAL**

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ABSTRACT

This article describes the *Career Interest Test* (Version 3.0), which is a 63-item forced choice, individually- or group-administered assessment of seven vocational interest categories: Outdoor, Practical, Scientific, Creative, Business, Office and People Contact interests. It is designed for use in educational and vocational contexts as a practical guide to adolescent career planning. The *Career Interest Test* is now made freely available for professional use and is also available for free on-line use through www.myfuture.edu.au or www.qualifax.ie or www.smartfuture.edu.au The *Career Interest Test* offers psychologists and career counsellors information at low cost and with brief testing time. Results can be used to provide reassurance about choices, to narrow the range of options or to stimulate career exploration by indicating the types of work that individuals may want to explore. It is based on the premise that vocational interests (i.e., activity preferences) may be inferred from consistent patterns of likes and dislikes. Technical data on the validity and reliability of the responses are provided.

Key words: assessment of career interests, ipsative assessment, person-environment fit theory, career exploration and planning.

RESUMEN

En este artículo se describe el *Career Interest Test* ("Test de Intereses Profesionales", Versión 3.0), que evalúa 7 categorías de intereses vocacionales: Exterior, Práctico, Científico, Creativo, Negocios, Administrativo y Contacto con Gente. Está compuesto por 63 ítems de elección obligatoria, y puede

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administrarse de forma individual o grupal. Su finalidad es la de proporcionar un instrumento práctico que sirva de guía para la planificación de la carrera de adolescentes, complementándose con otros instrumentos y técnicas de orientación educativa y profesional. El *Career Interest Test* está disponible de forma gratuita para su uso profesional (para aplicaciones a pequeña escala), y también se puede acceder al mismo a través de las siguientes direcciones: www.myfuture.edu.au, www.qualifax.ie o www.smartfuture.edu.au (en inglés, también ha sido traducido para el Medio Oriente y Asia del Sur). La elaboración de este instrumento de diagnóstico formaba parte de un proyecto de investigación longitudinal (Athanasou, 1986, 1990, 2003), que ha culminado con su publicación en el dominio público, además de los resultados obtenidos con la muestra participante.

El *Career Interest Test* proporciona información a psicólogos y orientadores con un bajo coste, y en poco tiempo. Los resultados pueden utilizarse para ayudar a reafirmar las elecciones realizadas, reducir el abanico de opciones disponibles, o potenciar la exploración de la carrera al señalar tipologías de trabajo concretas que los sujetos pueden querer explorar en más detalle. Se basa en la premisa de que los intereses vocacionales (es decir preferencias de actividad), pueden ser inferidos a partir de patrones consistentes de cosas que nos gustan, y cosas que no nos gustan.

El artículo comienza con una breve fundamentación teórica del *test*, haciendo referencia a los modelos y a las tipologías de intereses en las que se basa. Describe el tipo de evaluación que proporciona (ipsativa, ya que el sujeto se compara consigo mismo y no con un grupo), la forma de aplicación y la interpretación de puntuaciones. Se proporcionan los datos técnicos de validez y fiabilidad obtenidos en una muestra nacional australiana, en el ámbito rural y urbano. Concluye con algunos comentarios sobre su utilidad, las categorías de intereses, su uso en distintos países y sus limitaciones. Por último, el autor hace alusión a las críticas que muy acertadamente se han hecho al uso indiscriminado de *tests* e inventarios de intereses sin tener en cuenta otros factores y a la excesiva dependencia de la teoría de rasgos y factores, argumentando aún así que las personas pueden construir su plan de carrera basándose en sus preferencias e intereses y buscando el ambiente más adecuado a su personalidad. De este modo, los intereses profesionales pueden integrarse como un elemento dinámico y continuo dentro de una perspectiva constructivista de orientación para la carrera.

Palabras clave: evaluación de los intereses profesionales, evaluación ipsativa, teoría de la interacción persona-ambiente, exploración y planificación de la carrera.

Introduction

The purpose of this article is to describe the *Career Interest Test* (Athanasou, 1988) that was developed originally for use in Australia. This report provides some background and technical data on the *Career Interest Test*, which is intended for use by career advisers, vocational guidance officers, psychologists and rehabilitation or employment counselors. Except for large-scale use the *Career Interest Test* has been placed in the public domain so that it is available to a wider audience and freely for single use in professional educational or vocational contexts. It may also be accessed through national web-sites such as www.myfuture.edu.au as well as www.smartfuture.qld.gov.au. Version 3.0 of the *Career Interest Test* forms the backbone for the career exploration components of these sites. Version 4.0 is a commercial version available only for large-scale users (for example, Qualifax <http://www.qualifax.ie> in Ireland, private and government users in Australia). Versions of the *Career Interest Test* have been translated for use in the Middle-East and South-east Asia. The development of this assessment was part of a long-term program of research (see Athanasou, 1986, 1990, 2003) that has culminated in the placing of the *Career Interest Test* in the public domain.

Background

The seven career interests assessed are categorised as Outdoor, Practical, Scientific, Creative, Business, Office and People Contact work interests. The seven areas assess an individual's preferences for participating in different types of work activities, subjects and activities. These can be equated directly with the Holland (1997) classification of vocational types (Realistic = Outdoor, Practical; Investigative = Scientific; Artistic = Creative; Social = Personal contact; Enterprising = Business; Conventional = Office). Specifically, the *Career Interest Test* comprises 63 questions made up of 126 forced choices from 18 Outdoor, 18 Practical, 18 Scientific, 18 Creative, 18 Business, 18 Office and 18 People Contact items. Every item had to meet criteria of recognition and familiarity.

Central to the *Career Interest Test* are the seven interests that give a broad coverage of the two fundamental work-task dimensions of People versus Things and Data versus Ideas (see Figure 1; after Prediger, 1981). Each category embodies the notion that a vocational interest includes a broad and complex set of consistent likes and dislikes that act as reinforcers and discriminative stimuli (see Savickas, 1999 for an outline of the history, origins and psychology of vocational interest). The prognostic value of such likes and dislikes was seen in the early development of the occupationally-keyed scales that characterised the *Strong Vocational Interest Blank* (see Strong, 1943) and that discriminated an occupation from a general reference sample. Later developments in interest assessment focused on homogeneous or basic interest scales that shared similar content and the *Career Interest Test* follows in the traditions of Roe (1956), Kuder (1960), Holland (1997) and the general occupational themes of the *Strong Interest Inventory* (e.g., Hansen & Campbell, 1985).

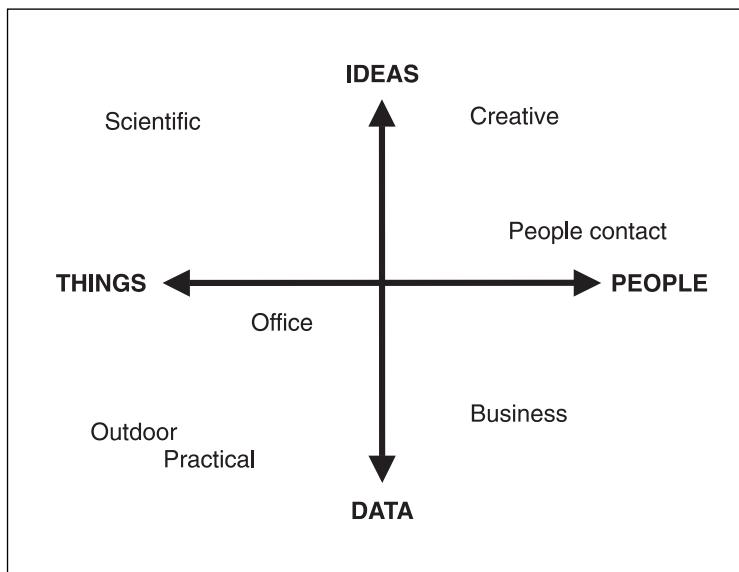


FIGURE 1.
Career Interest Test categories and work-task dimensions.

Broadly speaking, the *Career Interest Test* is founded on a person-environment fit theory that categorises both occupations and people in parallel ways. As a basis for career choice, it is considered that - other things being equal - people possessing interests similar to a particular occupational category will probably find that type of employment rewarding. Prediger (1999, pp. 298-299), however, cautioned against a mindless trait-factor matching or a simplistic test-and-tell approach and urged the incorporation of other factors, such as abilities into the career exploration process:

... the goal is not to find the ideal match. Rather, the goal is to say, for example, "Here are some other occupations that attract persons who are similar to you in important ways. You might want to check them out."

Ipsative assessment

The psychometric basis of the *Career Interest Test* lies in Thurstone's (1927) law of comparative judgement and the use of a pair-comparison methodology. A person chooses between pairs of occupations, pairs of subjects or pairs of activities. This means that the *Career Interest Test* provides an ipsative assessment, that is, one in which the person is compared against themselves. The results are not norm-referenced (i.e., compared against a group). It seeks to answer the question - "Which career fields are of greatest and least interest to me?" Accordingly, an idiographic approach to interest measurement was chosen for the *Career Interest Test*.

An idiographic approach assesses the individual within themselves. These approaches have a long tradition in interest measurement and were popularised in the historically famous *Kuder Preference Record* (Kuder, 1960). An idiographic approach does not rely on percentile ranks or standard scores, which are used in some instruments to indicate the percentage of persons in a norming sample who had scores the same as or lower than an individual's score. It should be emphasised that standing at say the 50th percentile can mean quite different things depending on the nature of the normative sample - men, women, high school pupils, employees, applicants or guidance clients. Moreover, users cannot interpret differences in percentile ranks as absolute differences in level of interest. In contrast, the idiographic approach to interest measurement focuses on the individual and considers the overall pattern of interests within the person.

Administration and interpretation

The *Career Interest Test* was designed for persons 15-18 years who want to explore and understand their pattern of vocational interests. It is not considered suitable for adult populations for whom a related *Career Interest Card Sort* (Athanasou & Hosking, 1998) was developed. Completion of the *Career Interest Test* requires the voluntary and active participation of respondents in a non-threatening setting where people understand the purpose of the assessment.

The administration takes approximately 10 minutes. It is designed to be administered individually and verbally on a one-to-one basis and therefore does not involve any reading re-

quirements for the respondent. Of course, it is also possible to use it as a paper-and-pencil instrument with classes or groups for career education, job-seeking or research purposes. The administration is straightforward - one establishes rapport and introduces the exercise. The person is simply asked, "Which would you prefer to do? *Grow crops* or *fix machines?*, *Diagnose an illness* or *fly a plane?*, *Design buildings* or *work in a science lab?* etc.". The responses are recorded by the user on a separate answer sheet and the administrator continues until all 21 occupational pairs have been asked. The administrator introduces the second section that deals with 21 pairs of courses and the person is asked, "Which would you like to learn? *Geography* or *Technical drawing?* *Chemistry* or *Metalwork?* *Music* or *Biology?* etc." again, one continues until all 21 pairs of courses have been completed. The last section deals with activities, and the person is asked, "Which would you like to do? *Look after animals* or *operate power tools?* *Experiment in a lab* or *fix cars?* *Create a sculpture* or *dissect specimens?* etc.". Users are encouraged to administer this instrument in a conversational tone, to provide introductions to each section and to provide additional explanations to assist those who may be unfamiliar with terms.

The majority of people take the *Career Interest Test* without any special interpretation or procedural problems, although some special cases may be slower to respond. All specific administration instructions have been integrated into the materials (these are available freely from the author upon request). Scoring requires very little time since it involves simply counting the "like" or ticked responses in each of the seven categories. Users are also encouraged to review the responses to specific pair comparisons, especially those which involve the highest categories or those that discriminate between the person's top choices. In one sense, it is intended as a structured interview rather than a paper-and-pencil interest inventory.

Results can be used to provide reassurance about choices, to narrow the range of options or to stimulate career exploration by indicating the types of work that individuals may want to explore. It is based on the premise that vocational interests (i.e., activity preferences) may be inferred from consistent patterns of likes and dislikes. There are two main approaches for interpreting the results:

- a) career preference - a person's preferences can be described by his/her ranking of scores; and
- b) career clarity - the clarity or pattern of a person's seven interest scores can be examined.

Interest scores

Although the interest scores on the *Career Interest Test* are the number of choices, they cannot be interpreted as units of interest. They cannot be added or subtracted or multiplied or divided in the way that real units of length or weight can be treated. Of course the numbers themselves can be treated arithmetically but in the case of assessing interests the numbers (or scores) are only intended as broad indicators of the extent of interest. This is why the user is cautioned about over-interpreting small differences.

It cannot truthfully be said that one category, for instance, shows twice as much interest as another or that two categories are indeed actually equal in interest (cf. Athanasou, 2001).

The results are only approximate indicators. The results from any educational or psychological assessment are not absolutely correct scores and this is important for the user as well as the person completing the *Career Interest Test* to understand from the outset.

The final numbers depend entirely on the content of the items (jobs, courses or activities) that were offered to the person and the level of interest of the person in one of the two available choices at that point in time. At best, the scores give only a general sense of the direction (i.e., rank order) of a person's interests. In addition there are some important limitations in the traditional use of scores in interest assessment., viz.:

- a) scores at various points (e.g., 3, 6, 9, 12, 15 or 18) would have vastly different errors of measurement and different reliabilities;
- b) scores are most indicative of interest at the extreme levels, such as those of high and low interest. These limitations have been raised because some laypersons may have a naive belief in the value of all scores.

Consequently, the most conservative approach for scoring purposes might be simply to rank order the results from the *Career Interest Test* recognising that small differences of 1-2 points should be ignored. Typically one should focus on the top two categories as indicators of preferences and the lowest categories would be considered as areas of probable dislike. The following sections provide some technical data on the reliability and validity of results from the *Career Interest Test* and are summarised from the User's Guide (Athanasou, 2006), a copy of which is available upon request.

Reliability information

Reliabilities were reported originally for 2-3 months and these test-retest correlations are high. They ranged from 0.85 to 0.96 and as expected they decline over a period of 4-5 months where they ranged from 0.67 to 0.87 (Athanasou, 1988). The most recent study of test-retest reliability over a one-month period and using Version 3 with high school pupil (Athanasou, 2006) provided test-retest reliabilities from 0.67 to 0.91 (0.83 - Outdoor; 0.91 - Practical; 0.83 - Scientific; 0.87 - Creative; 0.72 - Business; 0.67 - Office; 0.81 - People Contact. Although these test-retest results provide some assurance of stability, users should be cautious in making long-term predictions from adolescent career interests. They are stable but still subject to change. Repeated assessment (with or without the *Career Interest Test*) is advised. Interest assessment is not seen as a one-off, once-and-for-all process.

Individual stability in career interests

Of greater relevance might be the stability of an individual's interest patterns rather than group performance across time. The correlation between each person's scores (across the seven categories) at two time intervals showed considerable individual stability in the pattern of interests on the *Career Interest Test*. This is illustrated in figure 2 for the same group as in the previous paragraph. Note that while most of this group showed stability in the ordering of their interests over a one-month period, there was one person in the sample of 34

who had much lower stability. Accordingly, users are advised to undertake repeated assessments of interests for any individual.

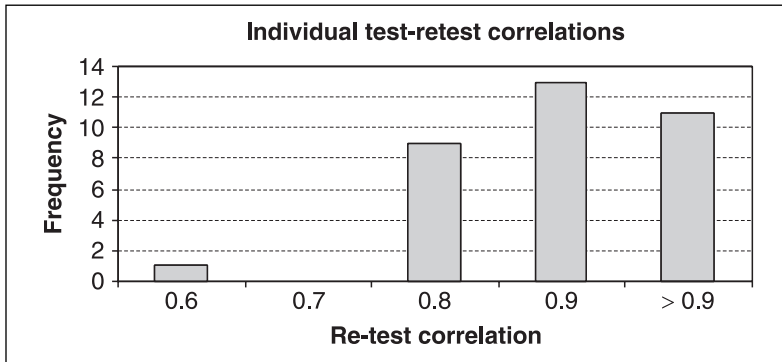


FIGURE 2.
Individual test-retest correlations over a 4-week period (N = 34).

Validity information

Normative data were obtained from samples of high school pupils (N = 935) in rural and metropolitan areas. The available demographic data indicated that the average age for this cohort was 15.1 years (SD = 0.7) and the median education level was Year 10 (see Athanasou, 2006).

- a) Average scores on the *Career Interest Test* categories of Practical and People Contact reflect differences in gender socialisation (see Table 1).

TABLE 1: Average scores on the Career Interest Test for males and females (N = 865).

Gender	Average Score						
	Ou	Pr	Sc	Cr	Bu	Of	Pc
Males N = 335	8	10	8	9	10	9	8
Females N = 532	7	6	8	10	11	10	11

All values rounded.

- b) The intercorrelations between the category scores on the *Career Interest Test* reflected the forced-choice nature of responses and the matrix displays the expected low independent correlations between categories (see Table 2). The average intercorrelation that one would expect for such a matrix is $-1/(n-1)$ where n is the number of categories. In the case of the *Career Interest Test* the actual average intercorrelation is -0.156 compared with the expected average of -0.166 .

TABLE 2: Interest category intercorrelations (N = 935).

	OU	PR	SC	CR	BU	OF	PC
OU		0.19	-0.05	-0.22	-0.43	-0.37	-0.12
PR			-0.17	-0.13	-0.27	-0.37	-0.46
SC				-0.36	-0.29	0.06	-0.19
CR					0.20	-0.26	-0.00
BU						0.09	-0.06
OF							-0.07
PC							

- c) Multidimensional scaling (non-metric) of the interest categories is mainly along two dimensions (see Table 3 and Figure 3). Dimension 1 is a things-versus-people (see Prediger, 1981; Roe, 1956) or possibly an underlying dimension based on gender influences on interests. The second dimension is not clear but the two dimensional representation is reasonably consistent with a circular but not necessarily hexagonal ordering of interests, like that of Holland (1997).

TABLE 3: Multidimensional scaling report (N = 935).

Variables	Dim1	Dim2
OU	-0.2970	-0.0166
PR	-0.3137	0.1377
SC	-0.0883	-0.3169
CR	0.1021	0.2801
BU	0.2536	0.1358
OF	0.1914	-0.2342
PC	0.1519	0.0142
Stress	0.28	0.09

- d) The *Career Interest Test* comprises three sections with occupations, courses and activities and the relationships between these three facets was positive but inferences should not be made about career interests only from one source. Information from job, course and activity preferences overlap but each contributes in its own fashion (see Table 4). The Business category shows the lowest area of overlap indicating the business interests in the *Career Interest Test* may not be well-represented by these three facets or alternatively insufficiently matured in a high school sample.

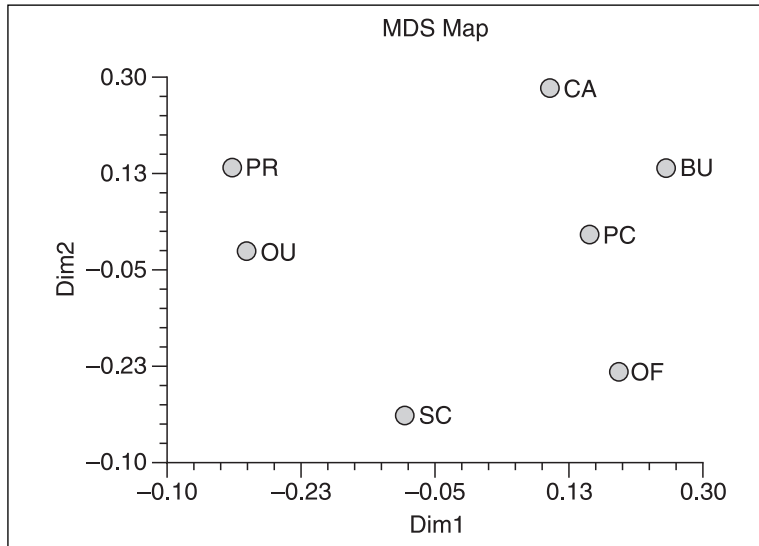


FIGURE 3.
Multidimensional scaling analysis of the *Career Interest Test* categories.

TABLE 4: Inter-relationship between job, course and activity preferences.

Interest category	Job and course preferences	Job and activity preferences	Course and activity preferences
OU	0.46	0.35	0.27
PR	0.52	0.48	0.45
SC	0.32	0.31	0.42
CR	0.48	0.44	0.43
BU	0.14	0.26	0.17
OF	0.51	0.40	0.34
PC	0.46	0.31	0.31

- e) Self-estimates of interests were positively related to scores on the *Career Interest Test* (Athanasou, 2003). The concurrent validity of interest scores and self-estimates, rated from very low interest (1) to very high interest (7) (N = 329 high school pupils) is indicated in Table 5. These are all positive and moderate correlations. Again, these are group results and not necessarily indicative of an individual. The moderate correlations would be substantially higher if these were attenuated for unreliability. For instance, assuming moderate reliability of the self-estimates of around 0.5 then the attenuated correlations in the second column of Table 5 after being corrected for unreliability would be in the range 0.68 to 0.98.

TABLE 5: Correlation of *Career Interest Test* score and self-estimates.

Interest category	Cit score and self-estimate
OU	0.47
PR	0.59
SC	0.59
CR	0.52
BU	0.41
OF	0.57
PC	0.47

- f) There is some overlap between specific categories and the results of other personality and vocational measures and the results of various studies (Athanasou, 2006) are indicated in Table 6. The highest value in each row is highlighted in bold. The relationships, however, are not uniform and not always as positive as one might expect. Although this might reflect problems of sampling as well as small group sizes, it also means that the results of the *Career Interest Test* should not be considered always as a valid indicator of the results of other questionnaires.

TABLE 6: Correlation of *Career Interest Test* scores and results from other inventories.

Questionnaire	Ou	Pr	Sc	Cr	Bu	Of	Pc
RAMAK ¹ VOCATIONAL INTEREST INVENTORY N = 35 adult education students							
Business	-30	-05	-15	08	48	-21	12
Organisation	-29	13	-23	-16	50	02	04
General Culture	-27	-20	03	19	02	15	29
Service	-28	-19	11	00	22	-29	35
Arts	-24	-19	-28	33	33	-35	24
Outdoor	37	63	-06	-41	-07	-57	-30
Scientific	08	28	26	-19	-18	-24	-25
Technical	-11	36	-02	-07	-07	-21	00
ACER YOUTH IN TRANSITION INTEREST SURVEY N = 34 year 11 high school pupils							
Realistic	21	41	33	-42	-23	-15	-31
Investigative	05	66	-06	-37	17	-04	-55
Artistic	00	-15	03	-17	12	01	26
Social	-22	-32	30	15	-04	-05	24
Enterprising	07	-40	02	30	-18	-11	32
Conventional	-04	-20	-06	-04	27	21	-04

TABLE 6 (continued): Correlation of *Career Interest Test* scores and results from other inventories.

Questionnaire	Ou	Pr	Sc	Cr	Bu	Of	Pc
KUDER CAREER SURVEY N = 27 male and female organisational learning students							
Nature	49	09	-43	35	-35	-36	06
Mechanical	23	45	-27	03	11	-19	-50
Computational	-17	-27	09	-49	38	38	11
Scientific	-20	25	14	15	-07	-25	06
Sales	-32	09	24	16	09	-09	-27
Artistic	36	-01	-17	61	-37	-42	30
Musical	-02	15	-07	07	13	-03	00
Human	18	-44	-26	29	-28	-17	73
Comm	-13	-12	-25	27	-08	-06	28
Office	-21	05	31	-68	34	54	-49
MY VOCATIONAL SITUATION N = 26 high school pupils							
Vocational identity	-20	03	34	09	-47	-12	2-
Occupational information	-22	09	32	23	-05	-24	-18
Barriers	-03	14	-14	25	10	-19	-11
NEW ENGLAND PERSONALITY QUESTIONNAIRE N = 20 pupils							
Extraversion	-03	-5	-02	-26	10	28	24
Anxiety	-17	21	-26	-09	18	03	-30
Flexibility	47	07	-04	24	-23	-41	-33
MARLOW-CROWNE SOCIAL DESIRABILITY N = 31 PUPILS							
Social desirability responding	-11	-18	16	-24	12	23	17
PERSONNEL SELECTION TEST N = 94 junior high school pupils							
Verbal	-10	-28	-02	10	06	15	20
Numerical	02	-21	-03	03	11	00	08
Spatial	00	00	-14	13	-03	03	00
PERSONNEL SELECTION TEST1 N = 39 adult education students							
Verbal	01	-17	15	52	-39	-12	-02
Numerical	13	01	02	05	-07	-03	-26
Spatial	30	-02	05	-12	-09	02	-18

Source: CIT Manual 1988, p.32; and unpublished data.

¹ Spearman rank correlations.

Concluding comments

The *Career Interest Test* was developed originally to meet the need for a comprehensive Australian interest survey that would be useful for a broad range of career goals. It has now

found application in Ireland, Sri Lanka and the Middle East. The framework should find universal application but the content will need to be culturally specific.

Some criteria that served as guides during the early phases of development were:

- a) a manageable range of interest categories;
- b) sufficient categories for a comprehensive evaluation;
- c) easy and accurate administration;
- d) a combination of items from jobs, courses and activities;
- e) interpretation procedures that report and display personal results; and
- f) a test with high technical qualities within an easily understood framework.

Users should feel reassured about the reliability of the results based on group and individual comparisons but some caution about the validity or meaningfulness of the responses is always warranted. The available evidence is that the *Career Interest Test* may not always overlap with other measures. Secondly, caution is required in making long-term predictions from the answers to the *Career Interest Test*, let alone any interest questionnaire.

It is recommended that the *Career interest Test* is always used in conjunction with a thorough careers interview and as part of a career exploration program for a person. It should not be used in a 'test-and-tell' fashion. This assessment of interests does not view the separate interests as traits but as categories of likely reinforcers.

The *Career Interest Test* is helpful in a career guidance context where there is insufficient information available to a person for them to decide about their current career interests. If a person's areas of career interests are clearly defined and stated then it suffices to use simple resources such as a classification of careers by interest categories and educational level.

Furthermore, in providing assistance there are a number of obvious factors other than interests that should be taken into account. These include special talents, educational achievements, a person's temperament, the range of opportunities, work experience, occupational information, one's personal values and any limiting factors that cannot be overcome (see Patton & McMahon, 1998 for a summary of influences from a systems theory perspective). Nevertheless, where adolescent interests are not clear then the results from the *Career Interest Test* may be used to search for occupations that are compatible with the highest interest categories. Practical assistance is available in the form of a *Personal Profile* handed to each person, and a *Classification of Occupations by Interest Categories* (copies of these are available from the author upon request).

While post-modern career theorists have quite rightly criticised the unthinking use of tests and a mindless dependence on a static trait-factor theory there is still some scope for each person to construct a career plan on the basis of their preferences or interests and to seek their own best person-environment fit. In this case career interests can be integrated as a dynamic and ongoing component within a constructivist perspective and narrative approach to each person's career.

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References

- Athanasou, J. A. & Hosking, K. (1998). Using a career interest card sort for vocational assessment and counselling, *Australian Journal of Career Development*, 7, 12-15.
- Athanasou, J. A. (1986). A vocational interest survey: Six experimental scales for the measurement of Holland's vocational types. In J. J. Lokan, & K. F. Taylor (Eds.), *Holland in Australia. A vocational choice theory in research and practice* (pp. 139-148). Melbourne: Australian Council for Educational Research.
- Athanasou, J. A. (2003). The Career Interest Test (3rd Edition). In M. McMahon & W. Patton (Eds.), *Ideas for Career Practitioners* (pp. 8-15). Brisbane: Academic Press.
- Athanasou, J. A. (1988). *Career Interest Test*. Sydney: Hobsons Press.
- Athanasou, J. A. (1990). A framework for the assessment of career interests. *International Journal of Career Management*, 2, 28-31.
- Athanasou, J. A. (2001). Analysis of responses to vocational interest items: A study of Australian high school students. *Journal of Career Assessment*, 9, 61-79.
- Athanasou, J. A. (2003). Rating of vocational interests under matching and nonmatching conditions. *Psychological Reports*, 92, 1061-1064.
- Athanasou, J. A. (2006). *Career Interest Test. Version 3.0*. Sydney: Author.
- Hansen, J. C. & Campbell, D. P. (1985). *Manual for the Strong Interest Inventory. Form T325 of the Strong Vocational Interest Blanks* (4th ed.). Palo Alto, CA: Consulting Psychologists Press.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments*. (3rd edition). Odessa, FL: Psychological Assessment Resources.
- Kuder, G. F. (1960). *Kuder Preference Record - Administrator's Manual*. Chicago: Science Research Associates.
- Patton, W., & McMahon, M. (1998). *Career development and systems theory. A new relationship*. Pacific Grove, CA: Brooks/Cole Publishing.
- Prediger, D. J. (1981). Getting "Ideas" out of the DOT and into vocational guidance. *Vocational Guidance Quarterly*, 29, 293-305.
- Prediger, D. J. (1999). Integrating interests and abilities for career exploration. General considerations. In M. L. Savickas, & A. R. Spokane (Eds.), *Vocational interests: meaning, measurement, and counselling use* (pp. 295-325). Palo Alto, CA: Davies-Black.
- Roe, A. (1956). *The psychology of occupations*. New York: Wiley.
- Savickas, M. L. (1999). The psychology of interests. In M. L. Savickas, & A. R. Spokane (Eds.), *Vocational interests: meaning, measurement, and counselling use* (pp. 19-56). Palo Alto, CA: Davies-Black.
- Strong, E. K. Jr. (1943). *Vocational interests of men and women*. Stanford, CA.: Stanford University Press.
- Thurstone, L. L. (1927). A law of comparative judgment. *Psychological Review*, 34, 273-286.

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