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INTERNATIONAL

OIP+

OCCUPATIONAL
INTEREST PROFILE
technical manual



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OVERVIEW

The OIP+ has been designed as a tool to aid careers guidance and development, and outplacement decisions. It has been developed in the United Kingdom on a large sample of individuals drawn from a wide range of different age and occupational groups and varying social backgrounds. The OIP+ is therefore appropriate for use in a wide range of career guidance and development settings.

The OIP+ is an expanded version of the earlier careers assessment tool, the OIP, which was first published in 1991. The changes that have occurred in the world of work over the last decade, and recent developments in personality theory (specifically the development of the Five Factor Theory of personality), necessitated a revision and update of the OIP to ensure its continued relevance to careers guidance in the 21st Century.

The principle differences between the OIP and the OIP+ have been the addition of four new scales, along with a minor revision of the existing scales to maintain the brevity of the test while preserving its psychometric properties. Experienced users of the OIP can rest assured that the OIP+ continues to measure the original OIP scales that they have come to rely on, thus enabling them to directly transfer the interpretive skills they have developed on the OIP to the revised and updated version of this test.

The OIP+ contains sixteen scales, eight

measuring personal work needs and eight assessing occupational interests. Each of the eight personal work needs measured by the OIP+ is bi-polar. That is to say, high or low scores on each dimension measure opposite characteristics (e.g. extraversion v introversion, etc.). The occupational interests on the other hand are uni-polar, with a high score indicating a strong interest in the given career area and a low score indicating a lack of interest in that career area.

The characteristics which are measured by the OIP+ have been selected for two reasons. Firstly, for their relevance to careers assessment and guidance decisions, and secondly, because of extensive research evidence demonstrating their validity. Thus the test user can be confident that the OIP+ is measuring meaningful aspects of the respondent's occupational interests and personal work needs.

MEASURING PERSONAL QUALITIES

Interest in the measurement of psychological characteristics (psychometrics) can be traced back to the late 19th Century and the work of Francis Galton (1884). Pioneering work in the field of vocational interest measurement was carried out in the 1920s by E.K. Strong, Jr., who developed the Strong Vocational Interest Blank. But it was the impetus provided by the second world war which resulted in these early endeavours developing into a serious scientific enterprise. During the war there was a great need to select military personnel for air crew training which led to the development of a number of psychometric tests both in the USA and in the UK. The main interest at that time was in the development of IQ tests (or tests of mental ability as they were then called) rather than in the development of tests of personality and interests. While trait theory, which underlies much of personality and occupational interesting testing, had been developed by Allport in the 1930's, it was some time before trait theory was used to construct measures of personality and occupational interests. In fact, it was not until after the Second World War that such work began in earnest.

The reasons for psychological testing beginning to burgeon after the Second World War were basically twofold. Firstly, modern computers permitted the lengthy and complex statistical analysis of data which is required to produce a psychometric test. Thus David Campbell, during the late 1960s, was able to use the newly available computing power to carry out the large scale research and analysis that was necessary for the development and publication of the Strong-Campbell Interest Inventory (Campbell, 1971). The second reason for the dramatic increase in psychological testing after the Second World War lay in the growing realisation that only by being able to understand and measure individual differences could we hope to understand, and ultimately predict, human behaviour with any degree of reliability.

The principles which underlie personality and interest measurement are not as complex as they might at first appear. A personality or interest questionnaire is simply a collection of questions, or "items", which assess an individual's interests or characteristic ways of thinking, feeling and acting in different situations. Items do not have to directly ask a person how they typically behave (e.g. I am a warm, friendly person). All that is needed for an item to work is for people to respond to it in a

consistent way. Thus, good questionnaires can be reliable, yet contain items which are not necessarily transparent or obvious in their wording. In the area of occupational assessment it is in fact helpful if a test contains items that are not transparent, thus making it harder to fake test results. However, this is less of an issue in careers guidance, as there is little reason for individuals who are completing questionnaires for guidance or development purposes to portray a falsely positive image of themselves.

Personality and interest questionnaires take items which measure different aspects of the same personality characteristic or interest area and combine them to form subscales or dimensions. By asking questions which address many different facets of a person's behaviour and attitudes, questionnaires attempt to get a broad picture of an individual's interests and how they typically think, feel and act in different settings and with different people (e.g. with friends, at work, at formal social engagements etc.). Thus, when we say a person is extroverted, we mean that they are typically sociable, lively, outgoing and friendly in a variety of contexts: that they usually seek variety, change and excitement and have a great need for others' company. In addition to addressing those characteristics which are extreme or outstanding, questionnaires also assess those ways in which a person is average. In personal development situations we are often as interested to know whether a person is average on a certain trait, as we are to identify their most notable or extreme characteristics. For example having an average score on a particular trait, say assertiveness, may better fit the demands of the career area being considered than being either highly challenging and assertive or very accommodating and passive. Average scores can describe a balanced and flexible position, where the person is capable of displaying the strengths which are found at both of the extreme ends of the personality dimension. In the case of a person who has average levels of assertion for example, they are likely to strive to achieve a balance between being task-focussed and achieving results, yet being sensitive to others' needs and avoiding interpersonal conflicts.

THE DEVELOPMENT OF THE OIP

The theoretical structure for the occupational interest scales of the OIP was developed from a review of existing vocational interest questionnaires (e.g. Kuder Preference Record, Rothwell-Miller Blank, Vocational Preference Inventory etc.) along with a detailed review of the pioneering research carried out by John Holland in the area of career themes. Holland (1985), reporting on the culmination of many years of research, suggested that the main dimensions underlying most occupational interest inventories could be accounted for by six general career themes –Realistic, Investigative, Artistic, Social, Enterprising and Conventional.

The Holland career themes are strongly reflected in the seven occupational interest scales contained in the OIP. The initial research for the development of the original OIP, however suggested that some changes to the basic Holland scheme were necessary. Three of the most important of these were dictated by changes that have occurred in the world of work since the Holland Career Themes were first proposed in the 1960s.

It was determined that the enormous growth in the areas of Information Technology and Computing required that Holland's Investigative career theme be separated into two components –Scientific and Logical, with the latter interest focussing on mathematical, computing and IT skills. It was also determined that, due to the growing importance of the financial services sector, the Conventional theme in Holland's scheme needed widening to include interests in both administrative and financial matters. Finally, it was determined that the Enterprising interest identified by Holland, which assess an interest in business and entrepreneurship, needed to be extended to include all those business careers that involve persuasion, such as; Sales and Marketing, Public Relations, etc.

A review of the relevant literature indicated that five personal variables played a significant role in career choice. Measures of extraversion, emotional stability and conscientiousness were included in the original OIP as research had demonstrated that these three personality factors account for a significant proportion of the variance in the majority of personality questionnaires. In addition, measures of the need to take control of situations, and the need for variety and change were included because of their clear relevance to career choice.

Thus a total of twelve scales, assessing seven interest and five personality characteristics, were measured by the original 128 item OIP. Items assessing the five personality characteristics and seven occupational interests were combined in the same form and presented as a single test. The response format was a 5-point Likert scale ranging from Strongly Disagree to Strongly Agree.

THE ADDITIONAL OIP+ SCALES

Since the OIP was first released in 1991 our understanding of the sphere of human personality has been greatly expanded by the work of Costa and MacCrea. Building on the research of other psychometricians, these authors have demonstrated that five personality factors are able to account for the majority of the variance found in personality questionnaires. These personality dimensions have come to be known as the Big Five personality factors. These well replicated personality dimensions are increasingly being used as the basic theoretical structure of most modern, multi-factorial personality measures.

Three of the Big Five personality dimensions are to be found in the original OIP. These were labelled: Need for Stability; Need for People; Need for Structure. To facilitate ease of Interpretation, these dimensions have been renamed in the OIP+ to be consistent with the factor labels that are generally used to describe the Big Five. Namely: Stability; Extraversion and Conscientiousness (respectively). In addition, the two remaining factors from the Big Five (Agreeableness and Openness) have been added to the OIP+ to further improve the

comprehensiveness of this assessment tool.

Research data collected on the original version of the OIP suggested that the Personal Work Needs scale, Need for Control, assessed an interest in controlling and managing others. Additionally, the rapid expansion of service sector and retailing jobs, which often require people management skills, suggested the importance of assessing managerial interests. For these reasons, the Need for Control scale was reclassified as an occupational interest scale assessing Managerial interests.

Finally, feedback from careers guidance counsellors had indicated the central role of financial as versus intrinsic rewards in influencing career choice. This factor has typically been overlooked in most measures of vocational interests which assume that intrinsic interests are most likely to determine career choice. Thus with the addition of this scale, it is possible with the OIP+ to determine the importance an individual attaches to the financial rewards of work and the degree to which they may be motivated to take on roles which offer financial as opposed to intrinsic rewards.

THE APTITUDE VERSUS INTEREST APPROACH TO CAREERS GUIDANCE

There are two broad approaches to careers guidance, which involve focussing on either the respondent's aptitudes or interests. If the aptitude approach to careers guidance is followed, the respondent is given a number of tests on which they have to perform to their maximum level. Their scores on these tests, which typically include general reasoning tests, and a range of other specific aptitude tests (i.e. mechanical, spatial, clerical etc.), are then compared to scores obtained by specific occupational groups. Careers are then suggested which match their Aptitude profile. Thus, for example, if an individual performed well on a test of spatial reasoning, depending upon other criteria being satisfied, a number of careers that involve a large component of spatial reasoning would be suggested.

The second approach to careers guidance is to assess occupational interests, personal needs and values, to provide the careers adviser with objective and reliable information on which to generate

career suggestions and advice. The major difference between these two approaches is that in the interests/values approach the client is asked questions to elicit their personal preferences, rather than their maximum level of performance on a range of work related aptitudes being assessed. Careers which are likely to meet the person's interests and values are then suggested, rather than suggesting careers that match their aptitudes.

Given that these two approaches to careers guidance are not mutually exclusive, the OIP+ has been designed so that it can optionally be integrated to integrate with a general reasoning test (such as the GRT2), or with a test of technical aptitudes (such as the Technical Test Battery), to provide a more comprehensive vocational assessment. This enables the careers adviser not only to suggest careers that meet the individual's interests and personal needs, but also to suggest careers that match their aptitudes and abilities.

THE OIP+ INTEREST SCALES

PERSUASIVE

High scorers on this scale show an interest in roles that involve communicating information and ideas to others in a persuasive manner. High scorers typically enjoy speaking in public and relish the opportunity to convert others to their way of thinking. Typical occupations for those with high persuasive interests would be sales and marketing roles, public relations, entrepreneurial or other business roles.

SCIENTIFIC

High scorers on this scale show an interest in scientific pursuits including Physics, Chemistry, Medicine and laboratory work. People scoring highly on this scale are typically interested in discovering new facts and solving scientific problems. Greatly interested in analytical skills, and with high levels of scientific curiosity, individuals with a high score on this scale are likely to enjoy working in a range of scientific areas.

PRACTICAL

High scorers on this scale show an interest in practical and mechanical activities. People scoring highly on this scale are typically interested in working with their hands and are likely to find great satisfaction from constructing or repairing things. Vocational roles involving this interest include: engineering; work in the construction industry; craft roles; horticulture; catering, etc.

ADMINISTRATIVE

High scorers on this scale show an interest in organising and maintaining records and information. Both financial and clerical/administration areas are sampled by this scale. High scorers are typically interested in such activities as bookkeeping, stock control etc. People who show an interest in this occupational area typically enjoy work which requires attention to large amounts of paperwork and the keeping detailed, accurate records.

NUTURING

High scorers on this scale are interested in helping and caring for other people – particularly those who are vulnerable or needy. They are interested in people and their problems, enjoy working closely with others and are naturally inclined to empathise with them. People scoring highly on this scale are typically interested in careers in the helping professions such as teaching, social work, health care roles, etc.

ARTISTIC

High scorers on this scale show an interest in all areas concerned with the creation of artistic and cultural products and ideas. High scorers are likely to be interested in a wide range of artistic endeavours such as painting, theatre, photography, and all types of design. They enjoy expressing themselves through artistic activities. High scorers are likely to enjoy working in most areas of the arts and entertainment industries.

LOGICAL

High scorers on this scale show an interest in logical, rational pursuits. Such individuals enjoy solving puzzles of all types and are likely to be interested in activities that require logical problem solving, or mathematical skills. Any careers that involve the use of computers, data analysis, etc. are likely to be of interest to high scorers.

MANAGERIAL

High scorers on this scale show an interest in managing others. They enjoy directing the work of others and feel comfortable giving people instructions. They are likely to enjoy people management roles in the retail, leisure or service sector, as well as enjoying more traditional managerial positions.

THE OIP+ PERSONAL WORK NEEDS SCALES

EXCITEMENT

High scorers are keen to actively seek out new and exciting activities. They enjoy variety and change, and are likely to quickly become bored if they have to perform the same task for any length of time. They enjoy taking risks and are likely to require an element of adventure or excitement in their working life. Low scorers on the other hand prefer the familiarity and safety of routine, and are most comfortable doing things they have done before. They are likely to be cautious, safety conscious individuals who have little need for excitement and thrills in their life and do not actively seek variety or change

STABILITY

High scorers on this dimension are emotionally stable, calm and composed individuals who are not prone to mood swings. Generally coping well under pressure, they are unlikely to become tense, irritable or moody. Accepting criticism in a good natured way they will rarely be upset by the thoughtless comments others might make. Low scorers tend to be emotionally volatile and prone to mood swings. Easily upset by others they may react adversely to criticism even if this is justified. They may have a tendency to worry about anticipated threats and challenges and be troubled by feelings of self doubt.

AGREEABLENESS

High scorers are trusting and kind-hearted by nature and have faith in the honesty and integrity of others. Inclined to give people the benefit of the doubt, others may on occasion take advantage of their good will. Generous and philanthropic, they are likely to be agreeable and accommodating in their dealings with others. Low scorers, on the other hand, are likely to be cynical in their perspective on life. Sceptical, and inclined to doubt others' good will, they have little faith in human nature. They are likely to be suspicious about others' motives, believing that most people are only motivated by self-interest. As a result they will not be easily taken in by flattery or praise and are likely to be quite guarded in their dealings with others.

OPTIMISM

High scorers on this dimension are likely to take an optimistic approach to set-backs and failures. Believing that their actions shape outcomes, they are likely to persevere in the face of adversity, believing that set-backs can be overcome with effort and hard work. As a result, they may be inclined to persevere with tasks when it might have been more constructive to have conceded defeat and to have invested their energies elsewhere. Low scorers, on the other hand, are prone to become dispirited in the face of failure. While they are likely to be as optimistic as most when things are going well, they may quickly concede defeat when things go wrong. Doubting their, and others', ability to shape events they may ascribe positive outcomes to chance or good luck.

CONSCIENTIOUSNESS

High scorers on this scale pay attention to detail and display self-control and restraint. Well organised, they like to carefully plan ahead, attempting to account for all possible contingencies. Diligent and persevering by nature, they have a strong sense of duty. Once they have started a task, they are likely to feel compelled to see it through to the end. Low scorers on the other hand, tend to have little concern for detail. Not enjoying planning ahead, they are likely not to be particularly well organised. Spontaneous and impulsive, they may be inclined to start tasks but lose interest in them before they are finished, or possibly spread themselves across too many different tasks at once.

EXTRAVERSION

High scorers greatly enjoy the company of others. Talkative, outgoing and sociable by nature, they dislike being on their own for long periods of time. Being naturally lively and participative, they enjoy social occasions and are likely to take centre stage at parties and social events. Low scorers on the other hand prefer to work on their own, away from the distraction of others. They will have little need for constant contact with others and may prefer their own company to participating in group activities. It is likely that they will take a while to get to know new people and they may slip into the background at social events.

OPENNESS

High scorers are inclined to think in abstract theoretical ways. At times they may become so involved with their own thoughts and ideas as to lose track of practical realities. Being open to theoretical possibilities and unconventional ideas, they are inclined to bring a radical, innovative approach to problem solving. Low scorers, on the other hand, are down to earth and pragmatic. Realistic and practical in their thinking style, they are inclined to reject theoretical, abstract approaches to problem solving. Preferring to focus on concrete issues they will be more concerned to get things working rather than ponder why they work.

FINANCIAL

High scorers value money and the trappings of wealth. They are likely to be motivated by financial success and appreciate the status that wealth confers. Aspirational by nature, they are likely to seek work that offers the potential for large financial rewards. Low scorers, on the other hand, are not particularly motivated by money. Not being particularly aspirational by nature their main concern when considering a job will not be its potential financial rewards. Rather they are likely to seek work that will be intrinsically rewarding even if it does not pay well.



THE PSYCHOMETRIC PROPERTIES OF THE OIP+

This chapter will present details concerning the psychometric properties of the Occupational Interest Profile. The aim will be to show that the OIP+ fulfils various technical requirements, in the areas of standardisation, reliability and validity, which ensure the psychometric soundness of the test.

STANDARDISATION : NORMATIVE

Normative data allows us to compare an individual's score on a standardised scale against the typical score obtained from a clearly identifiable, homogeneous group of people. In order to provide meaningful interpretations, the OIP+ was standardised against a number of relevant groups.

Standardisation ensures that the measurements obtained from a test can be meaningfully interpreted in the context of a relevant distribution of scores. Another important technical requirement for a psychometrically sound test is that the measurements obtained from that test should be reliable.

RELIABILITY

Reliability is the property of a measurement which assesses the extent to which variation in measurement is due to true differences between people on the trait being measured or to measurement error.

Reliability is generally assessed using two specific measures, one related to the stability of scale scores over time, the other concerned with the internal consistency, or homogeneity of the constituent items that form a scale score.

RELIABILITY : STABILITY

Also known as test-retest reliability, an assessment is made of the similarity of scores on a particular scale over two or more test occasions. The occasions may be from a few hours, days, months or years apart. Normally Pearson correlation coefficients are used to quantify the similarity between the scale scores over the two or more occasions.

Stability coefficients provide an important indicator of a test's likely usefulness of measurement. If these coefficients are low (< approx. 0.6) then it is suggestive that either the behaviours/attitudes being measured are volatile or situationally specific, or that over the duration of the retest interval, situational events have rendered the content of the scale irrelevant or obsolete. Of course, the duration of the retest interval provides some clue as to which effect may be causing the unreliability of measurement. However, the second measure of a scale's reliability also provides valuable information as to why a scale may have a low stability coefficient.

RELIABILITY : INTERNAL CONSISTENCY

Also known as scale homogeneity, an assessment is made of the ability of the items in a scale to measure the same construct or trait. That is, a parameter can be computed that indexes how well the items in a scale contribute to the overall measurement denoted by the scale score. A scale is said to be internally consistent if all the constituent item responses are shown to be positively associated with their scale score.

The most common measure of internal consistency is Cronbach's Alpha. If the items on a scale have high inter-correlations with each other, and with the total scale score, then coefficient alpha will be high. Thus a high coefficient alpha indicates that the items on the scale are measuring very much the same thing, while a low alpha would be suggestive of either scale items measuring different attributes or the presence of error.

The fact that a test has high internal consistency and stability coefficients only guarantees that it is measuring something consistently. It provides no guarantee that the test is actually measuring what it purports to measure, nor that the test will prove useful in a particular situation. Questions concerning what a test actually measures and its relevance in a particular situation are dealt with by looking at the test's validity. Reliability is generally investigated before validity as the reliability of a test places an upper limit on the test's validity. It can be mathematically demonstrated that a validity coefficient for a particular test cannot exceed that test's reliability coefficient.

VALIDITY

The ability of a scale score to reflect what that scale is intended to measure. Kline's (1993) definition is "A test is said to be valid if it measures what it claims to measure". Validation studies of a test investigate the soundness and relevance of a proposed interpretation of that test. Two key areas of validation are known as criterion validity and construct validity.

VALIDITY : CRITERION VALIDITY

Criterion validity involves translating a score on a particular test into a prediction concerning what could be expected if another variable was observed. The criterion validity of a test is provided by demonstrating that scores on the test relate in some meaningful way with an external criterion. Criterion validity comes in two forms –predictive and concurrent. Predictive validity assesses whether a test is capable of predicting an agreed criterion which will be available at some future time –e.g. can a test predict the likelihood of someone successfully completing a training course. Concurrent validity assesses whether the scores on a test can be used to predict a criterion measure which is available at the time of the test –e.g. can a test predict current job performance.

VALIDITY : CONSTRUCT VALIDITY

Construct validity assesses whether the characteristic which a test is actually measuring is psychologically meaningful and consistent with the test's definition. The construct validity of a test is assessed by demonstrating that the scores from the test are consistent with those from other major tests which measure similar constructs and are dissimilar to scores on tests which measure different constructs.

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RELIABILITY OF THE OIP+

INTERNAL CONSISTENCY

Internal consistency reliabilities: (Cronbach's Alpha) were computed on a combined sample of males and females. Table 1 below presents these coefficients for each of the OIP+ scales, along with the mean 'corrected' item-total correlations for each scale. The latter statistic provides a measure of the average association between the constituent scale items and the total scale. (Each individual item-scale score coefficient is corrected for the inflation of the coefficient that results from that item's inclusion in the scale score.)

Scale	Alpha	Average ITC
Persuasive	.71	.25
Scientific	.87	.48
Practical	.79	.35
Administrative	.80	.35
Nurturing	.83	.39
Artistic	.81	.35
Logical	.80	.35
Managerial	.79	.32
Excitement	.74	.29
Stability	.79	.33
Agreeableness	.70	.25
Optimism	.60	.18
Conscientiousness	.68	.22
Extraversion	.67	.21
Openness	.64	.21
Financial	.74	.26

Table 1 – presents alpha coefficients and average corrected item-whole correlations For each of the OIP+ scales on a sample of 242 young people ages 14-19 years.

Inspection of table 1 indicates that all the OIP+ scales have acceptable levels of internal consistency, with all the alpha coefficients being 0.6 or greater. In fact, such levels of internal consistency can be considered to be high give the brevity of the scales; which have only eight items each. Moreover, the moderate average corrected item-whole correlations indicate that these scales are measuring broad, meaningful dimensions, rather than narrow dimensions which are comprised of highly homogeneous items. Interestingly, the alpha coefficients for the personality dimensions are generally lower than for the occupational interest scales, possibly reflecting developmental issues that are due to the age range of this sample.

CONSTRUCT VALIDITY

SCALE INTER-CORRELATIONS

The inter-correlations between the occupational interest and personality scales are of interest as it is important that a test's sub-scales are relatively independent of each other, thus demonstrating that they are measuring distinct constructs. These inter-correlations are presented in Tables 2 and 3 respectively.

The inter-correlations between the vocational interest scales, presented in table 2, are mostly relatively modest in size. This indicates that most of the occupational interests assessed by the OIP+ are fairly independent of each other. The only significant exceptions to this are the Logical – Administrative and the Managerial – Persuasive correlations. The former reflects the procedural nature of the mathematical and computational interests assessed by the Logical interest, and the latter reflects the persuasive component of managerial roles. These correlations are therefore consistent with the definitions of these scales, providing evidence of these scales' construct validity. The inter-correlations between the personal work needs scales, presented in table 3, are all small (below 0.35), indicating that the personal work needs assessed by the OIP+ are very independent of each other.

THE RELATIONSHIP BETWEEN THE OIP+ AND THE JTI

A sample of over 100 young people completed both the JTI and OIP+ as part of validation exercise. The correlations between these tests' scales are presented in Table 4. As can be seen from inspection of this table the JTI Extraversion scale correlated very highly with OIP+ Extraversion scale (0.88), providing strong support for the validity of this scale. As would be expected, Extraverted Types (as measured by the JTI) showed a strong interest in Persuasive roles (.58), reflecting their tendency to communicate in an active, participative manner and their desire to engage in people centred activities.

As would be expected, The JTI Sensing-Intuiting dimension correlated very highly with the OIP+ Openness scale (0.81). This reflects the fact that Intuitive Types, who are orientated towards the world of ideas, are theoretically minded and open to change and innovation. As would be expected, this JTI scale also correlated with Artistic interests (.58), confirming that those with Artistic interests are more intuitive and creative.

The scales OIP+ scales measuring interests in Artistic and Nurturing occupations correlated with the JTI Thinking-Feeling dimension (0.50 and 0.36

OIP+ Interests

- 1 Artistic
- 2 Practical
- 3 Scientific
- 4 Administrative
- 5 Nurturing
- 6 Logical
- 7 Persuasive
- 8 Managerial

	1	2	3	4	5	6	7
1 Artistic	-						
2 Practical	0.05	-					
3 Scientific	0.07	0.30	-				
4 Administrative	0.02	0.01	0.00	-			
5 Nurturing	0.34	-0.01	-0.02	0.09	-		
6 Logical	0.03	0.15	0.33	0.42	0.01	-	
7 Persuasive	0.32	0.20	0.10	0.09	0.29	0.21	-
8 Managerial	0.14	0.14	0.07	0.07	-0.04	0.25	0.55

Table 2- presents correlations between each of the OIP+ vocational interest scales

OIP+ Work Needs

- 1 Excitement
- 2 Stability
- 3 Extraversion
- 4 Financial
- 5 Optimism
- 6 Openness
- 7 Agreeableness
- 8 Conscientiousness

	1	2	3	4	5	6	7
1 Excitement	-						
2 Stability	0.27	-					
3 Extraversion	0.19	0.26	-				
4 Financial	0.15	0.02	0.32	-			
5 Optimism	-0.01	0.30	0.07	0.14	-		
6 Openness	0.08	-0.15	0.05	-0.13	-0.15	1.00	
7 Agreeableness	-0.10	0.28	0.28	0.10	0.10	-0.01	-
8 Conscientiousness	-0.20	0.23	0.22	0.34	0.19	-0.05	0.23

Table 3 – presents correlations between each of the OIP+ personal work needs

respectively). The latter correlation reflects the fact that Feeling Types are likely to show a genuine interest and concern in others and be attracted to roles where they can nature and care for others. The former correlation reflects that sensitivity that Feeling Types have for artistic expression, and their resultant desire to work in an area where they can express their feelings through creative endeavours. As would be expected, the significant correlation (0.40) between this JTI scale and OIP+ Openness scales indicates Feeling Types are less hard-headed and more open to ideas and experiences. This pattern of correlations with the JTI Thinking-Feeling scale therefore provides good support for the construct validity of these OIP+ scales.

Finally, as would be expected, the JTI dimension Judging-Perceiving correlated negatively with OIP+ Conscientiousness scale and positively with Need for Excitement scale (-0.74 and 0.38 respectively). This reflects the fact that Judging Types are more conforming and conscientious than Perceiving Types who in turn are more interested in change, variety and excitement than Judging types. Thus, this pattern of correlations provides good support for the construct validity of these OIP+ scales.

RELATIONSHIP BETWEEN OIP+ AND VPI

A sample of over young people 100 (aged 15-16) completed both OIP+ and Holland's VPI as part of a validation exercise. As can be observed from Table 5, a number of very strong, meaningful correlations emerged, which provide support for the construct validity of the OIP+

As would be expected, the VPI Realistic scale correlates strongly with OIP+ Practical (r=0.59), indicating that both these dimensions are measuring an interest in hands-on, practical and technical occupations. Holland's Investigative scale correlates very strongly (0.66) with the OIP+ Scientific scale, indicating that both of these scales measure an interest in Science and research. Similarly, as would be predicted, both the Artistic interest scales in OIP+ and VPI are highly correlated (0.66) with each other supporting the construct validity of these scales. The VPI Social scale correlates substantially (0.60) with the OIP+ Nurturing scale, providing further support that this scale is assessing an interest in roles in the caring professions. Similarly, the VPI Conventional scale correlates significantly with the OIP+ Administrative scale (0.64), indicating that both of these scales are assessing in administrative and clerical roles.

	EI	SN	TF	JP		EI	SN	TF	JP
1 Artistic	-0.43	0.58	0.50	0.05	1 Excitement	-0.35	0.20	-0.03	0.38
2 Practical	-0.03	0.10	-0.12	0.16	2 Stability	-0.35	-0.03	-0.18	-0.13
3 Scientific	0.30	0.21	0.10	-0.18	3 Extraversion	-0.88	0.16	0.21	0.04
4 Administrative	0.01	-0.34	-0.17	-0.30	4 Financial	-0.27	-0.04	-0.10	-0.09
5 Nurturing	-0.21	0.10	0.36	0.05	5 Optimism	-0.17	-0.08	-0.01	-0.23
6 Logical	-0.19	-0.03	0.00	-0.23	6 Openness	-0.12	0.81	0.40	0.16
7 Persuasive	-0.58	0.32	0.21	-0.05	7 Agreeableness	-0.39	0.10	0.18	-0.28
8 Managerial	-0.31	0.14	0.09	-0.17	8 Conscientiousness	-0.23	-0.23	-0.06	-0.74

Table 4: Correlations between OIP+ and JTI scales

EI	Extraversion-Introversion	TF	Thinking-Feeling
SN	Sensing-Intuition	JP	Judgement-Perception

	VPI_R	VPI_I	VPI_A	VPI_S	VPI_E	VPI_C
OIP+_AR	-0.13	-0.07	0.66	0.38	0.24	0.10
OIP+_PR	0.5	0.21	0.12	-0.12	0.04	-0.00
OIP+_SC	0.23	0.66	-0.08	0.09	-0.27	-0.02
OIP+_AD	0.19	-0.00	-0.01	0.04	0.33	0.64
OIP+_NR	-0.04	0.02	0.26	0.60	0.17	0.08
OIP+_LG	0.24	0.07	-0.04	-0.05	-0.02	0.32
OIP+_PS	0.18	-0.25	0.49	0.29	0.50	0.31
OIP+_MG	-0.01	-0.06	0.19	0.03	0.31	0.04

Table 5: Correlations between OIP+ and VPI scales



The VPI scale Enterprising fails to find a direct equivalent with any of the OIP+ scales. As has previously been noted, this is due to refinements that have been introduced into the OIP+ to reflect in changes that have occurred in the world of work since the development of the Holland career themes. In particular, Holland's concept of an enterprising interest has been split into persuasive and managerial components, to reflect the growth of sales/marketing and managerial roles in the modern work place. Thus, as would be expected given our reformulation of Holland's Enterprising interest, this VPI scale correlates positively with the OIP+ Persuasive (0.50) scale and, to a lesser extent, with the Administrative (0.33) and Managerial (0.31) scales.

RELATIONSHIP BETWEEN THE OIP AND THE ROTHWELL-MILLER

Table 6 presents correlations between the related interests assessed by the OIP and Rothwell-Miller. It can be seen from this table that there are strong relationships between the OIP Artistic scale and the Rothwell-Miller scales assessing Aesthetic, Literary and Musical interests. Moreover, the OIP Artistic scale is also negatively associated with the well-Miller Computational and Scientific scales, which would be expected given the nature of these interests. This pattern of correlations therefore provides strong support for the construct validity of the OIP+ Artistic scale.

Two Rothwell-Miller interests fail to correlate well with similarly named OIP interests. In the case of the OIP Practical scale, this shows a fairly large relationship with the Rothwell-Miller Mechanical, but not with the Rothwell-Miller Practical, scale. The reason for this lies in the respective definitions of these scales, with the OIP Practical scale being much more mechanically oriented than craft oriented, while the reverse is true for the Rothwell-Miller practical scale.

There is also a fairly small relationship between the OIP and the Rothwell-Miller persuasive scales. The reason for this probably lies in the way the scales are constructed on the two tests. The OIP+ Persuasive interest scale asks questions about a person's liking for various persuasive behaviours while the Rothwell-Miller simply presents a list of jobs which are assessed to require persuasive skills.

	Pers	Scient	Pract	Admin	Nur	Art	Log
Outdoor				32			
Mechanical			54		-41		
Computational		55		48	-59	-45	51
Scientific					-31	-47	
Persuasive	21				-37		
Aesthetic						71	
Literary						41	
Musical						43	
Soc. Serv		-32	49	-31	55		44
Clerical				41			30
Practical							
Medical							

Table 6: The relationship between OIP+ Interests and the Rothwell-Miller Interest Bank

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CRITERION VALIDITY

Table 7 below presents correlations between the OIP+ interest scales and the GCSE grades obtained by a sample of 335 young people. Inspection of this table indicates a number of interesting and meaningful relationships that provide support for the criterion validity of a number of the OIP+ scales. In particular, it would be expected that interest in a given career area would be related to GCSE performance within the same or a similar topic area. All other factors being equal, it would be expected that those individuals with a greater interest in a given area would be more likely to perform better in that area. The most notable examples of significant relationships between interests and performance are presented below.

The OIP+ Scientific interest was related to GCSE Science grades ($r=0.43$) as well as Geography grades ($r=0.35$). While the Practical Interest would be assumed to be reflective of GCSE Craft grades, this hypothesised relationship failed to reach statistical significance. As noted above, this may reflect the fact that the OIP+ Practical scale assesses a broad interest in hands-on, practical and mechanical areas, rather than assessing a more limited interest in craft based activities. With regard to the OIP+ Practical scale, however, an interesting and meaningful relationship was found between it and GCSE IT grades, with those who obtain a

lower score on this scale obtaining better IT grades ($r=-0.39$). Consistent with the definition of this scale, this inverse relationship suggests that more conceptually orientated students are likely to do better in IT.

As would be expected, the OIP+ Administrative scales was strongly correlated with GCSE Business Studies ($r=0.46$), as well as IT ($r=0.43$) grades. An unexpected relationship was found between the OIP+ Nurturing scale Art and Design GCSE grades ($r=0.65$). While not hypothesised, this is nonetheless consistent with the notion that those with a Caring disposition are more inclined to express their feelings and emotions. The OIP+ Artistic interests scale pursuits was, as expected, found to be related to GCSE Art and Design grades ($r=0.56$), providing strong support for the criterion validity of this scale. Similarly, a number of consistent and meaningful relationships were found between the OIP+ Logical scale, and GCSE grades in subjects that require a logical, analytical approach, including: Maths ($r=0.55$); Business Studies ($r=0.52$); Geography ($r=0.40$) and Science ($r=0.35$). This pattern of correlations therefore provides strong support for the criterion validity of this scale.

	EngLi	EngLa	Maths	Scien	Geog	Hist	IT	ArtD	Craft	RE	Fren	Bus
VEN	.135	.059	.049	-.079	-.156	-.023	.035	-.055	.028	-.004	-.136	-.419
PHLE	-.206	-.065	.039	.084	.129	-.105	-.112	-.114	-.268	-.162	-.322	-.054
RAD	-.023	-.065	-.145	-.216	-.422	.258	.043	-.089	-.253	-.280	-.104	-.589
GRE	.304	.257	.037	-.064	-.233	.225	.210	-.063	-.043	.177	.081	-.149
ASSE	.357	.350	.169	.175	.232	.428	.313	.251	-.125	.061	.233	.302
PERS	.286	.169	.067	.063	.171	.257	.226	.305	-.050	.117	.050	.255
SCI	.072	-.018	.208	.434	.349	.197	.132	.420	.023	.249	.108	.235
PRA	-.168	-.184	.015	.140	.139	-.099	-.391	.188	.130	-.037	-.201	.050
ADM	.326	.232	.217	.102	.323	.310	.427	.216	-.039	.186	.290	.463
NUR	.291	.101	.013	-.023	.072	.090	.197	.649	.156	.235	.186	.036
ART	.218	.170	.012	-.061	.025	.223	.033	.564	.043	.215	.011	.059
LOG	.207	.219	.554	.353	.401	.068	.295	-.045	-.052	.251	.285	.515

Table 7: Correlations between OIP Interest scales and GCSE Grades

	GCSE C and above	Average GCSE pass	Max GCSE pass
VEN	08	12	10
PHLE	-05	-02	00
RAD	-06	-09	-07
GRE	07	10	13
ASSE	17	18	24
PERS	15	14	20
SCI	16	17	20
PRA	-09	-07	-10
ADM	24	21	26
NUR	09	11	14
ART	10	12	17
LOG	27	29	26

Table 8: The Relationships between GeneSys variables and 5 GCSE indicator variables

Number of GCSEs with grade C and above
 Average Pass Mark over all GCSEs taken
 Maximum Passmark across all GCSEs taken

The GCSE results of a sample of 355 young people who previously completed the OIP+ were collated to examine whether vocational interests

were related to success at GCSE. The OIP+ Logical scale showed a consistent relationship (approaching 0.3) with the number of GCSE (grades C and above), average GCSE grade and maximum number of GCSE's obtained. The OIP+ scales Administrative, Scientific, Persuasive and Managerial all showed modest but statistically significant relationships with the same criteria.

Samples of young people enrolled in NVQ programmes completed the OIP+ and the average profile was charted for a number of Standard Occupational Categories (SOC's).

It can be observed from the graph below that trainees in the Engineering, Engineering Motor Trade and Construction SOC codes obtained higher scores on the OIP+ Practical scale than did other vocational groups. As would be expected, those trainees with the health care SOC code obtained higher score on the OIP+ Nurturing scale than did other groups. Similarly those trainees in the Business Administration SOC code obtained higher scores on the OIP+ Administrative scale than did other trainee groups. Finally, those trainees in the Hairdressing SOC code obtained higher scores on the OIP+ Artistic interest than other groups, reflecting

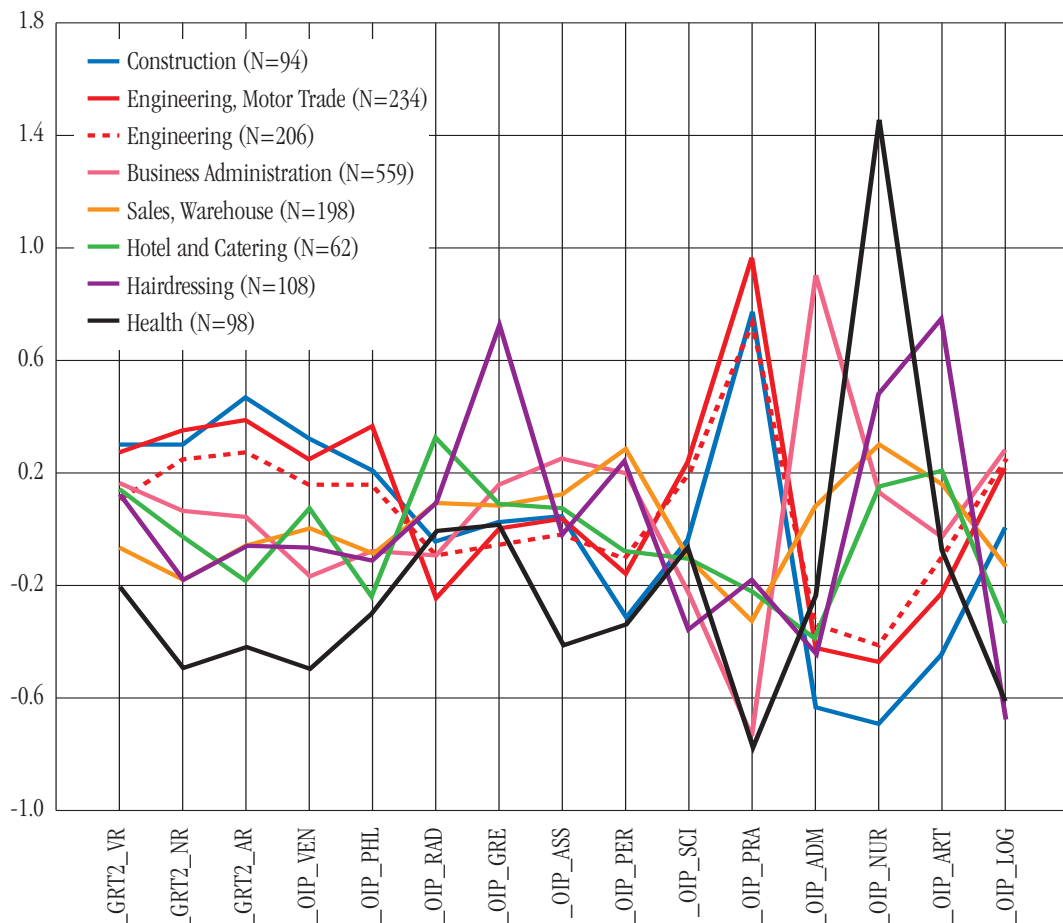


Figure 1: The GeneSys Ability, Personality, and Interest Profile for each of 8 Occupational SOC code categories.

the creative aspect of hairdressing. The above results therefore provide good evidence of the Criterion related validity of these OIP interest scales.

Sex differences were examined on a sub-sample of young people who completed the OIP+ as part of a vocational assessment. Table 9 presents mean scores on each of the OIP+ dimensions for males and females. Only one of the personal work needs dimensions showed a significant sex difference, with males reporting a greater need for excitement than females. Three of the eight interest scales showed sex differences. Females obtained higher scores on the nurturing and artistic interest than did the males, who obtained higher scores on the Practical interest scale than females.

	Mean	Mean	t-value	df	p	Valid N	Valid N
OIP+_AR	16.39623	11.14894	3.92699	98	0.000160	53	47
OIP+_PR	14.50943	17.97872	-2.54335	98	0.012543	53	47
OIP+_SC	12.66038	13.68085	-0.67825	98	0.499209	53	47
OIP+_AD	12.52830	12.17021	0.28281	98	0.777922	53	47
OIP+_NR	17.30189	11.36170	4.70449	98	0.000008	53	47
OIP+_LG	16.16981	17.25532	-0.85702	98	0.393527	53	47
OIP+_PS	18.24528	16.97872	1.13223	98	0.260300	53	47
OIP+_MG	18.45283	19.00000	-0.60800	98	0.544593	53	47
OIP+_EX	18.66038	22.17021	-3.17964	98	0.001974	53	47
OIP+_ST	16.07547	17.93617	-1.51169	98	0.133831	53	47
OIP+_PE	18.98113	17.25532	1.69864	98	0.092560	53	47
OIP+_MO	18.03774	19.04255	-0.91940	98	0.360143	53	47
OIP+_RS	17.50943	18.42553	-0.94447	98	0.347254	53	47
OIP+_OP	18.54717	17.10638	1.57011	98	0.119613	53	47
OIP+_AG	16.52830	13.40426	3.10293	98	0.002504	53	47
OIP+_CN	18.20755	17.51064	0.72843	98	0.468086	53	47

Table 9: Sex differences

To examine age effects, age was correlated with each of the OIP+ dimensions on a sub-sample of young people. No significant relationships were found.

	Age
OIP+_AR	-0.12
OIP+_PR	0.04
OIP+_SC	0.22
OIP+_AD	0.04
OIP+_NR	-0.11
OIP+_LG	0.26
OIP+_PS	-0.14
OIP+_MG	0.05
OIP+_EX	-0.08
OIP+_ST	0.05
OIP+_PE	0.00
OIP+_MO	0.02
OIP+_RS	0.17
OIP+_OP	0.08
OIP+_AG	-0.02
OIP+_CN	-0.04

ADMINISTRATION OF OIP+

BEFORE STARTING THE QUESTIONNAIRE

Put candidates at their ease by giving information about yourself, the purpose of the questionnaire, the timetable for the day, if this is part of a wider assessment programme, and how the results will be used and who will have access to them. Ensure that you and other administrators have switched off mobile phones etc.

The instructions below should be read out verbatim and the same script should be followed each time the OIP+ is administered to one or more candidates. Instructions for the administrator are printed in ordinary type. Instructions designed to be read aloud to candidates are bold with rules above and below and speech marks.

If this is the first or only questionnaire being administered give an introduction as per or similar to the following example:

“From now on, please do not talk among yourselves, but ask me if anything is not clear. Please ensure that any mobile telephones, pagers or other potential distractions are switched off completely. We shall be doing the Occupational Interest Profile which has no time limit, however, most people take about 20 minutes. During the test I shall be checking to make sure you are not making any accidental mistakes when filling in the answer sheet. I will not be checking your responses.”

WARNING: It is most important that answer sheets do not go astray. They should be counted out at the beginning of the test and counted in again at the end.

ADMINISTRATION INSTRUCTIONS

Continue by using the instructions **EXACTLY** as given. Say:

Distribute the answer sheets

Then ask:

“Has everyone got two sharp pencils, an eraser, some rough paper and an answer sheet.”

Rectify any omissions, then say:

“Print your surname, first name and title clearly on the line provided, followed by your age and sex. Please insert today's date which is []? on the ‘Comments’ line”

Walk around the room to check that the instructions are being followed.

WARNING: It is vitally important that test booklets do not go astray.

They should be counted out at the beginning of the session and counted in again at the end.

DISTRIBUTE THE BOOKLETS WITH THE INSTRUCTION:

“Please do not open the booklet until instructed.”

Remembering to read slowly and clearly, go to the front of the group and say:

“Please open the booklet and follow the instructions for this test as I read them aloud.”
(Pause to allow booklets to be opened).

This is a questionnaire concerning your interests, preferences and feelings about a range of things. You are asked to rate yourself on a scale from 1 to 5 on each question. When you have chosen the answer appropriate for YOU, record this by blackening the corresponding box on the answer sheet.

For example:

1. I like to watch the news on TV.

If you strongly agreed with this statement, you would fully blacken box 1 against question 1 on your answer sheet.”

Check for understanding of the instructions so far, then say:

“When answering the questions please remember the following:

1. Do not spend too much time pondering over the answer to each question. The information given in a question may not be as full as you would wish, but answer as best you can.
2. Please try to avoid the middle (In between) answer wherever possible.
3. Be as honest and truthful as you can. Don't give an answer just because it seems to be the right thing to say.
4. Make sure you answer every question, even those which do not seem to apply to you.
5. If you wish to change an answer, please erase it and insert your new answer.”

Then say very clearly:

“Is everybody clear about how to do this test?”

Deal with any questions appropriately, then say:

“Please begin”

Answer only questions relating to procedure at this stage, but enter in the Administrator's Test Record any other problems which occur. Walk around the room at appropriate intervals to check for potential problems. When everybody has completed the questionnaire:

COLLECT ANSWER SHEETS & TEST BOOKLETS, ENSURING THAT ALL MATERIALS ARE RETURNED (COUNT BOOKLETS & ANSWER SHEETS)

Then say:

“Thank you for completing the Occupational Interest Profile.”



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