



# MyCareerMatch Behavioural Assessment

## Reliability and Validation Report

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## Introduction

In an effort to ensure the efficacy of its assessment products, MyCareerMatch conducted reliability and validity research. Between 2006 and 2008 MyCareerMatch underwent reliability and validity testing. The reliability and validity studies involved 68 participants.

Participants represented a wide range of occupations, ranging from employees of public and private institutions, for profit and not-for profit organizations. Participants had varied educational backgrounds, including individuals with and without post-secondary education; and were from all organizational levels.

The MyCareerMatch proved to be highly reliable (.94) using a test-retest research format, leading to the conclusion that this assessment;

- is understood in the same way each time it is administered
- is appropriate to its intended audiences
- is relatively free from measurement error, and
- has a high degree of overall usefulness

MyCareerMatch showed significant content validity when measured against the MBTI and the DISC. All dimensions compared showed statistically significant content validity at the .05 confidence level.

In conclusion, MyCareerMatch showed considerable merit in precisely assessing and defining psychological types and behavioural styles. As the culminating assessment tool MyCareerMatch proved to be highly successful in helping individuals determine their behavioural types and personality preferences.

## Reliability and Validity

There are two primary ways that researchers can determine the extent to which particular empirical indicators (i.e., assessment responses) represent a given theoretical concept (i.e., behavioural styles as defined by MyCareerMatch). First, one can examine the reliability of an assessment instrument. Next, one can determine an instrument's validity.

It is important to note that the measurement of any psychometric instrument always contains a certain amount of chance error. Although ideal, the goal of error-free measurement is never attained in any area of scientific investigation.

### Reliability Defined

Reliability concerns the extent to which any measuring procedure yields the same results on repeated trials. The more consistent the results achieved by the same participants in the same repeated measurements, the higher the reliability of the measuring procedure; conversely the less consistent the results, the lower the reliability. An assessment instrument, for example, is quite reliable if an individual obtains approximately the same score or outcome on repeated examinations. Reliability is an important indicator of an instrument's readability, understand ability, and general usefulness.

### Validity Defined

In a general sense, any measuring device is valid if it does what it is intended to do. Unlike reliability that focuses on the performance of empirical measures, validity is usually more of a theoretically-oriented issue because it inevitably raises the question, "valid for what purpose?" Validity is crucial to an instrument's credibility; it is an indication that the instrument is indeed measuring what it was designed to measure and that it is measuring it accurately.

Validity, like reliability, is a matter of degree. Attaining a perfectly valid indicator—one that represents the intended, and only the intended, concept—is unachievable. However, the higher an instrument's validity the higher the likelihood that it is measuring the theoretical constructs for which it is expressly designed.

### Content Validity

Content validity is a way to determine the extent to which similar instruments obtain similar results. For example, if one is interested in determining the relationship (or content validity) between the Myers-Briggs Type Indicator (MBTI) and MyCareerMatch, a group would be administered both the MBTI and MyCareerMatch assessments. Both scores for every individual would be compared through statistical correlation to determine the extent of sameness in results.

Establishing content validity allows conclusions about the extent to which the assessment compares to a widely accepted benchmark assessment purportedly measuring the same content. It helps answer the question, "How well does the assessment instrument in question compare to other like assessment instruments?"

An important factor in establishing content validity is that at least one of the instruments used must be commonly held as a highly accurate measure of the underlying theoretical concepts. In the preceding example, the MBTI would qualify as such an instrument as it has widespread support in yielding benchmark data on behavioural styles and personality types

## Research Findings

To establish the merit of the MyCareerMatch's assessment instrument, MyCareerMatch underwent reliability and validity testing. Conducted over a period of two years from 2003 to 2005, both the reliability and validity studies involved 68 participants and included individuals participating in a MyCareerMatch workshops. The participants represented a wide range of occupations, ranging from employees of public and private institutions, for profit and not-for profit organizations; educational backgrounds, including individuals with and without post-secondary education; and from all organizational levels.

As you will note in Table 1 below, MyCareerMatch has proven highly reliable using a test-retest research format. One can safely conclude that the MyCareerMatch is understood in the same way each time it is administered and is relatively free from measurement error.

Additionally, MyCareerMatch shows significant content validity when measured against the MBTI and the DISC (Tables 2 and 3, respectively). All dimensions compared showed statistically significant content validity at the .05 confidence level. These findings are illustrated in Tables 2 and 3.

## Reliability Findings

To determine the reliability—the consistency of results—of the MyCareerMatch, seven (7) groups were asked to participate in a test-retest study. Each group participated in a workshop presented by the MyCareerMatch. In the initial workshop, each participant conducted their profile on-line. Between five (5) and six (6) weeks after the awareness workshops (enough time had passed to reduce memorized responses, yet still capitalize on the learning that occurred in the workshops), the same participants reconvened and scored an identical profile. To help eliminate some test-retest bias, the participants were given the same instructions prior to their profile in their first workshop and their retest experience.

Table 1 illustrates the reliability results of the MyCareerMatch instrument for each group, as well as its overall reliability. In general, the MyCareerMatch Assessment is a highly reliable assessment instrument with an overall reliability coefficient of .940 (1.00 is perfect reliability).

Table 1. MyCareerMatch Test-Retest Reliability (n=68)

| Group | No. of Participants | No. of Days Between Test-Retest | Reliability Coefficient |
|-------|---------------------|---------------------------------|-------------------------|
| 1     | 8                   | 42                              | .945                    |
| 2     | 12                  | 38                              | .952                    |
| 3     | 9                   | 41                              | .916                    |
| 4     | 11                  | 36                              | .928                    |
| 5     | 12                  | 36                              | .933                    |
| 6     | 8                   | 38                              | .963                    |
| 7     | 8                   | 40                              | .946                    |
|       | Total n = 68        |                                 | Mean = .940             |

## Validity Findings

To establish the content validity of MyCareerMatch, 22 participants from workshops and 28 university students were given three (3) behavioural instruments—the Myers-Briggs Type Indicator (MBTI), the DISC, and MyCareerMatch. The results were scored (the MBTI was scored by the test administrator) and then statistical correlations were run to determine the following relationships:

1. The extent to which the MBTI and MyCareerMatch Assessment results indicated similar personality, psychological, behavioural and behavioural characteristics.
2. The extent to which the DISC and MyCareerMatch Assessment results indicated similar personality, psychological, behavioural and behavioural characteristics.

To interpret the statistical analyses and to establish the degree of relationship between the assessments, a correlation coefficient was used. In this study, a perfect correlation, meaning a completely perfect relationship between the assessments, would be 1.00; no relationship, or no correlation, would be indicated by a coefficient of .00. Obviously, the closer the correlation coefficient is to 1.00 the stronger the relationship.

To establish statistical significance in the content validity study, a probability level of .05 was judged sufficient. This .05 probability level establishes that the results obtained from the correlation analysis would be wrong only approximately 5% of the time.

**Table 2** reports the results of the correlations between the MBTI and MyCareerMatch. These findings indicate a very strong relationship between the MBTI and MyCareerMatch.

**Table 2. Relationship of the MBTI and MyCareerMatch (n=50)**

|                            |                  |               |                |               |
|----------------------------|------------------|---------------|----------------|---------------|
| Myers-Briggs<br>MBTI       | SP<br>Perceptive | SJ<br>Judging | NT<br>Thinking | NF<br>Feeling |
| MyCareerMatch              | Driver           | Supporter     | Analyser       | Promoter      |
| Correlation<br>Coefficient | .811             | .846          | .821           | .804          |

**Table 3** represents the correlations between the DISC and the MyCareerMatch. Similar to the MBTI-MyCareerMatch findings. Again, a very strong relationship between the DISC and MyCareerMatch is evident.

**Table 3. Relationship of the DISC and MyCareerMatch (n=50)**

|                            |                |                  |                 |                 |
|----------------------------|----------------|------------------|-----------------|-----------------|
| DISC                       | D<br>Dominance | I<br>Influencing | S<br>Steadiness | C<br>Compliance |
| MyCareerMatch              | Driver         | Promoter         | Supporter       | Analyser        |
| Correlation<br>Coefficient | .894           | .889             | .897            | .874            |

## Conclusions

The purpose of this research was to determine the reliability and validity of MyCareerMatch as an accurate assessment of behavioural and personality type. Based on the results obtained, the following conclusions can be drawn.

1. The findings indicate that the MyCareerMatch is a highly reliable assessment instrument with an overall reliability coefficient of .94. Individuals administering and using this instrument are highly likely to obtain the same or very similar results on repeated usage of the MyCareerMatch questionnaire.
2. Additionally, users of MyCareerMatch can be assured that MyCareerMatch is easily readable and understandable by the vast majority of participants. Its language is appropriate to the intended audiences and meanings of the selected words and sentences these words are used in are clear.
3. The research on MyCareerMatch content validity with the MBTI was highly supportive of MyCareerMatch's ability to measure the same personality and behavioural characteristics as the MBTI. To a great extent, these instruments could be used inter-changeably and yield the same insights and results.
4. Similarly, the research comparing MyCareerMatch content with that of the DISC indicated a strong relationship between the two instruments. All dimensions achieved nearly the same outcomes on personality and behavioural characteristics.
5. Although not statistically based, MyCareerMatch validity appears to be quite high based on the reports of several study participants. This means that those characteristics and traits that MyCareerMatch claims to measure with its assessment tools and products are indeed measured through MyCareerMatch. Moreover, MyCareerMatch is highly likely to accurately predict individual behaviours and traits.