



Reliability and validity of the MBTI[®] instrument

When psychologists or practitioners evaluate a psychometric test or questionnaire, there are usually two main questions that they ask: “Is it *reliable*?” and “Is it *valid*?”. On both of these criteria, the Myers-Briggs Type Indicator (MBTI) performs well. Reputable psychometric tools have been developed through years of rigorous research by the test publisher, and OPP makes these research findings available via the [MBTI Step I Manual](#) and the [MBTI Step II Manual](#), of which all practitioners are given a copy upon qualification. Major findings are also published in data supplements that can be downloaded free online from www.opp.com/resources/practitioner-downloads.

In addition, there are many articles by independent researchers in established journals. Interested parties can find hundreds of these on a free searchable database published by CAPT: Mary and Isabel’s Library Online (MILO), at www.capt.org/MILO. This document presents a few key examples.

Reliability

Reliability looks at whether a test or questionnaire gives consistent results, in particular investigating whether it is consistent over time (*test-retest reliability*), and whether the questions that measure each scale are consistent with each other (*internal consistency reliability*). By convention, a correlation of 0.7 is often taken as the minimum acceptable value for personality questionnaire scales. The following independent, peer-reviewed study confirms that the MBTI tool performs well on both of these measures:

Capraro and Capraro, 2002: Myers-Briggs Type Indicator Score Reliability Across Studies: a Meta-Analytic Reliability Generalization Study

[Link to study online](#)

The MBTI tool was submitted to a descriptive reliability generalisation (RG) analysis to characterise the variability of measurement error in MBTI scores across administrations. In general, the MBTI and its scales yielded scores with strong internal consistency and test-retest reliability estimates, although some variation was observed.



Validity

Validity looks at whether a test or questionnaire measures what it is supposed to measure. Note that the MBTI assessment is NOT validated to predict performance and is NOT suitable for use in recruitment, therefore validity data relating to the MBTI in recruitment is not available. However, there is plenty of evidence that the MBTI tool accurately describes personality styles, some of which is listed below.

There are a number of ways to demonstrate validity, including:

- Relationships with other questionnaires
- Internal structure
- Relationships with behaviour
- Type descriptions
- Practical validity.

Relationships with other questionnaires

If the MBTI instrument is measuring what it is supposed to, then when people take the questionnaire alongside other tools that measure the same or similar concepts, there should be a high degree of correlation between the two sets of scores. Some examples:

- ***Furnham et al, 2003: The relationship between the revised NEO-Personality Inventory and the Myers-Briggs Type Indicator***

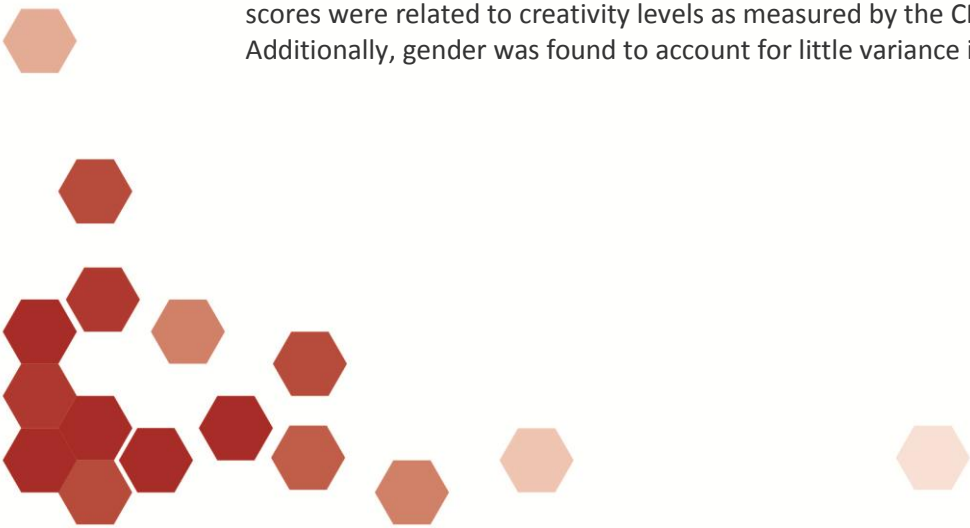
[Link to study online](#)

A total of 900 participants completed the NEO PI-R and the MBTI questionnaire. Correlational analysis of the personality measures showed that NEO-PI-R Extraversion was correlated with MBTI Extraversion–Introversion. Openness was correlated with Sensing–Intuition, Agreeableness with Thinking–Feeling and Conscientiousness with Judging–Perceiving, replicating the findings of Costa and McCrae (1989).

- ***Fleener and Taylor, 1994: Construct Validity of Three Self-Report Measures of Creativity***

[Link to study online](#)

Relationships were examined among two measures of creativity level, the CPI Creativity Scale (CPI-CT) and the MBTI Creativity Index (MBTI-CI), and a measure of creativity style, the Kirton Adaption-Innovation Inventory (KAI). Scores on these scales from various managerial samples were used in the analyses. With sample sizes ranging from 431 to 12,115, significant intercorrelations were found among the three measures. Contrary to expectations, KAI scores were related to creativity levels as measured by the CPI-CT and the MBTI-CI. Additionally, gender was found to account for little variance in MBTI-CI scores.



Internal structure

The dimensions measured by the questionnaire should be robust and should hold together when examined by statistical techniques such as factor analysis:

- **Thompson and Borrello, 1986: Construct Validity of the Myers-Briggs Type Indicator**
[Link to study online](#)

The study investigated the structure and item performance of the instrument using data from 359 college students. Factor analysis was applied to the 95 scored MBTI items. Factor adequacy and invariance coefficients were computed, and the appropriateness of the recommended item weights was examined. The results strongly supported the instrument's construct validity.

Relationship with behaviour

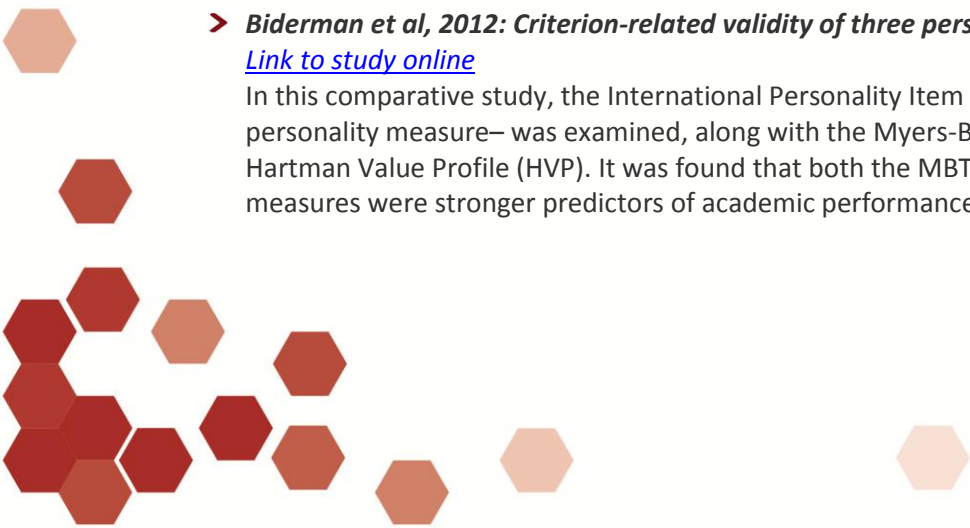
One would expect that an individual's underlying personality type would relate to, but not entirely predict, their behaviour and other external criteria.

- **Harrington and Loffredo, 2010: MBTI personality type and other factors that relate to preference for online versus face-to-face instruction**
[Link to study online](#)

Online college classes are being offered at a rate that far exceeds the growth of overall higher education classes. However, much can still be learned about how to create a better online classroom environment by determining why a large percentage of students continue to prefer face-to-face classes. One factor among many that may have an influence on preference is personality, since it relates to learning style and comfort level. A poor fit in learning style or a low comfort level can lead to student dissatisfaction and attrition. The study gave 166 mostly female college students, two-thirds of whom were taking or had taken four or more online classes, the Myers-Briggs Type Indicator and a Likert-type questionnaire asking why they preferred one teaching modality delivery over the other. Results revealed that a statistically significant majority of Introverts preferred online classes, and Extraverts face-to-face classes. A trend with a small effect size toward Perceiving types preferring face-to-face classes was also found. Overall, students who preferred online classes indicated their rank-ordered preference was because of convenience, the enjoyment of computer technology, and a desire for innovation, whereas those who preferred face-to-face classes reported they were influenced by the class structure appealing to their need to learn through listening and by their desire to better gauge the emotional reactions of others in the class. Implications for design of online classes to appeal to students who prefer face-to-face learning environments and for academic counseling and advising are discussed.

- **Biderman et al, 2012: Criterion-related validity of three personality questionnaires**
[Link to study online](#)

In this comparative study, the International Personality Item Pool – a popular Big Five personality measure– was examined, along with the Myers-Briggs Type Indicator and the Hartman Value Profile (HVP). It was found that both the MBTI Judging dimension and HVP measures were stronger predictors of academic performance than conscientiousness.



➤ ***Edwards, Lanning and Hooker, 2002: The MBTI and Social Information Processing: An Incremental Validity Study***

[Link to study online](#)

The ability of the Myers-Briggs Type Indicator to predict performance on social cognitive tasks tapping information processing effort was assessed. Judgment and intuition interacted to predict the amount of attributional adjustment on a dispositional attribution task. The MBTI scales predicted processing above and beyond measures of the five factors, rational-experiential preferences, and causal uncertainty. The relevance of these results for interpretation of the MBTI indexes is discussed.

Type descriptions

If the MBTI tool is valid, then respondents should be able to identify themselves from descriptions based on their type, and avoid identifying with descriptions of other types.

➤ ***Carskadon and Cook, 1982: Validity of MBTI type descriptions as perceived by recipients unfamiliar with type***

The hypotheses of the study were strongly supported, and the results obtained thoroughly refuted the idea that type descriptions other than one's own might be equally appealing if given to persons taking the MBTI. The results of the study are especially encouraging, since most of the subjects evaluated the type descriptions eight weeks after taking the MBTI.

Practical validity

Any personality tool, including the MBTI instrument, should have been shown to be useful in practice.

➤ ***McCarthy and Garavan, 1999: Developing self-awareness in the managerial career development process: the value of 360-degree feedback and the MBTI***

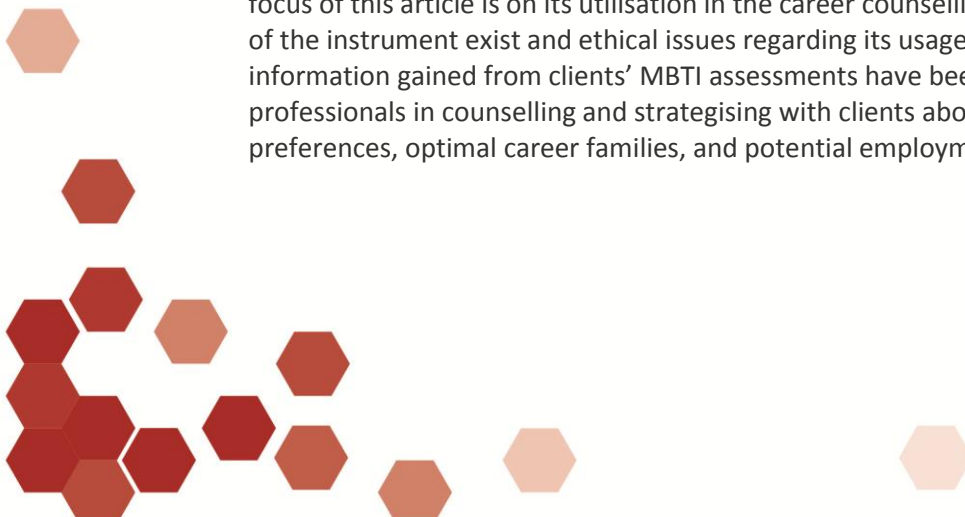
[Link to study online](#)

The importance of self-awareness in the managerial career development processes is examined, and the relationship between self-awareness and managerial success is also considered. The findings of a qualitative study conducted to investigate the effectiveness of two instruments used to enhance self-awareness are reported. One of the characteristics of effective managerial career development is the creation of self-awareness in the learner. 360-degree feedback and personality inventories are considered useful tools in this respect.

➤ ***Kennedy and Kennedy, 2004: Using the Myers-Briggs type indicator in career counselling***

[Link to study online](#)

The Myers-Briggs Type Indicator is a personality instrument with numerous applications. The focus of this article is on its utilisation in the career counselling process. Although limitations of the instrument exist and ethical issues regarding its usage have been itemised, information gained from clients' MBTI assessments have been proved to be useful to professionals in counselling and strategising with clients about their psychological preferences, optimal career families, and potential employment opportunities.



➤ **Bradley and Hebert, 1997: The effect of personality type on team performance**

[Link to study online](#)

This study develops a model of the theoretical impact of individual personality differences on the productivity of information systems (IS) development teams, then illustrates that impact by presenting a case example. Following a discussion of team composition and MBTI personality types, it analyses the attributes of two IS development teams based on age, intelligence, problem-solving ability, task responsibility, and personality-type composition. In this case, there were no significant differences in the two teams other than the differences in personality-type composition. The study determines that the differences in team performance were primarily caused by differences in the personality-type composition of the two teams.

References

- Biderman, M.D., Worthy, R., Nguyen, N.T., Mullins, B. and Luna, J.: *Criterion-related validity of three personality questionnaires*. Paper presented at the 27th Annual Conference of The Society for Industrial and Organizational Psychology, San Diego CA, 2012
- Bradley, J.H. and Hebert, F.J.: 'The effect of personality type on team performance'. *Journal of Management Development* 16 (5), 1997
- Capraro R.M. and Capraro M.M.: 'Myers-Briggs Type Indicator Score Reliability Across Studies: a Meta-Analytic Reliability Generalization Study'. *Educational and Psychological Measurement* 62, 2002
- Carskadon, T.G. and Cook, D.D.: 'Validity of MBTI type descriptions as perceived by recipients unfamiliar with type'. *Research in Psychological Type* 5, 1982
- Costa, P. T. Jr. and McCrae, R. R.: *The NEO-PI/NEO-FFI manual supplement*. Odessa FL: Psychological Assessment Resources, 1989
- Edwards J. A., Lanning K. and Hooker K.: 'The MBTI and Social Information Processing: An Incremental Validity Study'. *Journal of Personality Assessment* 78 (3), 2002
- Fleenor J.W. and Taylor, S.: 'Construct Validity of Three Self-Report Measures of Creativity'. *Educational and Psychological Measurement* 54 (2), 1994
- Furnham, A., Moutafi, J. and Crump, J.: 'The relationship between the revised NEO-Personality Inventory and the Myers-Briggs Type Indicator'. *Social Behavior and Personality* 31(6), 2003
- Harrington, R. and Loffredo, D.A.: 'MBTI personality type and other factors that relate to preference for online versus face-to-face instruction'. *Internet and Higher Education* 13, 2010
- Kennedy, R.B. and Kennedy, D.A.: 'Using the Myers-Briggs Type Indicator in career counselling'. *Journal of Employment Counselling* 41, 2004
- McCarthy, A.M. and Garavan, T.N.: 'Developing self-awareness in the managerial career development process: the value of 360-degree feedback and the MBTI'. *Journal of European Industrial Training* 23/9, 1999
- Thompson, B. and Borrello G.M.: 'Construct Validity of the Myers-Briggs Type Indicator'. *Educational and Psychological Measurement* 46 (3), 1986