



Technical Brief for the

MBTI® FORM M and FORM Q ASSESSMENTS

Singapore

Nancy A. Schaubhut
Richard C. Thompson



800-624-1765 | www.cpp.com

Technical Brief for the MBTI® Form M and Form Q Assessments—Singapore Copyright 2017 by CPP, Inc. All rights reserved. Myers-Briggs Type Indicator, Myers-Briggs, MBTI, Step I, Step II, and the MBTI logo are trademarks or registered trademarks of The Myers & Briggs Foundation in the United States and other countries. The CPP logo is a trademark or registered trademark of CPP, Inc., in the United States and other countries.

INTRODUCTION

The *Myers-Briggs Type Indicator*® (MBTI®) instrument is one of the most commonly used personality assessments in the world. Because its administration outside the United States is growing rapidly, the instrument is continually being evaluated for use in specific regions. This technical brief summarizes the measurement properties of the MBTI Form M and Form Q assessments with a Singaporean sample. To that end, it examines the reliability of the MBTI Form M and Form Q assessments, reports on type distribution in a sample of Singaporean participants, and provides comparisons with the US national representative sample (NRS) used in the *MBTI*® *Manual* (Myers, McCaulley, Quenk, & Hammer, 1998) to examine similarities and differences between the groups.

THE MBTI® ASSESSMENT

The MBTI assessment uses a typology composed of four pairs of opposite preferences, called *preference pairs*:

- Extraversion (E) or Introversion (I)—how you direct and receive energy
- Sensing (S) or Intuition (N)—how you take in information
- Thinking (T) or Feeling (F)—how you decide and come to conclusions
- Judging (J) or Perceiving (P)—how you approach the outside world

The assessment combines an individual's four preferences—one from each preference pair, denoted by its letter—to yield one of the 16 possible personality types (e.g., ESTJ, INFP, etc.). Each type is equally valuable, and an individual inherently belongs to one of the 16 types. This model differentiates the MBTI assessment from most other personality instruments, which typically assess personality traits. Trait-based instruments measure how much of a certain characteristic an individual possesses. Unlike the MBTI assessment, those instruments usually consider one end of a trait to be more positive and the other to be more negative.

SINGAPOREAN SAMPLE

Historically, the MBTI assessment has been administered in Singapore using North American English. A sample composed of 12,838 Singaporean respondents who completed the MBTI Form Q assessment in North American English was obtained for this study. It is important to note that this is not a representative sample, but rather a sample of convenience. Therefore, no inferences may be drawn about the preferences or type distribution of the population of Singapore. The data reported in this technical brief should be used for psychometric information purposes only.

The Singaporean sample includes 54% women and 44% men, 1% not reported. Respondents' ages ranged from 18 to 69 years (mean = 36.4, *SD* = 8.7). All respondents reported their country of residence as Singapore. Additional demographics were not available for this sample.

Table 1 includes the number and percentage of respondents of each type in the sample. As shown, the most frequently occurring type for this sample is ISTJ (22.8%), followed by ESTJ (12.3%). The least common types are ESFP (2.5%) and ENFJ (3.0%). Type distributions for women and men in the Singaporean sample are presented in Tables 2 and 3.

Table 4 shows the number and percentage of respondents for each preference. Also included for reference are the number and percentage of respondents for each preference in the US national representative sample (NRS; Myers et al., 1998).

RELIABILITY OF THE FORM M PREFERENCES

The internal consistency reliabilities (Cronbach's alphas) for the Singaporean sample and the US NRS are reported in Table 5. The reliabilities of the four preference pairs are good for the Singaporean sample and are very similar to those reported in the *MBTI*® *Manual* (Myers et al., 1998).

TABLE 1. MBTI® TYPE DISTRIBUTION IN THE SINGAPOREAN SAMPLE

SENSING		INTUITION			
Thinking	Feeling	Thinking			
ISTJ <i>n</i> = 2,923 22.8%	ISFJ <i>n</i> = 1,065 8.3%	INFJ <i>n</i> = 441 3.4%	INTJ <i>n</i> = 883 6.9%		
ISTP <i>n</i> = 664 5.0%	ISFP <i>n</i> = 417 3.2%	INFP <i>n</i> = 631 4.9%	INTP <i>n</i> = 641 5.0%	Perceiving	
ESTP <i>n</i> = 418 3.3%	ESFP <i>n</i> = 317 2.5%	ENFP <i>n</i> = 647 5.0%	ENTP <i>n</i> = 579 4.5%	Perceiving	EXTRAVERSION
ESTJ <i>n</i> = 1,577 12.3%	ESFJ <i>n</i> = 560 4.4%	ENFJ <i>n</i> = 384 3.0%	ENTJ <i>n</i> = 711 5.5%	Judging	

Note: *N* = 12,838.

TABLE 2. MBTI® TYPE DISTRIBUTION IN THE SINGAPOREAN SAMPLE: WOMEN

SENSING		INTUITION			
Thinking	Feeling	Thinking			
ISTJ <i>n</i> = 1,462 21.0%	ISFJ <i>n</i> = 761 10.9%	INFJ <i>n</i> = 285 4.1%	INTJ <i>n</i> = 379 5.4%		
ISTP <i>n</i> = 312 4.5%	ISFP <i>n</i> = 248 3.6%	INFP <i>n</i> = 377 5.4%	INTP <i>n</i> = 301 4.3%	Perceiving	
ESTP <i>n</i> = 211 3.0%	ESFP <i>n</i> = 210 3.0%	ENFP <i>n</i> = 365 5.2%	ENTP <i>n</i> = 279 4.0%	Perceiving	EXTRAVERSION
ESTJ <i>n</i> = 794 11.4%	ESFJ <i>n</i> = 403 5.8%	ENFJ <i>n</i> = 250 3.6%	ENTJ <i>n</i> = 321 4.6%	Judging	

Note: *n* = 6,958.

TABLE 3. MBTI® TYPE DISTRIBUTION IN THE SINGAPOREAN SAMPLE: MEN

SENSING		INTUITION			
Thinking	Feeling	Thinking			
ISTJ n = 1,431 25.1%	ISFJ n = 299 5.2%	INFJ n = 151 2.6%	INTJ n = 488 8.6%	Judging	INTROVERSION
ISTP n = 327 5.7%	ISFP n = 163 2.9%	INFP n = 247 4.3%	INTP n = 332 5.8%	Perceiving	
ESTP n = 199 3.5%	ESFP n = 101 1.8%	ENFP n = 270 4.7%	ENTP n = 291 5.1%		EXTRAVERSION
ESTJ n = 758 13.3%	ESFJ n = 145 2.5%	ENFJ n = 129 2.3%	ENTJ n = 375 6.6%	Judging	

Note: n = 5,706.

TABLE 4. MBTI® PREFERENCE DISTRIBUTIONS FOR THE SINGAPOREAN SAMPLE AND THE US NRS

Preference	Singaporean Sample (N = 12,838)		US NRS (N = 3,009)	
	n	%	n	%
Extraversion (E)	5,193	40.5	1,483	49.3
Introversion (I)	7,645	59.5	1,526	50.7
Sensing (S)	7,921	61.7	2,206	73.3
Intuition (N)	4,917	38.3	803	26.7
Thinking (T)	8,376	65.2	1,210	40.2
Feeling (F)	4,462	34.8	1,799	59.8
Judging (J)	8,544	66.6	1,629	54.1
Perceiving (P)	4,294	33.4	1,380	45.9

Note: Source for the US NRS is the *MBTI® Manual* (Myers et al., 1998).

TABLE 5. MBTI® PREFERENCE PAIR INTERNAL CONSISTENCY RELIABILITIES FOR THE SINGAPOREAN SAMPLE AND THE US NRS

Preference Pair	Cronbach's Alpha	
	Singaporean Sample	US NRS
Extraversion–Introversion	.91	.91
Sensing–Intuition	.89	.92
Thinking–Feeling	.88	.91
Judging–Perceiving	.90	.92

Note: Singaporean sample N = 12,838; US NRS N = 3,009. Source for the US NRS is the *MBTI® Manual* (Myers et al., 1998).

FACTOR ANALYSIS

Several studies have conducted confirmatory factor analyses of the MBTI instrument to assess the validity of its factors. They have indicated that a four-factor model, such as the one theorized and developed by Myers, is the most appropriate and offers the best fit (Harvey, Murry, & Stamoulis, 1995; Johnson & Saunders, 1990). A principal components exploratory

factor analysis with varimax rotation was conducted using the item responses from the Singaporean sample. The results are presented in Table 6. The shaded cells indicate that factor 1 is E–I, factor 2 is S–N, factor 3 is T–F, and factor 4 is J–P. The four-factor structure produced by this analysis shows that the MBTI Form M items in Singapore are measuring their intended constructs, the four preference pairs.

**TABLE 6. FACTOR ANALYSIS ROTATED COMPONENT MATRIX
FOR THE SINGAPOREAN SAMPLE**

Item Code	Factor 1 (E–I)	Factor 2 (S–N)	Factor 3 (T–F)	Factor 4 (J–P)	Item Code	Factor 1 (E–I)	Factor 2 (S–N)	Factor 3 (T–F)	Factor 4 (J–P)
EI1	.73	-.04	.01	-.04	SN1	.06	.43	-.03	.03
EI2	.54	-.07	.06	-.01	SN2	-.08	.50	.16	.21
EI3	.55	-.09	.03	.01	SN3	-.05	.56	.04	.17
EI4	.57	.11	-.09	.02	SN4	-.07	.45	-.02	.06
EI5	.57	.00	-.07	.03	SN5	-.16	.38	-.05	.10
EI6	.59	-.06	.05	-.02	SN6	-.05	.37	.06	.06
EI7	.45	-.01	-.05	-.02	SN7	-.08	.48	-.18	.14
EI8	.70	.01	-.03	-.05	SN8	.02	.48	.10	.20
EI9	.57	-.15	-.07	-.01	SN9	-.07	.65	.11	.09
EI10	.62	-.08	-.04	-.08	SN10	-.02	.50	.02	.05
EI11	.66	-.14	-.02	-.05	SN11	-.06	.31	.13	.08
EI12	.59	-.17	-.02	-.06	SN12	.09	.38	-.01	.11
EI13	.60	-.06	.02	-.03	SN13	-.06	.55	.08	.07
EI14	.55	-.07	-.05	.01	SN14	-.05	.66	.17	.11
EI15	.64	-.01	.01	-.02	SN15	-.12	.55	.00	.01
EI16	.56	-.03	.00	.00	SN16	-.08	.53	.12	.17
EI17	.73	-.06	.00	-.02	SN17	-.06	.56	.05	.04
EI18	.55	.11	-.10	.00	SN18	-.02	.49	.18	.22
EI19	.61	-.07	.03	-.04	SN19	-.09	.58	-.04	.05
EI20	.53	-.10	.02	-.03	SN20	-.06	.63	.18	.14
EI21	.67	-.07	.03	-.01	SN21	.06	.52	.07	.08
					SN22	-.04	.48	.08	.15
					SN23	.00	.57	.03	.07
					SN24	-.13	.66	.01	.07
					SN25	-.01	.45	.04	.05
					SN26	-.07	.30	-.30	.03

(cont'd)

**TABLE 6. FACTOR ANALYSIS ROTATED COMPONENT MATRIX
FOR THE SINGAPOREAN SAMPLE (CONT'D)**

Item Code	Factor 1 (E-I)	Factor 2 (S-N)	Factor 3 (T-F)	Factor 4 (J-P)	Item Code	Factor 1 (E-I)	Factor 2 (S-N)	Factor 3 (T-F)	Factor 4 (J-P)
TF1	-.06	.06	.45	.20	JP1	.01	.09	.03	.61
TF2	-.11	.21	.42	.08	JP2	.04	.08	-.02	.60
TF3	-.04	.07	.57	.11	JP3	-.05	.14	.08	.65
TF4	.11	.05	.49	.03	JP4	-.01	.20	.01	.61
TF5	-.07	.00	.63	.13	JP5	.06	.08	.02	.56
TF6	.02	.08	.58	.05	JP6	-.09	.19	-.07	.39
TF7	-.02	-.05	.62	.07	JP7	-.03	.03	.05	.51
TF8	-.01	-.02	.40	-.04	JP8	-.01	.10	.03	.50
TF9	.03	-.17	.54	.01	JP9	.01	.19	.08	.60
TF10	-.04	.15	.42	-.01	JP10	-.17	.31	.22	.47
TF11	.02	.07	.49	.03	JP11	-.07	.12	.31	.45
TF12	.07	-.07	.53	.01	JP12	.01	.12	.23	.39
TF13	-.13	.28	.49	.09	JP13	-.04	.30	.04	.53
TF14	-.07	.12	.54	.04	JP14	-.15	.21	.29	.33
TF15	-.05	.15	.61	.02	JP15	-.04	.10	-.01	.63
TF16	-.09	.02	.52	-.03	JP16	-.09	.11	.10	.65
TF17	-.03	-.01	.65	.11	JP17	.04	.08	.10	.59
TF18	-.03	.21	.57	.11	JP18	-.20	.17	.09	.64
TF19	.04	-.04	.60	.04	JP19	-.01	.03	.07	.47
TF20	-.09	.21	.45	.08	JP20	.02	.12	.04	.60
TF21	.11	.00	.53	.05	JP21	.01	-.05	.11	.48
TF22	-.04	-.01	.51	.07	JP22	.04	.17	.12	.64
TF23	.01	.09	.43	.04					
TF24	.03	.00	.32	.08					

Note: N = 12,838.

RELIABILITY OF THE FORM Q FACETS

The MBTI Form Q assessment includes the 93 items that make up the MBTI Form M assessment (measuring the four preference pairs, E-I, S-N, T-F, and J-P) plus another 51 items that are used only to measure the

Form Q facets. For each of the four preference pairs there are five facets (see Table 7), yielding a total of 20 facets. These facets help describe some of the ways in which each preference can be different for each individual to create a richer and more detailed description of an individual's behavior. The remaining analyses focus on the evaluation of the Form Q facets.

TABLE 7. MBTI® FORM Q FACET INTERNAL CONSISTENCY RELIABILITIES FOR THE SINGAPOREAN SAMPLE AND THE US NRS

Form Q Facets	Cronbach's Alpha	
	Singaporean Sample	US NRS
E–I Facets		
Initiating–Receiving	.81	.85
Expressive–Contained	.79	.79
Gregarious–Intimate	.66	.60
Active–Reflective	.62	.59
Enthusiastic–Quiet	.75	.72
S–N Facets		
Concrete–Abstract	.71	.81
Realistic–Imaginative	.74	.79
Practical–Conceptual	.50	.67
Experiential–Theoretical	.69	.83
Traditional–Original	.71	.76
T–F Facets		
Logical–Empathetic	.78	.80
Reasonable–Compassionate	.71	.77
Questioning–Accommodating	.41	.57
Critical–Accepting	.47	.60
Tough–Tender	.76	.81
J–P Facets		
Systematic–Casual	.74	.74
Planful–Open–Ended	.76	.82
Early Starting–Pressure–Prompted	.66	.70
Scheduled–Spontaneous	.79	.82
Methodical–Emergent	.60	.71

Note: Singaporean sample $N = 12,838$; US NRS $N = 3,009$. Source for the US NRS is the *MBTI® Manual* (Myers et al., 1998).

Internal consistency reliabilities for each facet are reported in Table 7 for the Singaporean sample and the US NRS. The Singaporean sample alphas range from .41 (Questioning–Accommodating) to .81 (Initiating–Receiving). Overall, some of this sample's alphas are somewhat lower than those of the US NRS. This is consistent with the reliabilities that have been found for international samples and translations of the MBTI Form Q (or, for Europe, Step II™) assessment (Quenk, Hammer, & Majors, 2004; Schaubhut, 2008; Schaubhut & Thompson, 2010a, 2010b, 2011a, 2011b, 2012, 2013, 2016a, 2016b, 2017a, 2017b, 2017c, 2017d). Reliabilities for nine other translations can be found in the *MBTI® Step II™ Manual*, European edition (Quenk et al., 2004).

CONCLUSION

The analyses reported here with an initial Singaporean sample demonstrate that measurement properties of the assessment are adequate. Therefore, the MBTI Forms M and Q can be widely used with individuals who reside in Singapore and read English. As use of the MBTI assessment in Singapore continues to grow, larger and more diverse samples will become available, and the measurement properties of MBTI Forms M and Q in Singapore will continue to be evaluated.

REFERENCES

- Harvey, R. J., Murry, W. D., & Stamoulis, D. (1995). Unresolved issues in the dimensionality of the Myers-Briggs Type Indicator®. *Educational and Psychological Measurement*, 55, 535–544.
- Johnson, D. A., & Saunders, D. R. (1990). Confirmatory factor analysis of the Myers-Briggs Type Indicator® Expanded Analysis Report. *Educational and Psychological Measurement*, 50, 561–571.
- Myers, I. B., McCaulley, M. H., Quenk, N. L., & Hammer, A. L. (1998). *MBTI® manual: A guide to the development and use of the Myers-Briggs Type Indicator® instrument*. Sunnyvale, CA: CPP, Inc.
- Quenk, N. L., Hammer, A. L., & Majors, M. S. (2004). *MBTI® Step II™ manual*, European edition. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A. (2008). *Technical brief for the MBTI® Form M and Form Q assessments—Latin and North American Spanish*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2010a). *Technical brief for the MBTI® Form M and Form Q assessments—Simplified Chinese*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2010b). *Technical brief for the MBTI® Form M and Form Q assessments—Traditional Chinese*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2011a). *Technical brief for the MBTI® Form M and Form Q assessments—Korean*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2011b). *Technical brief for the MBTI® Form M and Form Q assessments—Brazilian Portuguese*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2012). *Technical brief for the MBTI® Form M and Form Q assessments—Afrikaans*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2013). *Technical brief for the MBTI® European Step I™ and Step II™ assessments—Turkish*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2016a). *Technical brief for the MBTI® Form M and Form Q assessments—Australia*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2016b). *Technical brief for the MBTI® Form M and Form Q assessments—New Zealand*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2017a). *Technical brief for the MBTI® Form M and Form Q assessments—India*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2017b). *Technical brief for the MBTI® Form M and Form Q assessments—Indonesia*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2017c). *Technical brief for the MBTI® Form M and Form Q assessments—Malaysia*. Sunnyvale, CA: CPP, Inc.
- Schaubhut, N. A., & Thompson, R. C. (2017d). *Technical brief for the MBTI® Form M and Form Q assessments—Thai*. Sunnyvale, CA: CPP, Inc.