Technical Brief for the

MBTI® FORM M ASSESSMENT

Mongolia

Nancy A. Schaubhut
Richard C. Thompson

INTRODUCTION

The *Myers-Briggs Type Indicator®* (MBTI®) instrument is one of the most commonly used personality assessments in the world. Because administration of the instrument outside the United States is growing rapidly, new translations are continually being developed for use in specific regions. This technical brief summarizes the measurement properties of the MBTI Form M assessment with a Mongolia sample. To that end, it examines the reliability of the MBTI Form M assessment, reports on type distribution in a sample of Mongolian 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.

MONGOLIA SAMPLE

Historically, the MBTI assessment has been administered in Mongolia using North American English. A sample composed of 113 Mongolian respondents who completed the MBTI Form M 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 Mongolia. The data reported in this technical brief should be used for psychometric information purposes only.

The Mongolia sample includes 66% women and 33% men, 1% not reported. Respondents' ages ranged from 17 to 58 years (mean = 28.6, *SD* = 8.9). All respondents reported their country of origin and residence as Mongolia. Of the sample, 32% reported working full-time and 7% part-time, 50% were students, 1% none of the above, and 10% unreported.

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 (20.4%), followed by ESTJ (15.9%). The least common types are ESTP (0.9%), INTJ (1.8%), and INTP (1.8%). Type distributions for women and men in the Mongolia 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 Mongolia sample and the US NRS are reported in Table 5. The reliabilities of the four preference pairs are good for the Mongolia sample and are very similar to those reported in the *MBTI® Manual* (Myers et al., 1998).

TABLE 1. MBTI® TYPE DISTRIBUTION IN THE MONGOLIA SAMPLE

SENSING		INTUITION			
Thinking	Feeling		Thinking		
ISTJ n = 23 20.4%	ISFJ n = 10 8.8%	INFJ n = 6 5.3%	INTJ n = 2 1.8%	Judging	INTROVERSION
ISTP n = 9 8.0%	ISFP n = 4 3.5%	INFP n = 5 4.4%	INTP n = 2 1.8%	Perceiving	
ESTP n = 1 0.9%	ESFP n = 3 2.7%	ENFP n = 7 6.2%	ENTP n = 4 3.5%	Perceiving	EXTRAVERSION
ESTJ n = 18 15.9%	ESFJ n = 10 8.8%	ENFJ n = 3 2.7%	ENTJ n = 6 5.3%	Judging	

Note: N = 113.

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

SENSING		INTUITION			
Thinking	Feeling		Thinking		
ISTJ n = 10 13.3%	ISFJ n = 8 10.7%	INFJ n = 4 5.3%	INTJ n = 2 2.7%	Judging	INTROVERSION
ISTP n = 7 9.3%	ISFP n = 4 5.3%	INFP n = 3 4.0%	INTP n = 2 2.7%	Perceiving	
ESTP n = 1 1.3%	ESFP n = 3 4.0%	ENFP n = 5 6.7%	ENTP n = 0 0.0%	Perceiving	EXTRAVERSION
ESTJ n = 12 16.0%	ESFJ n = 8 10.7%	ENFJ n = 2 2.7%	ENTJ n = 4 5.3%	Judging	

Note: n = 75.

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

SENSING		INTUITION			
Thinking	Feeling		Thinking		
ISTJ n = 13 35.1%	ISFJ n = 2 5.4%	INFJ n = 2 5.4%	INTJ n = 0 0.0%	Judging	INTROVERSION
ISTP n = 1 2.7%	ISFP n = 0 0.0%	INFP n = 2 5.4%	INTP n = 0 0.0%	Perceiving	
ESTP n = 0 0.0%	ESFP n = 0 0.0%	ENFP n = 2 5.4%	ENTP n = 4 10.8%	Perceiving	EXTRAVERSION
ESTJ n = 6 16.2%	ESFJ n = 2 5.4%	ENFJ n = 1 2.7%	ENTJ n = 2 5.4%	Judging	

Note: n = 38.

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

	Mongolia Sample (*N* = 113)		US NRS (*N* = 3,009)	
Preference	*n*	%	*n*	%
Extraversion (E)	52	46.0	1,483	49.3
Introversion (I)	61	54.0	1,526	50.7
Sensing (S)	78	69.0	2,206	73.3
Intuition (N)	35	31.0	803	26.7
Thinking (T)	65	57.5	1,210	40.2
Feeling (F)	48	42.5	1,799	59.8
Judging (J)	78	69.0	1,629	54.1
Perceiving (P)	35	31.0	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 MONGOLIA SAMPLE AND THE US NRS

	Cronbach's Alpha	
Preference Pair	Mongolia Sample	US NRS
Extraversion–Introversion	.89	.91
Sensing–Intuition	.88	.92
Thinking–Feeling	.78	.91
Judging–Perceiving	.83	.92

Note: Mongolia sample N = 113; 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 assessment to assess the validity of the factors of the MBTI assessment. 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 com-

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

Item Code	Factor 1 (E–I)	Factor 2 (J–P)	Factor 3 (T–F)	Factor 4 (S–N)	Item Code	Factor 1 (E–I)	Factor 2 (J–P)	Factor 3 (T–F)	Factor 4 (S–N)
EI1	.60	.02	.02	.13	SN1	.06	−.19	.02	.35
EI2	.63	−.05	.16	−.08	SN2	.05	.03	.08	.26
EI3	.41	.12	.18	−.09	SN3	.15	.31	.07	.52
EI4	.61	.18	.05	.15	SN4	−.07	.18	−.05	.20
EI5	.50	−.04	−.07	.09	SN5	.01	.09	.10	.24
EI6	.69	.05	−.02	−.13	SN6	−.07	.20	−.04	.22
EI7	.40	.03	.11	.01	SN7	.04	.46	−.01	.32
EI8	.64	.02	.05	−.13	SN8	−.14	.46	−.14	.11
EI9	.39	−.04	.02	−.40	SN9	−.06	.22	.01	.42
EI10	.55	−.17	.18	.03	SN10	−.03	.09	−.05	.16
EI11	.64	.00	.06	−.11	SN11	.06	−.22	.00	.41
EI12	.46	.00	.10	−.30	SN12	.09	−.13	−.12	.31
EI13	.52	.11	−.06	−.34	SN13	−.26	.14	.08	.48
EI14	.53	−.03	.11	−.29	SN14	−.01	.19	.03	.30
EI15	.47	.16	−.03	.10	SN15	−.21	.14	.02	.42
EI16	.48	.10	−.02	−.03	SN16	−.10	.16	−.15	.18
EI17	.59	.15	−.02	.07	SN17	−.17	.12	.13	.17
EI18	.66	−.03	.03	−.09	SN18	.24	.17	−.15	.30
EI19	.67	.03	−.03	.01	SN19	−.09	.07	−.08	.47
EI20	.63	−.02	−.06	.23	SN20	−.05	−.04	.13	.39
EI21	.49	.09	.11	.05	SN21	−.02	−.07	−.14	.24
					SN22	.04	.14	.27	.42
					SN23	.03	−.05	−.03	.54
					SN24	−.33	.30	−.02	.10
					SN25	.13	.24	−.15	.24
					SN26	−.13	−.07	−.22	.47

(cont'd)

Item Code	Factor 1 (E–I)	Factor 2 (J–P)	Factor 3 (T–F)	Factor 4 (S–N)	Item Code	Factor 1 (E–I)	Factor 2 (J–P)	Factor 3 (T–F)	Factor 4 (S–N)
TF1	−.09	.28	.36	.18	JP1	−.11	.45	.10	.04
TF2	.08	.23	.16	.19	JP2	.02	.48	.21	−.06
TF3	.08	.17	.55	−.07	JP3	.11	.54	.00	.11
TF4	.13	−.02	.39	.20	JP4	.01	.47	.20	.02
TF5	.06	−.02	.38	.09	JP5	.23	.25	.21	.12
TF6	.09	.15	.29	−.13	JP6	.14	.45	−.06	−.06
TF7	.02	.39	.46	−.21	JP7	.14	.41	.18	.14
TF8	.06	−.18	.51	.02	JP8	.03	.47	−.04	−.14
TF9	−.04	.00	.25	−.06	JP9	.08	.54	.03	.21
TF10	−.20	.03	.44	.25	JP10	.03	.54	.09	−.12
TF11	.05	.03	.21	−.16	JP11	.09	.57	−.01	−.19
TF12	−.02	−.08	.38	−.26	JP12	−.01	.49	.19	−.17
TF13	−.28	.23	.24	.12	JP13	.01	.49	.09	.12
TF14	.13	.19	.49	−.17	JP14	−.35	.19	.30	.03
TF15	.00	.20	.56	.04	JP15	.02	.58	.17	−.23
TF16	.00	−.07	.45	−.07	JP16	.05	.52	−.03	.12
TF17	−.07	.23	.42	−.34	JP17	.31	.30	.32	−.02
TF18	.16	.07	.39	.25	JP18	.00	.55	.14	.29
TF19	.09	.16	.55	−.13	JP19	.16	.57	−.07	.13
TF20	.02	−.10	.33	.13	JP20	.06	.41	.09	.19
TF21	−.08	.10	.42	.01	JP21	.34	.38	−.05	.16
TF22	.05	−.17	.53	.18	JP22	−.10	.57	−.22	−.02
TF23	.23	−.17	.29	−.06					
TF24	.22	.17	−.05	−.22					

Note: N = 113.

CONCLUSION

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