

Japan (Japanese) Technical Brief for the MBTI® Global Step I™ and Step II™ Assessments

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INTRODUCTION

The Myers-Briggs Type Indicator® (MBTI®) assessment is one of the most commonly used personality instruments in the world. Because administration of the assessment 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 translations of the MBTI Global Step I[™] and Step II[™] assessments developed for areas where Japanese is read and understood. To that end, it reports on type and preference distributions in a sample of people who completed the global research version (GRV) of the MBTI assessment in Japanese (i.e., the Japanese sample) and explores similarities and differences between the Japanese sample and the global sample. Additionally, this technical brief examines the reliability and validity of the Japanese translations of the MBTI Global Step I and Step II assessments. For more information on the global sample and construction and translation of the global assessments see chapter 7 of the MBTI[®] Manual for the Global Step I[™] and Step II[™] Assessments (Myers, McCaulley, Quenk, & Hammer, 2018).

THE MBTI® MODEL

The MBTI assessment measures a typology composed of four pairs of opposite preferences, or preference pairs:

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

The MBTI assessment combines an individual's four preferences—one preference from each preference pair, denoted by its letter—to yield one of 16 possible personality types (e.g., ESTJ, INFP). Each type is equally valuable, and an individual inherently sorts into 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 trait a person possesses. Unlike the MBTI assessment, those instruments usually consider one end of a scale to signify positive characteristics and the other to signify negative characteristics.

DESCRIPTION OF THE JAPANESE SAMPLE

Following the translation of the MBTI GRV into Japanese, a sample of participants was obtained through the Japanese distributor, JPP. It is important to note that this Japanese sample is not representative; rather, it is a sample of convenience. Therefore, no inferences should be drawn about the preferences or type distribution of the population that reads and understands Japanese. The data reported in this technical brief should be used for psychometric information purposes only.

The Japanese sample is composed of 316 individuals who each completed the MBTI GRV in Japanese. The MBTI GRV comprises 230 MBTI items, including items from the commercial forms of the MBTI assessment— Form M and Form Q, and European Step I and Step II assessments-that were current at the time the GRV was developed. The Global Step I and Step II assessments contain a subset of the 230 items used on the GRV form.

Table 1 provides demographic data. Of the Japanese sample, 53% are women and 47% are men. Respondents' ages range from 19 to 75 years (mean = 45.1; standard deviation = 9.6).

Table 1 | Demographic summary: Japanese sample

Demographic	Sample %
Age	
Mean age: 45 years	_
Gender	
Female	53
Male	47
Marital status	
Married	67
Unmarried	33
Country of residence	
Japan	100
Note: N = 316	

Note: N = 316.

MBTI® Type and Preference Distributions

As shown in table 2, the most frequently occurring types for this sample are ENFP (14.2%), INTP (10.4%), and INFP (10.1%). The least common types are ENTJ (1.9%), ESTP (3.2%), and ENFJ (3.5%).

Table 3 shows the number and percentage of participants with each preference. Also included for reference are the number and percentage of participants in the global sample who have each preference.

MBTI® GLOBAL STEP I* ASSESSMENT RESULTS FOR THE JAPANESE SAMPLE

The Global Step I assessment contains 92 items used to help determine individuals' personality type. It replaces the Form M assessment and the European Step I assessment and was the outcome of the GRV research.

Relationships Between MBTI® Global Step I™ and Form M Preference Pair Results

Correlations between MBTI Global Step I and Form M preference pair results for the Japanese sample are shown in table 4. The overall agreement rate for whole types between the Global Step I and Form M assessments is 88%, higher than the 60% agreement rate between Form G and Form M reported in the 1998 MBTI® Manual (Myers, McCaulley, Quenk, & Hammer).

Table 2 | Reported MBTI* type distribution: Japanese sample

Sens	ing	Intui	ition		
Thinking	Fee	eling	Thinking		
ISTJ n = 22 7.0%	ISFJ n = 18 5.7%	INFJ n = 18 5.7%	INTJ n = 16 5.1%	Judging	Introversion
ISTP n = 22 7.0%	ISFP n = 12 3.8%	INFP n = 32 10.1%	INTP n = 33 10.4%	Perce	ersion
ESTP $n = 10$ 3.2%	ESFP n = 13 4.1%	ENFP <i>n</i> = 45 14.2%	ENTP n = 27 8.5%	Perceiving	Extra
ESTJ n = 14 4.4%	ESFJ <i>n</i> = 17 5.4%	ENFJ <i>n</i> = 11 3.5%	ENTJ <i>n</i> = 6 1.9%	Judging	Extraversion

Note: N = 316.

Table 3 | Reported MBTI° preference distributions: Japanese and global samples

		anese nple	Glo	
Preference	n	%	n	%
Extraversion (E)	143	45.3	7,251	43.2
Introversion (I)	173	54.7	9,522	56.8
Sensing (S)	128	40.5	11,321	67.5
Intuition (N)	188	59.5	5,452	32.5
Thinking (T)	150	47.5	9,128	54.4
Feeling (F)	166	52.5	7,645	45.6
Judging (J)	122	38.6	8,021	47.8
Perceiving (P)	194	61.4	8,752	52.2

Note: Japanese sample, N = 316; global sample, N = 16,773.

Table 4 | Relationships between MBTI Global **Step I**[™] and Form M preference pair results: Japanese sample

	Global Step I* ar preference pa	
Preference pair	Correlation between continuous scores	Agreement rate (%)
E-I	.96	98
S-N	.97	97
T-F	.97	90
J-P	.96	92
Overall agreement	rate for whole types	88

Note: N = 316.

Global Step I[™] Preference Pair Intercorrelations

Intercorrelations of Global Step I preference pair continuous scores in the Japanese sample are shown in table 5 below the diagonal. The highest correlation is between the S-N and J-P preference pairs. The next highest is between S-N and T-F. These correlations are similar to those found for the global sample, shown in table 5 above the diagonal. The Japanese sample findings are likewise consistent with those reported for Form M in the 1998 MBTI® Manual (Myers et al.).

Reliability of Global Step I™ Results

Reliability refers to consistency of measurement. A measure is said to be reliable when it produces a consistent, though not necessarily identical, result. Internal consistency reliability measures the consistency of responses across items in a particular measure for a particular sample. The most commonly used estimator of internal consistency reliability is Cronbach's alpha (Cronbach, 1951). The internal consistency reliabilities for the Japanese sample and the global sample are reported in table 6. The reliabilities of the four preference pairs are excellent at .93 and .94 for the Japanese sample and are similar to those reported in the MBTI® Manual for the Global Step I™ and Step II™ Assessments (Myers et al., 2018).

Validity of Global Step I™ Results: Factor **Analysis**

An instrument is said to be valid when it measures what it has been designed to measure (Ghiselli, Campbell, & Zedeck 1981; Murphy & Davidshofer, 2005). In several studies, confirmatory factor analyses of the MBTI assessment have been conducted 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 components exploratory factor analysis with varimax rotation was conducted using the item responses from the Japanese sample. The results are presented in table 7. The shaded cells indicate that factor 1 is S-N, factor 2 is E-I, factor 3 is J-P, and factor 4 is T-F. The first factor is the one that accounts for the most variance in this sample. The four-factor structure produced by this analysis shows that the MBTI Global Step I items translated into Japanese are measuring their intended constructs, the four preference pairs.

Table 5 | Intercorrelations of Global Step I™ preference pair continuous scores: Japanese and global samples

Preference pair	E-I	S-N	T-F	J-P
E-I	_	20	15	15
S-N	05	_	.27	.48
T-F	14	.09	_	.23
J-P	09	.29	.00	_

Note: Correlations for the Japanese sample (N = 316) are below the diagonal; those for the global sample (N = 16,773) are above the diagonal

Table 6 | Internal consistency reliabilities of Global Step I[™] preference pair continuous scores: Japanese and global samples

		C	ronbac	h's alph	a
Sample	N	E-I	S-N	T-F	J-P
Japanese	316	.94	.93	.93	.94
Global	16,773	.89	.87	.89	.88

Table 7 | Factor analysis rotated component matrix for the Japanese sample

Item code	Factor 1 S-N	Factor 2 E-I	Factor 3 J-P	Factor 4 T-F	Item code	Factor 1 S-N	Factor 2 E-I	Factor 3 J-P	Factor 4 T–F
EI1	.01	.77	08	10	TF1	.07	12	04	.65
EI2	01	.58	.00	03	TF2	.01	12	03	.74
EI3	05	.61	05	02	TF3	09	11	.06	.63
EI4	06	.76	03	01	TF4	06	17	.04	.74
EI5	.07	.56	17	08	TF5	03	08	02	.79
EI6	.05	.49	03	10	TF6	.00	.01	.05	.54
EI7	10	.71	11	13	TF7	.06	08	.03	.75
EI8	15	.50	14	.25	TF8	01	03	04	.72
EI9	.06	.59	02	26	TF9	.08	12	.05	.73
EI10	07	.71	.05	.02	TF10	.02	06	05	.70
EI11	04	.53	.22	12	TF11	.03	08	.04	.63
El12	.07	.53	05	14	TF12	.11	10	03	.64
EI13	13	.55	02	.17	TF13	07	09	02	.79
EI14	.02	.70	04	09	TF14	.09	06	.01	.51
EI15	06	.61	.00	.11	TF15	.01	.01	.09	.59
EI16	15	.37	13	09	TF16	.77	04	.00	05
EI17	.01	.62	05	06	TF17	.16	12	.09	.46
EI18	.08	.70	05	06	TF18	08	20	.04	.45
EI19	09	.68	.00	04	TF19	.10	11	.01	.72
EI20	.12	.63	08	14	TF20	.12	.11	.08	.57
EI21	05	.76	.01	.03	TF21	03	.01	02	.62
EI22	03	.71	11	02	TF22	.07	.11	01	.61
EI23	.05	.75	01	12	TF23	05	.11	.02	.56
EI24	02	.67	.02	19					
					JP1	.17	08	.59	11
SN1	.49	.04	.00	.20	JP2	.19	.06	.58	.11
SN2	.46	.18	.03	24	JP3	.07	.00	.53	.02
SN3	.59	.19	.19	.11	JP4	.06	14	.68	.02
SN4	.64	05	.18	13	JP5	.10	.10	.65	.00
SN5	.72	.03	.15	.16	JP6	.28	.03	.65	.01
SN6	.60	.07	.03	.19	JP7	.02	03	.81	.04
SN7	.50	.00	.17	.18	JP8	.08	.03	.65	04
SN8	.66	04	.22	05	JP9	.43	10	.48	04
SN9	.40	02	.10	.06	JP10	.07	08	.82	.04
SN10	.60	.08	.09	11	JP11	.09	15	.64	.07
SN11	.41	16	.23	.06	JP12	.09	.04	.70	06
SN12	.68	15	.28	.00	JP13	.16	05	.79	.05
SN13	.67	13	.12	02	JP14	.36	10	.60	.12
SN14	.67	14	.14	11	JP15	.35	15	.53	.05
SN15	.72	.13	.09	.14	JP16	.10	09	.82	.05
SN16	.76	07	.22	.06	JP17	.13	.02	.72	.02
SN17	.70	09	.16	.06	JP18	.33	18	.53	.07
SN18	.63	15	.20	04	JP19	.09	.05	.79	.03
SN19	.63	.06	.01	21	JP20	.08	05	.76	.05
SN20	.69	.12	.07	.18	JP21	.26	20	.54	09
SN21	.66	20	.21	07					
SN22	.65	.01	.06	.08					
SN23	.72	03	.07	.02					
SN24	.38	16	.47	.03					

Note: N = 316.

MBTI® GLOBAL STEP II® ASSESSMENT RESULTS FOR THE JAPANESE SAMPLE

The Global Step II assessment includes the 92 items that make up the Global Step I 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 Step II facets. For each of the four preference pairs there are five facets (see table 8), yielding a total of 20 facets. These facets help describe some of the ways in which each preference can be expressed differently and thus create a richer and more detailed description of an individual's personality. The remaining analyses in this brief focus on the evaluation of the Step II facets.

Relationships Between MBTI® Global Step II™ and Form Q Facet Results

The Global Step II assessment replaces the Form Q assessment and the European Step II assessment. Table 8 presents the relationships between MBTI Global Step II and Form Q facet results for the Japanese sample. All of the correlations are quite high at .90 or above, except for the moderate correlation on the Questioning-Accommodating scale.

Global Step II[™] Facet Intercorrelations

Intercorrelations of Global Step II facets are presented in table 9. Facets within each preference pair correlate more highly with other facets of the same preference pair than with facets of different preference pairs.

Reliability of Global Step II[™] Results

Internal consistency reliabilities for each facet are reported in table 10 for the Japanese sample and the global sample. The Japanese sample alphas range from .75 (Practical-Conceptual) to .90 (Scheduled-Spontaneous). Three-fourths of the Japanese sample alphas are in the .80 to .89 range. This sample's alphas are higher than those of the global sample.

Table 8 | Relationships between Global Step II™ and Form Q facet results: Japanese sample

	Correlation between Global Step II [™]
Global Step II [®] facet	and Form Q continuous scores
E-I facets	
Initiating-Receiving	.99
Expressive – Contained	.99
Gregarious-Intimate	.98
Active-Reflective	.90
Enthusiastic-Quiet	.99
S–N facets	
Concrete-Abstract	.96
Realistic-Imaginative	.98
Practical-Conceptual	.93
Experiential-Theoretical	.95
Traditional-Original	.94
T–F facets	
Logical-Empathetic	.93
Reasonable-Compassionate	.94
Questioning-Accommodating	.79
Critical-Accepting	.91
Tough-Tender	.97
J-P facets	
Systematic-Casual	.95
Planful-Open-Ended	.99
Early Starting-Pressure-Prompted	.95
Scheduled-Spontaneous	.98
Methodical-Emergent	.96

Note: N = 316

Table 9 | Intercorrelations of Global Step II" facets: Japanese sample

Global Step II" facet	₽ij	2.	м.	4.	5.	9	7.	<u>α</u>	6	10.	11.	12.	13.	14.	15.	16.	17.	18.	19. 2	20.
E-I facets																				
1. Initiating–Receiving	1																			
2. Expressive-Contained	.79	I																		
3. Gregarious–Intimate	.73	.72	I																	
4. Active-Reflective	.74	89.	.61	I																
5. Enthusiastic-Quiet	.75	.71	89.	69.	I															
S-N facets																				
6. Concrete-Abstract	.04	.03	.10	90.	01	I														
7. Realistic–Imaginative	.01	.03	.04	.02	05	.81	I													
8. Practical–Conceptual	03	05	02	90	12	.73	.77	ı												
9. Experiential–Theoretical	60:	60.	.12	.02	03	.76	.75	69.	ı											
10. Traditional-Original	13	13	11	17	19	.71	.75	.82	99.	I										
T-F facets																				
11. Logical–Empathetic	20	18	22	08	21	.32	.32	.20	.04	.16	I									
12. Reasonable – Compassionate	15	13	17	00.	14	.16	.16	90:	11	00.	.86	I								
13. Questioning-Accommodating	- 60.–	09	14	80.	09	.15	.22	- 90:	90	.04	.70	9/.	I							
14. Critical–Accepting	15	17	20	.03	14	.05	- 90:	- 90'-	20	07	.70	.79	.87	I						
15. Tough–Tender	10	11	18	90:	11	.13	.19	- 90:	08	01	.74	77.	.83	.81	ı					
J-P facets																				
16. Systematic–Casual	16	18	16	12	19	.48	.51	.55	.37	.65	.21	.13	.14	.08	.13	I				
17. Planful-Open-Ended	02	07	90	04	05	.24	.32	.36	.20	.42	.04	.02	.07	.04	.04	.73	ı			
18. Early Starting–Pressure-Prompted	11	12	10	09	10	.20	.28	.27	.20	.33	.07	.05	.13	80.	.05	.62	.73	I		
19. Scheduled–Spontaneous	. 60.–	11	10	09	12	.35	.41	.47	.29	.54	.08	.05	.10	.03	80.	.86	.85	.74	I	
20. Methodical–Emergent	- 60.–	12	12	09	11	.26	.32	.34	.18	.40	.07	.04	.10	.05	.07	9/.	77.	.70	83	
Note: N = 316.																				

Table 10 | Internal consistency reliabilities of Global Step II[™] facets: Japanese and global samples

	Cronbac	h's alpha
Global Step II [*] facet	Japanese sample	Global sample
E-I facets		
Initiating-Receiving	.89	.82
Expressive-Contained	.85	.73
Gregarious-Intimate	.82	.62
Active-Reflective	.77	.64
Enthusiastic-Quiet	.81	.69
S-N facets		
Concrete-Abstract	.84	.74
Realistic-Imaginative	.85	.72
Practical-Conceptual	.75	.66
Experiential-Theoretical	.78	.68
Traditional-Original	.80	.72
T–F facets		
Logical-Empathetic	.84	.80
Reasonable-Compassionate	.85	.76
Questioning-Accommodating	.76	.62
Critical-Accepting	.84	.59
Tough-Tender	.81	.73
J-P facets		
Systematic-Casual	.85	.76
Planful-Open-Ended	.89	.79
Early Starting-Pressure-Prompted	.83	.65
Scheduled-Spontaneous	.90	.80
Methodical-Emergent	.80	.64

Note: Japanese sample, N = 316; global sample, N = 16,773.

Validity of Global Step II[™] Results

Reported here as evidence of the validity of the Japanese translation of the MBTI Global Step II assessment are the percentage of out-of-preference facet scores for each preference pair, as well as correlations between preference pairs and facets.

The five facets within each preference pair do not represent the entire conceptual domain of the preference pair. Further, it is not uncommon for individuals to have a facet score on the side opposite that of their preference in a given preference pair. For example, an Extravert may score toward the Intimate pole of the Gregarious–Intimate facet. This apparent inconsistency is referred to as an out-of-preference score and defined as a facet score from -2 to -5 when a respondent has a preference for I, N, F, or P; or from 2 to 5 when a respondent has a preference for E, S, T, or J. While it is not unusual to have a number of outof-preference scores, it is relatively rare to have three or more facet scores out-of-preference for any one preference pair. The percentage of out-of-preference facet scores for each preference pair in the Japanese sample is shown in table 11.

Correlations between facets and preference pairs are presented in table 12. The correlation between each facet and its corresponding preference pair is significantly higher than those between the facet and the other three preference pairs. This is "compelling evidence for the theoretical hierarchical structure of the Step II facets in relation to the Step I scales" (Quenk, Hammer, & Majors, 2001, p. 104). The Japanese sample correlations are comparable to those reported in the MBTI® Step II™Manual (Quenk et al., 2001) and MBTI® Step II® Manual, European Edition (Quenk, Hammer, & Majors, 2004). For the Global Step II assessment in Japanese, the lowest correlation between a facet and its corresponding preference pair is between Early Starting-Pressure-Prompted and J-P.

Table 11 | Percentage of reported out-ofpreference Global Step II[™] facet scores: Japanese sample

	Numl	ber of out	-of-prefe	rence fa	cet score	s (%)
Preference pair	0	1	2	3	4	5
E-I	76	22	3	0	0	0
S-N	79	15	5	0	0	0
T-F	77	14	7	1	0	0
J-P	72	23	6	0	0	0

Note: N = 316. Percentages may not total to 100% due to the rounding of decimals.

Table 12 | Correlations between Global Step II™ facets and preference pairs: Japanese sample

		Prefer	ence pair	
Global Step II [™] facet	E-I	S-N	T-F	J-P
E-I facets				
Initiating-Receiving	.91	03	19	09
Expressive-Contained	.89	01	18	12
Gregarious-Intimate	.80	.01	22	12
Active-Reflective	.83	04	03	09
Enthusiastic-Quiet	.87	10	19	11
S-N facets				
Concrete-Abstract	.02	.90	.24	.32
Realistic-Imaginative	02	.90	.27	.40
Practical-Conceptual	10	.87	.14	.44
Experiential-Theoretical	.04	.85	02	.27
Traditional-Original	19	.88	.08	.52
T-F facets				
Logical-Empathetic	18	.24	.94	.09
Reasonable – Compassionate	11	.06	.93	.05
Questioning – Accommodating	04	.10	.83	.09
Critical-Accepting	11	05	.83	.04
Tough-Tender	06	.07	.87	.08
J-P facets				
Systematic-Casual	20	.58	.19	.87
Planful-Open-Ended	05	.35	.05	.91
Early Starting – Pressure-Prompted	11	.29	.08	.79
Scheduled-Spontaneous	12	.46	.09	.97
Methodical-Emergent	12	.34	.08	.86

Note: N = 316.

CONCLUSION

Initial analyses of the Japanese translations of the MBTI Global Step I and Step II assessments demonstrate that they each have good internal consistency reliabilities that are consistent with those of prior forms of the MBTI assessment (i.e., Form M and Form Q, European Step I and Step II). Validity was established by showing the percentage of outof-preference facet scores and correlations between Global Step I preferences and Global Step II facets. While more research should be conducted, all these analyses show that the Japanese translations of the MBTI Global Step I and Step II assessments have high reliability and validity and are appropriate for use with individuals in Japan who read and understand Japanese.

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