



Technical Brief for the THOMAS-KILMANN CONFLICT MODE INSTRUMENT

Japanese

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INTRODUCTION

The *Thomas-Kilmann Conflict Mode Instrument* (TKI) is a 30-item instrument that evaluates an individual's methods for handling conflicts (Herk, Thompson, Thomas, & Kilmann, 2011; Schaubhut, 2007). The TKI measures five conflict modes (Thomas & Kilmann, 1974, 2007):

- *Competing*: an individual exhibits assertive and non-cooperative behaviors
- *Collaborating*: an individual exhibits assertive and cooperative behaviors
- *Compromising*: an individual exhibits median levels of assertive and cooperative behaviors
- *Accommodating*: an individual exhibits cooperative but not assertive behaviors
- *Avoiding*: an individual exhibits neither assertive nor cooperative behaviors

The TKI is useful for understanding behavior in a variety of contexts, such as team building, training (supervisory, management, negotiation, and safety), and leadership development (History and validity, 2009). To determine whether an individual scores high, low, or in between on a conflict mode, the raw scores and percentiles are evaluated (Herk et al., 2011). The higher an individual's raw score is for a particular conflict mode, the more often the individual engages in behaviors common to that conflict-handling style (Schaubhut, 2007). The percentiles are separated into three classes: the top 25%, the median 50%, and the bottom 25% (Herk et al., 2011; Schaubhut, 2007). These percentiles represent the percentage of individuals who score above, below, or at a given raw score (Herk et al., 2011).

PURPOSE

The purpose of this technical brief is to evaluate a translation of the TKI into Japanese and compare the scoring and distribution to the U.S. norms (Schaubhut, 2007). This brief specifically addresses the development of the raw score–percentile matrix across the five conflict modes. Differences between the U.S. norm sample and the Japanese sample raw scores and percentiles are examined. Additionally, this brief explores the influence of gender on the five conflict-handling styles within the Japanese sample.

METHOD

Data on the TKI were collected by CPP's Japanese distributor as part of a larger translation project focused on adapting CPP assessments for use in the Japanese market. The distributor solicited participants, asked them to complete the assessment, and provided individual or group feedback on the assessment results. Participants may have also been compensated for their time.

The Japanese sample is primarily a sample of convenience and thus is not a representative sample of the Japanese population. The sample of Japanese completing the TKI consisted of 171 participants—72 men and 99 women—ranging in age from 20 years to 84 years ($M = 42.37$, $SD = 9.39$). No other demographic information was available to further describe the sample. The updated U.S. norm sample consisted of 8,000 participants, with approximately 50% men and 50% women (Schaubhut, 2007). The participants included in the updated U.S. norm sample were selected to best reflect the demographic (e.g., race, gender) and occupation distributions in the United States (Schaubhut, 2007).

Raw Scores and Percentiles

The raw scores and percentiles for the updated U.S. norm sample and the Japanese sample are presented in Table 1.* The table shows that while there is not an exact one-to-one correspondence between the two samples, the overall pattern is similar across the conflict modes. The smaller Japanese sample size also tends to make the cumulative frequencies somewhat less clear, since there are simply fewer respondents to distribute across the 13 (0–12) raw scores.

*Percentiles for assessments are often calculated using the cumulative frequencies. However, cumulative frequencies tend to be biased in the upward direction. To account for that bias, TKI percentiles are calculated as a median point (middle) of the range of cumulative frequency covered by that score. For example, “if a raw score of 5 on a given conflict mode had a cumulative frequency of 40% and a 6 had a cumulative frequency of 60%, then a 6 would be seen as covering the range from 40% to 60% and the percentile assigned would be the median value of 50%” (Schaubhut, 2007, p. 3).

TABLE 1. TKI RAW SCORES AND PERCENTILES FOR THE U.S. NORM SAMPLE AND THE JAPANESE SAMPLE

Raw Score	Percentile									
	Competing		Collaborating		Compromising		Avoiding		Accommodating	
	U.S.	Japanese	U.S.	Japanese	U.S.	Japanese	U.S.	Japanese	U.S.	Japanese
0	3	1	0	0	0	0	1	0	0	1
1	10	5	1	0	0	0	2	2	2	5
2	20	11	3	1	1	2	6	6	7	11
3	31	14	7	3	3	9	12	14	16	21
4	44	36	15	6	7	20	22	28	30	32
5	57	49	26	13	15	38	34	42	46	45
6	69	62	41	24	27	62	49	58	62	61
7	79	72	58	39	41	79	65	73	76	75
8	87	82	74	58	58	90	78	84	87	85
9	93	90	87	76	75	97	88	94	94	92
10	96	95	95	89	87	100	95	99	98	98
11	98	98	99	96	95	100	98	100	100	100
12	100	100	100	100	99	100	100	100	100	100

Note: N = 8,000 for the U.S. norm sample; N = 171 for the Japanese sample. Percentiles are rounded up.

Interpretive Ranges

The TKI scores are also separated into three interpretive ranges: high (top 25%), medium (middle 50%), and low (bottom 25%). As shown in Table 2, the interpretive ranges for the U.S. and Japanese samples were similar across the conflict modes. The ranges differed only

slightly between the samples, usually by approximately one raw score; for example, for Competing the median 50% range for the U.S. norm sample was 3–6, while the range for the Japanese sample was 4–6. This is very similar to the pattern of differences found in other countries (Herk et al., 2011).

TABLE 2. RAW SCORES AND INTERPRETIVE CATEGORIES FOR THE U.S. NORM SAMPLE AND THE JAPANESE SAMPLE

Interpretive Category	Competing		Collaborating		Compromising		Avoiding		Accommodating	
	U.S.	Japanese	U.S.	Japanese	U.S.	Japanese	U.S.	Japanese	U.S.	Japanese
	High (top 25%)	7–12	7–12	9–12	9–12	10–12	7–12	8–12	8–12	7–12
Medium (middle 50%)	3–6	4–6	5–8	7–8	6–9	5–6	5–7	4–7	4–6	4–7
Low (bottom 25%)	0–2	0–3	0–4	0–6	0–5	0–4	0–4	0–3	0–3	0–3

Note: Interpretive ranges that differ between the U.S. norm sample and the Japanese sample are shaded.

TABLE 3. ANOVA SUMMARY FOR THE TKI MODES BY GENDER IN THE JAPANESE SAMPLE

TKI Mode	Variance Sources	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F	p	η_p^2
Competing	Gender	1.247	1	1.247	.171	.680	.0010
	Error	1232.835	169	7.295			
Collaborating	Gender	.747	1	.747	.171	.680	.0010
	Error	739.359	169	4.375			
Compromising	Gender	11.116	1	11.116	3.731	.055	.0215
	Error	503.562	169	2.980			
Avoiding	Gender	29.211	1	29.211	6.010	.015	.0343
	Error	821.420	169	4.860			
Accommodating	Gender	3.305	1	3.305	.530	.468	.0031
	Error	1053.865	169	6.236			

ANALYSES OF CONFLICT MODE DIFFERENCES

Researchers examined whether differences existed between men and women for conflict types and whether those conflict types were meaningful. They first used a univariate analysis of variance (ANOVA) to determine whether statistically significant differences existed between the means of the two groups (Tabachnick & Fidell, 2007). Next, they examined the magnitude of any differences found using partial eta squared (η_p^2). Effect sizes of .0055 are considered weak, .0588 moderate, and .1379 strong (Cohen, 1988, p. 4). Due to the small Japanese sample size ($N = 171$), partial eta squared should be interpreted with caution (Ferguson, 2009).

As shown in Table 3, in the Japanese sample a moderate difference was found between scores for men and women on the Avoiding conflict mode, with men scoring .84 lower than women (men: $M = 5.04$, $SD = .26$; women: $M = 5.88$, $SD = .22$). The difference in Avoiding scores is consistent with the U.S. sample (see Schaubhut, 2007). Unlike in the U.S. sample, no statistically significant differences were observed in the other conflict modes. However, it is important to note that in general weak differences in gender differences were seen in the U.S. sample (see Schaubhut, 2007).

CONCLUSION

The analyses presented in this technical brief illustrate that even though small differences exist between the 2007 U.S. norm sample and the Japanese sample, similarities abound. The Japanese sample's percentile scores are most similar to the U.S. norm sample's scores for the Competing and Accommodating conflict modes. In regard to these scales, the points between the percentiles are minimal for each raw score (e.g., a raw score of 8 on Competing corresponds to the 87th percentile for the U.S. sample and the 82nd percentile for the Japanese sample). However, for the Collaborating, Compromising, and Avoiding modes the two samples have much greater difference between the raw scores and percentiles (e.g., a raw score of 6 on Collaborating corresponds to the 41st percentile for the U.S. sample and the 24th percentile for the Japanese sample).

Raw scores and interpretive categories for both samples suggest that the U.S. norm sample and the Japanese sample are similar, with slight differences in the raw score ranges across conflict modes. For example, the Japanese sample tended to have larger ranges between the interpretive categories for the Collaborating conflict mode than did the U.S. norm sample. However, for the Compromising conflict mode the U.S. norm sample

had larger ranges between the interpretive categories than did the Japanese sample. Yet, both samples had the same ranges for the high (top 25%) interpretive category across all conflict modes except Compromising.

The ANOVA results suggest that gender is not a significant factor for the conflict-handling style employed by individuals from the Japanese sample. The Avoiding conflict mode was the only style influenced by gender, though the effect size was moderate, with men scoring slightly lower than women. Given the issue of sample size influencing the magnitude of effect sizes observed, one should use caution when interpreting the role of gender on conflict-handling styles within the Japanese sample. These findings are similar to those found by Herk et al. (2011) when examining the role of gender on conflict modes for which gender is significant; however, the effect sizes tend to range from weak to moderate (see Herk et al., 2011).

Overall, these findings suggest that the TKI operates similarly in the Japanese sample as compared to the U.S. norm sample. Given that the Japanese sample size is smaller than what would be considered favorable, the results developed from this sample should be monitored and further evaluated in the future once larger samples become available.

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