

The Translation and Development of a Short Form of the Korean Language Version of the Multidimensional Work Ethic Profile

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ABSTRACT *The present research seeks to further facilitate a cross-cultural study on the work ethic construct by developing a short version of the Korean language version of the Multidimensional Work Ethic Profile (MWEPP). Our research purpose is to provide researchers and practitioners with a short version of the Korean MWEPP that can better meet their research needs by providing a thorough assessment of work ethic in a shorter time than the original full version. Results indicate that a shortened version demonstrates psychometric properties similar to the full version and is more practical and efficient to administer.*

KEY WORDS: Work ethic, instrument translation, instrument adaptation, Korea

Introduction

More and more members of the business community are expressing concerns about the work ethic – a commitment to the value and importance of hard work – among potential employees. Some believe that work ethic is declining both in America as well as other industrialized countries (Ali and Azim, 1995; Eisenberger, 1989; Sacks, 1998). Concern has been expressed that the decline in work ethic corresponds to lower levels of job performance (Yandle, 1992), higher levels of absenteeism and turnover (Klebnikov, 1993; Shimko, 1992), and increases in counterproductive behavior ranging from unauthorized breaks to employee theft (Sheehy, 1990). Others have argued that work ethic is not in decline, rather the work ethic among those classified as ‘Generation X’ is different than that of previous generations (Allerton, 1994; Corbo, 1997; Spiegler, 1997). Regardless of the point of view, the importance of work ethic to employers is apparent. Flynn (1994) states that in a survey of hiring managers more than 50% reported that they were more concerned about an applicant’s attitude than aptitude. Flynn (1994) also indicates that in another survey of 150 American managers, nearly 60% of the respondents ranked work ethic as the

most important factor when hiring an administrative employee, assuming the candidate had the basic skills necessary to perform the job. Work ethic was ranked higher than other employee characteristics such as intelligence (23%), enthusiasm (12%), and education (4%).

Work Ethic Studies

Modern formulations of the work ethic construct stem from the work of Max Weber. In 1904 and 1905 Weber wrote the now classic two-part essay entitled 'The Protestant Ethic and the Spirit of Capitalism'. In this essay Weber advanced the thesis that the introduction and rapid expansion of capitalism and the resulting industrialization in Western Europe and North America was *in part* the result of the Puritan value of asceticism and the belief in a calling from God (Byrne, 1990; Charlton *et al.*, 1986; Fine, 1983; Furnham, 1990; Green, 1968; Lehmann, 1993; Maccoby, 1983; Nord *et al.*, 1988; Poggi, 1983). It was the application of these values that Weber believed led to the 'work ethic' – the complete and relentless devotion to one's economic role on earth (Lessnoff, 1994). Since Weber's thesis of work ethic, many researchers have conducted studies on work ethic. Among them, Super (1969) defined work values as being work-goals which attributes or qualities are intrinsically desirable and seek in the activities in which people engage. As Hill (1992) commented, the measure of work values reflected upon the worker's satisfaction with employment rather than directly assessing work ethic. From his study of the Work Values Inventory Super (1969) identified 15 work values in creativity, management, achievement, surrounding, supervisory relations, way of life, security, associates, esthetics, prestige, independence, variety, economic return, altruism, and intellectual stimulation. Another study by Wayne (1989) measured adherence to contemporary work values and the Protestant work ethic and found no difference in measure of Protestant work ethic based on gender or age. In an attempt to develop a comprehensive work ethic instrument, Furnham (1990) studied seven instruments designed to measure the Protestant Work Ethic including: (a) the Protestant Ethic (Goldstein and Eichorn, 1961), (b) the Protestant Work Ethic (Mirels and Garrett, 1971), (c) the Pro-Protestant Ethic Scale (Blood, 1969), (d) the Spirit of Capitalism Scale (Hammond and Williams, 1976), (e) the Leisure Ethic and Work Ethic (Buchholz, 1978), (f) the Eclectic Protestant Ethic (Ray, 1982), and (g) the Australian Work Ethic (Ho, 1984). After a meta analytic study using these instruments from 1,021 subjects, Furnham (1990) found that five main factors (belief in hard work, role of leisure, religious and moral beliefs, stress on independence of others, and asceticism) accounted for one-third of the total variance between items and concluded that differences in previous research was caused by an emphasis on one of more of these different facets. From this study, Furnham (1990) recommended that future work ethic scales include measures of attitudes and beliefs about asceticism, independence, time, leisure, and work.

Several studies were conducted to measure how work ethic is different based on demographic variables. Miller's (1980) study indicated that occupational interest and gender were the two variables accounting for the largest variance in Protestant work ethic values for college students. Wayne (1989) found that women scored significantly higher than men for contemporary work values. According to Hall

(1991) female students in a community college setting scored significantly higher than male students on measures of work attitudes. Hill's (1992) study indicated that females scored significantly higher than males on all four of the work ethic dimensions measured by the Occupational Work Ethic Inventory (OWEI) subscales (dependable, considerate, ambitious, cooperative). The finding that female scored higher than male on the OWEI supported previous study findings using gender as a variable (Miller, 1980; Wayne, 1989).

Stemming from Weber's thesis, a great deal of research has focused on the nomological network surrounding work ethic as well as the comparison of work ethic among demographic variables and/or across cultures (see Furnham, 1990 for a summary). Recent literature, however, has suggested that one of the primary factors limiting this research is the lack of common conceptualizations and measurement systems for the work ethic construct.

The Multidimensional Work Ethic Profile

In an attempt to address this limitation, Miller *et al.* (2002) recently presented a historical and conceptual review of the work ethic construct. Drawing on the large body of literature stemming from Weber's original work, they posit that work ethic is not a single unitary construct but a constellation of attitudes and beliefs pertaining to work behavior. They suggest that the work ethic construct: (a) is multi-dimensional; (b) pertains to work and work-related activity in general, not specific to any particular job (yet may generalize to domains other than work – school, hobbies, etc.); (c) is learned; (d) refers to attitudes and beliefs (not necessarily behavior); (e) is a motivational construct reflected in behavior; and (f) is secular, not necessarily tied to any one set of religious beliefs. Based on previous literature as well as original empirical research, Miller *et al.* (2002) identified seven components or dimensions comprising the work ethic construct. The dimensions posited are centrality of work, self-reliance, hard work, leisure, morality/ethics, delay of gratification, and wasted time (see Table 1 for a full definition of each dimension).

Miller *et al.* (2002) also argue that previous measures of work ethic have been deficient to the extent that they do not sufficiently assess and/or differentiate among the various facets of work ethic. Consequently, they developed and provided initial support for a multidimensional work ethic inventory – the Multidimensional Work Ethic Profile (MWEP). The MWEP purports to measure seven conceptually and empirically distinct (i.e., divergent) facets of work ethic. (Each of the seven facets [dimensions] tapped by the MWEP along with dimension definitions and sample scale items are presented in Table 1).

In an extension of the work by Miller *et al.* (2002), Woehr *et al.* (2007) examined the appropriateness of the MWEP as a measurement tool across cultures. Specifically, Woehr *et al.* report on the development and evaluation of both Spanish and Korean language versions of the MWEP. They also examined the degree of measurement invariance between the original English language version and the two new versions in three diverse samples (Korean, Mexican, and U.S. organizational samples). Woehr *et al.* indicated that the two alternate language versions assessed Miller *et al.*'s (2002) conceptualization of work ethic to the same extent as did the original English version. In essence they demonstrated that the Spanish and Korean

Table 1. MWEP dimensions, dimension definitions, and sample items

Dimension	Definition	Sample items
Centrality of work	Belief in work for work's sake and the importance of work.	<ul style="list-style-type: none"> – Even if I inherited a great deal of money, I would continue to work somewhere. – It is very important for me to always be able to work.
Self-reliance	Striving for independence in one's daily work.	<ul style="list-style-type: none"> – I strive to be self-reliant. – Self-reliance is the key to being successful.
Hard work	Belief in the virtues of hard work.	<ul style="list-style-type: none"> – If you work hard you will succeed. – By simply working hard enough, one can achieve their goals.
Leisure	Pro-leisure attitudes and beliefs in the importance of non-work activities.	<ul style="list-style-type: none"> – People should have more leisure time to spend in relaxation. – The job that provides the most leisure time is the job for me.
Morality/ethics	Believing in a just and moral existence.	<ul style="list-style-type: none"> – People should be fair in their dealings with others. – It is never appropriate to take something that does not belong to you.
Delay of gratification	Orientation toward the future; the postponement of rewards.	<ul style="list-style-type: none"> – The best things in life are those you have to wait for. – If I want to buy something, I always wait until I can afford it.
Wasted time	Attitudes and beliefs reflecting active and productive use of time.	<ul style="list-style-type: none"> – I try to plan out my workday so as not to waste time. – Time should not be wasted, it should be used efficiently.

versions of the MWEP may legitimately be used to make cross-group comparisons between English, Spanish, and Korean speaking participants (i.e., cross-cultural measurement invariance).

Research to date suggests that the MWEP provides a psychometrically sound measure of the constellation of attitudes and beliefs that comprise the work ethic construct (Miller *et al.*, 2002). In addition, research also indicates that the MWEP demonstrates a high level of cross-cultural viability (Woehr *et al.*, 2003). Thus, the MWEP is a potentially valuable tool to facilitate further cross-cultural research with respect to the work ethic construct.

Needs to Reduce the Length of the MWEP in Cross Cultural Studies

Although the MWEP has been found to be a sound psychometric measure of work ethic across diverse cultures, one concern with current versions of the measure,

especially in applied settings, is the length of the instrument. Several researchers concerned that lengthy survey instruments may decrease the likelihood of response from study participants (Rogelberg and Luong, 1998) and have emphasized the necessity of concise and focused measurement instruments especially when data collection is conducted using the Internet or Intranets within organizations (Stanton, 1998). The full version of the MWEP is a self report measure comprised of 65 items assessing the seven conceptually and empirically distinct dimensions presented in Table 1. Each of the 7 dimensions is assessed with 7 to 10 items. During previous qualitative evaluations of the MWEP, several international human resources managers have expressed concerns over the time to complete the full version of the measure, especially when used in conjunction with other measures such as assessing job satisfaction, organization commitment, and job performance especially within international or cross-cultural context. While the need for psychometrically sound but shorter survey instruments in organizational research is apparent and high among researchers, there is a big research gap about how to shorten scales while maintaining desirable qualities of the original full-length scale (Smith and McCarthy, 1995; Stanton *et al.*, 2002). This concern has been especially prevalent in cross cultural studies.

As one of the newly industrializing countries (NICs) in East Asia and as one of the most westernized countries in Asia (Scarborough, 1998), South Korea has experienced an incredible record of economic growth and integration into the high-tech modern world economy since the early 1960s. During the rapid modernization of the past several decades, South Korea has experienced major social changes moving from the traditional Confucianism and Buddhism dominant society to the modern and westernized society. We believe that the development of a Korean language version of the MWEP provides a valuable tool to conduct a cross cultural analysis of the role of work ethic on various workplace issues including work performance, employee morale, motivation, and work stress in Korea. However, we believe that the potential value of the MWEP might be enhanced through the development of a shorter Korean version of the measure.

Consequently, the primary goal of the present study is to develop a short form of the Korean language version of the MWEP that yields psychometric properties similar to the original version, but with a substantially shorter administration time. The goal was to provide researchers and practitioners with a version of the Korean language MWEP that can better meet their needs by providing a thorough assessment of work ethic in a shorter time than is available with the original MWEP. At the same time, this study seeks to provide researchers with an exemplary procedure of shortening an existing instrument for data collection so they can utilize similar procedures for their study in cross cultural study settings.

Method

Participants

Two independent groups of participants were utilized in the present study. The first group was a sample of Korean university students and the second was a sample of non-student working adults.

University sample. This sample consisted of 491 full time and part time undergraduate and graduate students who were studying in six universities located in the metropolitan area of Seoul, South Korea. Participants were 76% female and 86% were between the ages of 20 and 30. Regarding degree status, 282 (76%) were in undergraduate degree programs, 63 (17%) were in master's degree programs, and 25 (7%) were in doctoral degree programs. Thirty one percent of the sample were working students either in part time or full time status. The mean age of participants in this sample was 25.43 years ($SD = 5.04$). All participants voluntarily and anonymously completed the Korean language version of the 65-item MWEP measure.

Corporate sample. This sample consisted of 412 working adults from three multinational corporations in Seoul, South Korea. Eighty percent of the sample was between the ages of 27 and 35, and the sample was 75% male. All participants voluntarily and anonymously completed the Korean language version of the 65-item MWEP measure.

Measures

Multidimensional Work Ethic Profile – Korean language version (KMWEP). In cross-cultural research studies, validating linguistic equivalence between the different language versions of a cross-cultural survey instrument is an important task. Linguistic equivalence refers to the extent to which matching items on two versions of instrument have the same meaning, nuance, and connotation (Chen and Bates, 2005). Woehr, Arcineiga, and Lim (2007) recently developed and evaluated the Korean Multidimensional Work Ethic Profile (KMWEP). The KMWEP is the Korean translation of the English language version of the MWEP developed by Miller *et al.* (2003). Both the MWEP and the KMWEP are self-report measures composed of 65 items assessing the seven conceptually and empirically distinct dimensions (see Table 1). Each of the seven dimensions is assessed with 7 to 10 items. Responses to all items are made on 5-point Likert-type scales (1 = strongly disagree to 5 = strongly agree). Woehr *et al.* (2007) demonstrate that the KMWEP: 1) is a psychometrically sound measure of the proposed seven dimensions, and 2) shows a high degree of measurement equivalence with both the original English language version as well as Spanish language version. While a full description of the development of the KMWEP is beyond the scope of the present paper, readers are encouraged to see Woehr *et al.* (2007) for a full discussion of the both the development and equating process. In the present study, we used the full version of the KMWEP as the sole basis for development of the short form version.

Analytic Approach

We took a two stage approach to the development and evaluation of a short form of the KMWEP (hereafter referred to as the KMWEP-SF). The first stage focused on the identification of the optimal subset of the original KMWEP items to retain on the short form. Toward this end we first conducted an exploratory factor analysis using the university sample data to determine the 5 best items from each scale of the

KMWEP that retained the unique dimension characteristics of the original dimension. We decided to retain five items from each scale because this would reduce the total number of items for the entire scale to 35, which we considered a reasonable trade-off between concerns regarding administration time and the need for acceptable psychometric properties. Specifically, we used exploratory factor analysis both to examine the degree of first factor saturation (unidimensionality) for each dimension and to empirically identify the most relevant subsets of scale items (Briggs and Cheek, 1986). Analysis of the items was performed separately by dimension. That is, responses to items corresponding to each of the seven dimensions were factor analyzed separately. These analyses were primarily intended to identify the subset of items with the cleanest loadings on each factor. For this analysis we used a principal components analysis. Principal components analysis is an appropriate approach in that unlike common factor analysis, it does not assume an underlying set of latent factors. Rather “components” represent optimal linear functions of the actual variables (i.e., items) rather than of common and unique “factors” (i.e., principal components analysis decomposes the full item correlation matrix as opposed to the reduced matrix in common factor analysis) (Dunteman, 1989; Kim and Mueller, 1978). Principal components analysis has been recommended as an appropriate approach for the selection of an optimal subset of variables (Briggs and Cheek, 1986; Dunteman, 1989; Nunnally and Bernstein, 1994).

We then used the corporate sample to cross validate the results of the initial analyses. Specifically, we used a confirmatory factor analytic application of LISREL 8.7 (Joreskog and Sorbom, 1999) to test the fit of a seven factor model (corresponding to the seven work ethic dimensions) in which the five items selected in the original factor analysis served as manifest indicators of the work ethic dimension represented. Here it is important to note that this analysis was performed on a separate sample in order to provide a true cross validation of the original analyses.

The second stage of our analyses focused on the extent to which the scales developed for the KMWEP short form demonstrated equivalent psychometric characteristics to the original KMWEP scales. Toward this end we used the full sample (combined corporate and university sample) to examine the reliability (coefficient alpha) for each scale and the correlation between the long and short form scales. In addition, we examined the overall pattern of correlation among dimensions. If the KMWEP-SF functions similarly to the KMWEP, reliability estimates should be roughly equivalent, the correlations between similar dimensions should be quite high, and the overall pattern of correlations among the dimensions should be equivalent.

Results

Results of the initial exploratory factor analyses are presented in Tables 2 and 3. Table 2 provides a clear indication of the unidimensionality of each of the 7 KMWEP dimensions indicating a high degree of commonality across items as well as a high degree of first factor saturation. Table 3 presents the factor loadings for the five items demonstrating the highest factor loadings on each scale. These results indicated that the factor loadings across the dimensions ranged from .38 to .86. Cliff and Hamburger (1967) suggested that for a sample of 250, factor loadings of greater

Table 2. Factor analytic results for the 7 work ethic dimension

Factor	Eigenvalue	Proportion of variance Accounted for		Difference ^a	Relative difference ^b
		1 st Factor	2 nd Factor		
Hard work	3.14	42.69	13.45	2.15	7.12
Self-reliance	3.03	42.96	11.88	2.19	13.79
Leisure	2.81	39.80	12.41	1.93	7.60
Centrality of work	2.96	38.99	14.16	1.88	6.96
Morality/ethics	2.20	26.21	15.87	.87	2.28
Delay of gratification	2.28	37.97	17.51	1.23	5.23
Wasted time	2.52	38.49	17.00	1.26	7.04

Notes: $N = 490$.

^aDifference is the difference between the first and second eigenvalues. The larger the difference the larger the drop in the scree plot between the 1st and 2nd factors.

^bRelative Difference represents the difference between eigenvalues 1 and 2 relative to the difference between 2 and 3. The larger this difference the larger the difference in the slope of the scree plot from the 1st to 2nd factor relative to the slope from the 2nd to 3rd factors.

Table 3. Factor analytic results for the KMWEP-SF

Factor	Factor loadings				
	Item 1	Item 2	Item 3	Item 4	Item 5
Self-reliance	.63 (34)	.59 (50)	.58 (06)	.57 (28)	.57 (55)
Morality/ethics ^a	-.76 (57)	-.64 (16)	-.59 (48)	.52 (54)	.43 (37)
Leisure	.60 (43)	.58 (14)	.57 (31)	.56 (58)	.50 (08)
Hard work	.69 (17)	.64 (35)	.61 (38)	.58 (60)	.58 (45)
Centrality of work	.74 (33)	.69 (10)	.68 (40)	.57 (41)	.52 (30)
Wasted time	.81 (12)	.78 (36)	.62 (23)	.40 (56)	.37 (39)
Delay of gratification	.76 (11)	.70 (19)	.64 (29)	.57 (46)	.41 (03)

Note: $N = 490$.

Numbers inside parentheses indicate the item numbers from the KMWEP. ^aItems 1, 2, and 3 from this dimension are reverse scored.

than .33 should be considered significant at the $\alpha = .01$ level. Thus, these results indicate that all items retained for the KMWEP-SF demonstrated significant factor loadings on the appropriate work ethic dimension scale.

Results of the confirmatory factor analysis provided clear support for the seven factor model of work ethic represented in the KMWEP-SF. Specifically, a seven factor model within each of the 35 KMWEP loading on the appropriate work ethic dimension (five items per scale) demonstrated an acceptable fit with the data ($\chi^2 = 1145.18$, $df = 537$, $RMSEA = .052$, $CFI = .93$, $NFI = .87$). In addition, t-values associated with each of the factor loadings indicated that each item significantly loaded on the appropriate dimension. Taken together, these results suggest that the items identified in the initial exploratory factor analysis are also valid indicators of the work ethic dimensions in a separate and distinct sample.

Given the support provided by the confirmatory factor analysis for the cross validation of the KMWEP scales, we used the full sample (combined university and corporate samples) to examine scale reliabilities and convergence across measurement format. Internal consistency reliability estimates (coefficient α) for each of the seven scales of the KMWEP and KMWEP-SF are presented in Table 4. An examination of these results indicated a similar pattern of reliabilities between the KMWEP and KMWEP-SF. While these correlations are generally moderate (mean $\alpha = .74$) it is important to note that they likely represent underestimates of the actual scale reliability (due to restricted item variance). Consistent with this is the fact that the correlations between short form scales and original KMWEP scales presented in Table 5 (in essence parallel forms reliability based on the scale score rather than item r 's) are all above .90.

Finally, correlations among each of the seven dimensions for both the original and short form of the KMWEP are presented in Table 5. Examination of these correlations indicates a highly similar pattern (mean deviation = .11) among the original KMWEP scales and the KMWEP-SF scales.

Table 4. Reliability estimates for the 7 scales of the KMWEP and KMWEP-SF by sample

	KMWEP	KMWEP-SF
Self reliance	.84	.71
Morality/ethics	.69	.61
Leisure	.84	.79
Hard work	.84	.78
Centrality of work	.82	.82
Wasted time	.74	.76
Delay of gratification	.73	.73

Note: Reliability estimates were calculated using Cronbach's alpha.

Table 5. Correlations between the 7 scales of the KMWEP and KMWEP-SF

Original scales	Short form scales						
	Self reliance	Morality/ethics	Leisure	Hard work	Cent. of work	Wasted time	Delay of grat.
Self reliance	.94	.22	.28	.39	.36	.43	.35
Morality/ethics	.43	.90	.10	.18	.25	.22	.12
Leisure	.52	.12	.93	.15	.14	.16	.26
Hard work	.52	.45	.12	.90	.35	.37	.37
Centrality of work	.47	.43	.04	.56	.90	.46	.32
Wasted time	.52	.41	.13	.56	.60	.92	.33
Delay of gratification	.24	.29	.26	.12	.33	.36	.94

Note: $N = 852$.

Values on the diagonal represent the correlation short form and original KMWEP scales for the same dimension. Values below the diagonal represent the correlations among the original KMWEP scales and values above the diagonal represent the correlations among the short form KMWEP scales.

Discussion

In conducting cross-cultural studies, developing survey instruments that are conceptually and linguistically sound becomes a critical task (Chen and Bates, 2005; Stanton *et al.*, 2002). This concern is as important as securing construct equivalence between the different language versions to measure the same underlying construct of a research interest. In developing a shortened version of cross-cultural survey instrument, several issues in the quality of shortened scale were indicated. First, as Stanton *et al.* (2002) suggested, internal item qualities (properties of items that are determined in reference to the scale itself) should be measured in the form of distributional characteristics (mean, variance, skewness, and kurtosis), item-total correlations, and factor analysis loadings. Second, external item qualities must be measured in connection with other constructs or indicators. Third, judgmental item qualities such as clarity of item expression, scale relevance to a particular survey context, and semantic redundancy of an item's content with other items also need to be examined through proper translation and adaptation procedures. Among these three item quality issues, this study resolved the issue of internal item qualities by calculating internal consistency estimates of reliability for each dimension of the two forms in both the corporate and the university samples and also by calculating correlation coefficients in both samples between the KMWEP and the KMWEP-SF for each dimension. Regarding the judgmental item qualities in using the KMWEP-SF, a thoughtful and thorough translation and adaptation process of the original instruments was performed through a forward and backward translation method. In this regard, the MWEP provides a psychometrically sound measure of the work ethic construct (Miller *et al.*, 2002) and this research study to develop a shorter Korean version of MWEP (KMWEP-SF) illustrates how the researchers address the issue of linguistic and construct equivalence of the two different language versions. From our analysis the KMWEP-SF is a potentially valuable tool to facilitate further cross-cultural research with respect to the work ethic construct.

Jones (1997) suggests that two indices of a theory's importance are the length of time it continues to attract attention and the number of scholars who investigate it. One might add to these the extent to which a theory captures attention in popular as well as scientific culture. Using these indices the ideas of Max Weber (1904, 1905) with regard to the construct of work ethic have certainly been among the most influential. Work ethic has been the focus of scholars in history, sociology, anthropology, political science, psychology, and organizational behavior. In addition, a great deal of literature has sought to address cross-cultural comparisons with respect to work ethic (Furnham, 1990). Miller *et al.* (2002) facilitated the research on work ethic by providing a comprehensive and empirically supported multidimensional measure of the work ethic construct. Woehr *et al.* (2003) extended this work with their development and evaluation of Spanish version of the MWEP. Our goal in the present paper was to further facilitate research on the work ethic construct by developing a short version of the Korean language version of the measure. Our results indicate that the shortened version demonstrates psychometric properties similar to the full version and is more practical and efficient to administer.

Future Studies and Limitations

The development of a shorter version of the Korean MWEP is expected to promote more research studies combined with other organizational variables in workplace environment. First, the KMWEP-SF can be used to conduct an analysis of the role of work ethic on various workplace issues including job satisfaction, employee morale, motivation, and work stress. Second, future studies will reveal meaningful findings about the relationships between work ethic construct and other organizational variables occurring in cross-cultural settings. By conducting these kinds of future studies, the issue of external item qualities of the KMWEP-SF will be fully examined and addressed.

Several limitations of this study are identified. Regarding translation procedure, as Chen and Bates (2005) indicate, using researchers as translators may cause some type of biases during the translation procedure. To avoid this kind of limitation, consulting third party individuals for translation may allow objective translation that minimizes the researchers' biases during the translation procedure. The generalization of the study findings may also be limited due to the selection of the study subjects. The subjects who participated in the data collection procedure were selected from a sample located in a metropolitan area in Korea.

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