Validating the Factors of the English and Filipino Versions of the Sense of Self Scale

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The Sense of Self (SOS) Scale measures different aspects of a learner's sense of purpose and self-concept that are related to their motivations to strive in their academic endeavors, and is designed to have four dimensions: sense of purpose, sense of reliance, negative self-esteem, and positive self-esteem. In this study, we developed a (conversational) Filipino version of the SOS using a translation process that combined a committee approach with back-translation. To assess the validity of the four-factor structure of the Filipino and English versions of the SOS, 765 high school students were asked to complete one of the two versions. Confirmatory factor analysis indicated a good fit between the four-factor structure and the data from the two language versions. The scales corresponding to the four factors were also found to show adequate internal reliability for both versions. Finally, the pattern of correlations among the four factors were similar for both versions. The discussion focused on the viability of the four-factor structure of the Filipino and English SOS Scales for use in various research explorations on Filipino students' motivations in school.

Keywords: sense of self, validation, translation, back-translation technique, motivation, learning, Philippines, confirmatory factor analysis.

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What a person can do and what he or she can become is often guided by the person's notions of who he or she is, including the person's beliefs and evaluations about themselves (Burns, 1982; Eggen & Kauchak, 2007). These notions, beliefs, and evaluations comprise the person's sense of self, which provides an internal guiding mechanism that guides and cultivates the person through life (Mann, Hosman, Schaalma, & De Vries, 2004). The concept of "sense of self" has actually been studied in relation to many different concepts in the psychology literature. For example, aspects of the sense of self have been studied in relation to a person's self-concept or the cognitive appraisal of one's own physical, social, and academic competence (Marsh & Craven, 2006; Pintrich & Schunk, 2002). Sense of self has also been studied in relation to people's self-esteem, self worth, or their emotional response to and appraisal of the self (Pintrich & Schunk, 2002; Eggen & Kauchak, 2007). Maehr (1984) was the psychologist who used the term "sense of self" to refer to the relatively organized collections of perceptions, beliefs, and feelings related to who one is.

As a psychological construct, sense of self has received substantial attention in psychology research because of its strong association with positive outcome variables including promotion of happiness and mental health in general, optimal functioning, achievement, resilience, acceptance, among others (see Baldwin & Sinclair, 1996; McInerney, 2008; Taylor & Brown, 1988 for reviews). The associations of sense of self with a range of positive psychological states and outcomes has been observed in a variety of settings, and has been documented in the various subareas of psychological study including the study of social behavior and relations, personality, education, child development, mental and physical health, social services, organizations, work, and sports (Harter, 1998; Marsh & Craven, 2006; Marsh & Hau, 2004).

This positive influence of sense of self can be understood within the framework of personal investment theory developed by Maehr, who, as mentioned earlier, first defined the concept (Maehr & Braskamp, 1986; Maehr & McInerney, 2004). Personal investment theory is a social-cognitive theory which seeks to explain how a person chooses to invest his or her energy, talent and time in particular activities. In other words, the theory is a theory of human motivation, but one that is phenomenologically based. The theory proposes that a person's motivation to engage a task or activity is dependent on the subjective meaning that the person attaches to the activity. However, this subjective meaning is shaped by three important belief systems: beliefs regarding the appropriate goals regarding the activity, beliefs related to alternatives available for pursuing the goals, and beliefs about self (Maehr
Therefore, according to personal investment theory, the sense of self is one of the core set of beliefs that would determine whether a person will be properly motivated to engage an activity.

Personal investment theory assumes that there are three dimensions of the sense of self: sense of purpose, sense of reliance, and self-esteem (McInerney, 2005), although the last dimension is assumed to have positive and negative dimensions, too (McInerney, Roche, McInerney, & Marsh, 1997). Sense of purpose refers to beliefs related to how important the activity is relative to one's broader and/or long term goals. Sense of reliance refers to beliefs regarding one's capacity and confidence to successfully undertake the activity. Other researchers refer to the same concept as self-efficacy (Schunk & Pajares, 2004). Self-esteem refers to a person's beliefs about his or her intelligence and other abilities relevant to completion of the task, and is similar to what other psychologists define as self-concept (Harter, 1998;Marsh, 1990; Marsh & Shavelson, 1985). Note that these three sets of beliefs about the self are distinct from each other, and are not assumed to be correlated with each other as the three represent beliefs about different aspects related to the person and the activity. However, personal investment theory assumes that the stronger these three types of self-beliefs are in the person, the more likely he or she will be motivated to engage in the task.

Much of the empirical work done on the sense of self and on personal investment theory has been in relation to students' motivation in the formal school setting, and more specifically, in relation to understanding the different levels of achievement and motivation of different types of students. For example, McInerney (2008, McInerney, Hinkley, Dowson, & Van Etten (1998) used the theory to study differences in motivation among students of different ethnicities in Australia. Similarly, Watkins, McInerney, Akande, and Lee (2003) used the theory to compare ethnic differences in South African schools. As regards sense of self, research has documented the positive relationship between dimensions of sense of self and positive school outcomes such as school adjustment, satisfaction, aspirations, and achievement, among others (see Marsh & Craven, 2006, for review). A recent study by McInerney (2008) documented the positive association between the dimensions of sense of purpose and sense of reliance on the one hand, and intention for further education, positive affect for schooling, and valuing for schooling on the other. A study involving Filipino students (Watkins, McInerney, & Boholst, 2003) also found positive associations between sense of self with the students' use of deep and achieving strategies in their studies. All these studies point to the importance of the sense of self as a construct for understanding motivation and performance, and the potential viability of using the construct in studying motivation in the Philippine context, especially among Filipino students.
Research on the sense of self, as defined in personal investment theory, has depended on the use of the Sense of Self Scale which is part of the larger Inventory of School Motivation (or ISM, McInerney, Yeung, & McInerney, 2001). The Sense of Self Scale has been validated as part of the ISM in different cultures, and with different subgroups of students within these different cultures (McInerney & Ali, 2006; McInerney, Dowson, & Yeung, 2005; McInerney, Marsh, & Yeung, 2003; McInerney et al., 2001). These studies generally involve validating the factor structure of scales (using various confirmatory factor analysis procedures) and the construct validity of the scale (using convergent validity procedures). There has even been one validation study of the Sense of Self Scale within the ISM with Filipino students (Watkins et al., 2003). The study found that only the sense of purpose subscale had acceptable internal consistency with $\alpha = .80$; for the sense of reliance and self-esteem scales the $\alpha$-values were below .60.

Therefore, the validity of the Sense of Scale for use in the Philippine context is still in question. The problem may be one of cross-cultural validity of the scale. We also note the fact that the Sense of Self Scale was conceptualized and developed primarily for students in a predominantly Westernized culture (Australia), and thus there is the cultural dimension of the scale that also needs to be considered. As Maneesriwongul & Dixon (2004) noted: "The values reflected by an instrument and the meanings of its component constructs may vary from one culture to another. Research instruments must be reliable and valid in each culture studied" (p. 175). Thus, although it is acceptable practice to adapt a foreign-developed measures for local use, it is important that the issue of validity is addressed before the results of such psychological tests with different cultures are interpreted (Hambleton, 2001; van deVijver & Hambleton, 1996; van de Vijver & Tanzer, 2004).

The other problem may be in the language used in the validation study with Filipino students (Watkins et al., 2003). In that validation study, the original English language version of the scale was used. In some previous cases, psychological test or scales in English administered to bilingual Filipino participants seem to have the same psychometric properties as Filipino translations of the scales (e.g., Bernardo, 2008a; Bernardo, Posecion, Reganit, & Rodriguez-Rivera, 2004). In other cases, however, the language of the tests seem to yield very different results when they are presented in the Filipino bilinguals’ two languages (e.g., Watkins & Gerong, 1999). Zhang & Bernardo (2000) even suggested that language may be one of the reasons why learning-related psychological scales are not valid with low-achieving Filipino students. In this regard, Hambleton (2001, see also van de Vivjer
& Tanzer, 2004) articulates many important issues that relate to the linguistic equivalence of translations of tests across cultures.

In the present study, we translated the Sense of Self Scale within the ISM (McInerney et al., 2001) into Filipino, and then validated the factor structure of the translated Filipino and the original English scale with Filipino-English bilingual students. We discuss the specific procedures we used in both the translation and the validation in the method section. Our purpose for undertaking this study is to develop Filipino and English versions of the Sense of Self Scale that could be used for different types of Filipino students, both for assessment and for research purposes.

METHOD

Translation Phase

Instrument. The 26 items in the original English version of the Sense of Self Scale within the Inventory of Student Motivation (ISM) Questionnaire (McInerney et al., 2001) was used in the study. The items were organized into four factors: Factor 1 – Sense of Purpose (SOP), Factor 2 – Sense of Reliance (SOR), Factor 3 – Negative Self-Esteem (NEGSE), and Factor 4 – Positive Self-Esteem (POSSE). Details of the instrument will be described later, after the translation procedures are completely discussed.

Translation. vande Vijver and Hambleton (1996) discussed three options for translating psychological instruments: application, adaptation, and assembly; and among the three the observation is that application is the most widely used. Application involves a linguistic translation of the original instrument into the target language following some procedures to ensure linguistic equivalence of the translations. vande Vijver and Hambleton warn against simply aiming for close literal translations (i.e., linguistic equivalence), and instead propose the need to adapt the test items in order to ensure that the items in the translated scales have the same psychological meaning (i.e., psychological equivalence). In this regard, Brislin, Lonner, and Thordike (1973) proposed four typical techniques used in translating instruments (back-translation, bilingual technique, committee approach, and pretest) and strongly suggested the use of multiple techniques in order to best approximate both linguistic and psychological equivalence.

In this study, we combined back-translation with a committee approach and a modified bilingual technique. First, a translation committee composed of four Filipino-English bilinguals was constituted. Aside from the fact that all four were Filipino-English bilinguals, one of the four has had experience
in instrument translation and had worked as English teacher for foreign students, which allowed them to ensure the linguistic equivalence of the translations. All the four committee members were doctoral students in educational psychology with extensive knowledge of both psychological measurement and the relevant principles and theories, which allowed them to ensure that the translations were psychologically equivalent.

The four members of the committee first undertook the (forward) translation of the original English version of the Sense of Self Scale into Filipino. The four were tasked to develop their Filipino translations individually, using conversational Filipino that would be used and understood by the typical Filipino high school student. The four members then met as a committee to compare and to review the different translations. The committee considered the readability, comprehensibility, linguistic equivalence, and conceptual closeness of the translations. For each item the committee members revised their draft translations until they reached consensus on the best translation.

Once the Filipino translation was completed, these were back-translated into English. Ideally, the back-translation should be undertaken by a distinct group of translators, but in this study, the same committee undertook the back-translation during a separate meeting. Again, each of the four members of the committee individually translated the Filipino translations back into English. The English back-translations were compared to the original English items. When the back-translation were deemed less than ideal, the committee agreed to adjust or revise the Filipino translations so that these would more closely reflect the original English items.

We would like to note that because we aimed to use conversational Filipino in the translation, the items in the Filipino version of the scale were not purely in the Filipino language. That is, some English words were retained because they are more commonly used by high school students in casual conversation, and the Filipino translation is hardly used by such students. In all such cases, the English word was italicized and placed within quotation marks. Some examples of such cases are:

- Gusto kong maramdaman na “in charge” ako sa aking sarling gawain.
- Kapag ako ay gumagawang mag-isa, hindi ako nababahala sa mahihirap na “schoolwork.”

The modified bilingual technique involved in the translation is discussed in the validation of the two translations to be described in the next subsection.
Validation Phase

In the validation phase, a modified bilingual technique was used to test the translations. The bilingual technique typically involves administering the two language versions to bilingual participants; however, in the present study, the two language versions were presented to two groups of bilingual participants in order to determine whether the factor structure of the two language versions were equivalent.

Participants. The participants in the validation phase were 765 (301 male, 464 female) high school students from five public and private schools (two in the National Capital Region, one from Region IV-A and two from Region IV-B), who were selected using a convenience sampling procedure. Although convenience sampling was used, the researchers took care to choose schools with diverse types of students and to obtain a sizable sample in order to ensure that the sample was fairly heterogeneous. They were randomly assigned to answer either the English or Filipino versions of the scale: 378 participants (160 males & 218 females) completed the English version, and 387 participants (141 male & 246 female) completed the Filipino version. The average age of the participants who completed the English version was 14.62 years ($SD = 1.39$ years), whereas the average age of those who answered the Filipino version was 13.98 years ($SD = 1.41$ years). All the participants were asked to complete the inventory as part of the class requirement. They were assured that their responses would remain confidential and would not, in any way, influence their course grade.

Instrument. The original English version and the translated Filipino version of the Sense of Self Scale were used in the validation phase. Both language versions of the scale were posited to have four factors, represented by four subscales. The four factors/subscales are briefly described below, with an example of an item in English and Filipino.

Factor 1. Sense of Purpose (SOP). The degree to which a student values school for the future (e.g., “I try hard to do well at school so I can get a good job when I leave;” “Sinisikap kong maging mahusay sa paaralan para makakuha ako ng trabaho kapag ako ay nagtapos”).

Factor 2. Sense of Reliance (SR). The degree to which a student is self-reliant and confident within academic settings (e.g., “I often try new things on my own;” “Madalas akong sumusubok ng mga bagong bagay sa aking sariling kakayahan”).

Factor 3. Negative Self-Esteem (NEGSE). The extent to which a student holds negative feelings about his/her general intellectual ability at school
(e.g., “I am always getting into trouble in school;” “Palagi akong nasasangkot sa gulo sa paaralan”).

Factor 4. Positive Self-Esteem (POSSE). This is the degree to which a student holds positive feelings about his/her general intellectual ability in school (e.g., “I think I am as good as everybody else at school;” “Naniniwala akong kasinggaling ako ng sino man sa paaralan”).

All the items required a response using a Likert-type scale where respondents just selected/marked their response to a scale ranging from 1 (strongly agree) to 5 (strongly disagree). The English version of the Sense of Self included the following directions:

“In this part of the survey, we are interested in finding out what your parents, teachers, and your friends tell you about school and its importance for you. Please read the items carefully and encircle the number that reflects the degree of your honest answer to each item. Be guided accordingly with the scale in answering: 1 = Strongly agree to 5 = Strongly disagree.”

The directions for the Filipino version were:

“Sa bahaging ito ng survey, interesado kaming malaman kung ano ang sinasabi sa inyo ng inyong mga magulang, guro at mga kaibigan tungkol sa paaralan at kahalagahan nito sa inyo. Basahin at bilugan ang numero na nagpapakita ng antas ng inyong pinakamatapat na kasagutan sa bawat aytem. Sundin ang “scale” sa pagsagot: 1 = Lubos na sumasang-ayon hanggang 5 = Lubos na di sumasang-ayon.”

The items in both language versions were arranged in cyclic order where all the first items of the four scales comprised the items 1-4, the second items of the four factors were positioned to numbers 5-8, and so on. The cyclic order was used to prevent potential set effects in which students identify contiguous items as items measuring similar attributes, and then answer the clustered item without regard to their true assessment of their response (Bong, 1997).

RESULTS

Preliminary analysis was performed to check the properties of the data. No outliers were found; mean value replacement was used for the few missing data points. The evaluation of the assumptions about multivariate normality and linearity were all satisfactory.
Confirmatory factor analysis (CFA)

Two CFAs were conducted, one for each of the datasets derived from the two language versions. The CFA procedure was used to assess the extent to which the observed data reflected or fit the proposed four-factor model or structure of the 26-item Sense of Self Scale. Bagozzi and Heatherton (1994) suggested that it is quite likely that having more than five indicators per factor in a large sample would lead to an unsatisfactory fit in the measurement model. To address this issue, we aggregated the items to form item “parcels” as indicators in the CFA (Little, Cunningham, Shahar, & Widaman, 2002). A parcel is defined as an aggregate-level indicator comprised of the sum or average of two or more items, responses, or behaviors. To create the parcels, we randomly assigned each item in a factor to one parcel grouping. Random assignment of two to four items to parcels should, on average, lead to parcels that contain roughly equal common factor variance (Little et al., 2002). Using parcels is believed to increase the reliabilities of the indicator variables, and reduces the likelihood that parameters will be affected by item-specific variance (Lance, Woehr, & Fisicaro, 1991). Moreover, the distribution of the parcels are more likely to approximate a normal distribution better than the distribution of individual items, and the results based on parcels are more likely to be stable (generalizable) across samples (West, Finch, & Curran, 1995). Eight parcels were created from the 26 items of the Sense of Self Scale, with two parcels as indicators for each of the four factors. There were three to four randomly assigned items for each parcel, with the average of the items being used as the parcel score.

As is customary, several goodness-of-fit indices were used to determine the model fit, based on the understanding that multiple indices provided a comprehensive evaluation of model fit (Hu & Bentler, 1995, 1999). The fit indices used were: the ratio of chi-square values to the degrees of freedom ($\chi^2$/df); root mean square error approximation (RMSEA), goodness of fit index (GFI), comparative fit index (CFI), normed fit index (NFI), non-normed fit index (NNFI), and the comparative fit index (CFI). The criterion values were set based on the prescriptions summarized in Schermelleh-Engel, Moosbrugger, and Muller (2003; see also Bentler, 1990). For $\chi^2$/df, values less than 2.0 show good fit, while values from 2.0 to 3.0 show acceptable fit. For RMSEA, values less than .05 show good fit, and values from .05 to .08 indicate acceptable fit. NFI and GFI values between .95 and 1.00 indicate good fit, and any value higher than .90 shows acceptable fit. For NNFI and CFI, values higher than .97 indicate good fit, and values higher than .95
show acceptable fit. Finally, AGFI values should be at least .90 and should be close to the GFI values to indicate good fit, and any value higher than .85 shows acceptable fit. The fit indices for the CFAs for the two language version data are shown in Table 1.

### TABLE 1
Summary of the Goodness-of-Fit Statistics

<table>
<thead>
<tr>
<th>Version</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\chi^2$/df</th>
<th>RMSEA</th>
<th>NFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>GFI</th>
<th>AGFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>24.47</td>
<td>14</td>
<td>1.75</td>
<td>.009</td>
<td>0.978</td>
<td>0.981</td>
<td>0.991</td>
<td>0.984</td>
<td>0.959</td>
</tr>
<tr>
<td>Filipino</td>
<td>17.61</td>
<td>14</td>
<td>1.26</td>
<td>.036</td>
<td>0.976</td>
<td>0.990</td>
<td>0.995</td>
<td>0.972</td>
<td>0.972</td>
</tr>
</tbody>
</table>

Note: df = degrees of freedom; RMSEA = root mean square error approximation; NFI = normed fit index, NNFI = non-normed fit index; CFI = comparative fit index; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index.

The results showed good fit between the data from both the English and Filipino versions and the hypothesized four-factor structure of the Sense of Self Scales. The four-factor model for the two language versions are shown in Figures 1 and 2, and a simple comparison of the coefficients will indicate that the two language versions are comparable. The results of the CFA show very strong support for the four-factor structure of both the original Sense of Self Scales and the Filipino translation of the scale.

**Internal consistency of factor scales**

To further explore the validity of the two language versions of the Sense of Self Scale, we computed for the internal consistency of the four scales for each version. Table 2 shows the Cronbach $\alpha$ values for all the subscales, as well as the basic statistics for each of the subscales. All the reliability estimates were acceptable and were in the same magnitude ranging from .74 to .85 for the English version and .74 to .79 for the Filipino version. The $\alpha$ values we found in our study are better than those found in the earlier study of Watkins et al. (2003).
Figure 1. Confirmatory factor analysis of 8 parcels of English version of Sense of Self Scale with 4 factors. Inter-factorial correlations indicated are significantly different from zero at $p<.05$.

Figure 2. Confirmatory factor analysis of 8 parcels of English version of Sense of Self Scale with 4 factors. Inter-factorial correlations indicated are significantly different from zero at $p<.05$. 
TABLE 2
Descriptive statistics and internal consistency for the subscales of the two language versions of Sense of Self Scale

<table>
<thead>
<tr>
<th>Factors/Subscales</th>
<th>Cronbach</th>
<th>α</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English</td>
<td>Filipino</td>
<td>English</td>
<td>Filipino</td>
<td>English</td>
<td>Filipino</td>
</tr>
<tr>
<td>Sense of Purpose (6 items)</td>
<td>.85</td>
<td>.76</td>
<td>9.78</td>
<td>8.94</td>
<td>3.45</td>
<td>3.90</td>
</tr>
<tr>
<td>Sense of Reliance (8 items)</td>
<td>.74</td>
<td>.74</td>
<td>19.54</td>
<td>17.96</td>
<td>4.58</td>
<td>4.36</td>
</tr>
<tr>
<td>Negative Self-Esteem (7 items)</td>
<td>.79</td>
<td>.79</td>
<td>23.21</td>
<td>23.87</td>
<td>5.04</td>
<td>4.96</td>
</tr>
<tr>
<td>Positive Self-Esteem (5 items)</td>
<td>.76</td>
<td>.78</td>
<td>13.75</td>
<td>11.64</td>
<td>3.52</td>
<td>2.95</td>
</tr>
</tbody>
</table>

Correlations among the Sense of Self subscales/factors

The final test of the two language versions of the Sense of Self scales' validity involved comparing the pattern of correlations among the different subscales. If the four subscales are measuring the same underlying constructs in the two language versions, then the pattern of correlations among the four subscales should be similar in both language versions. The correlations among the subscales are summarized in Table 3, which shows a very similar pattern of correlations for both the original English version and the translated Filipino version of the scale. The factors that correlated positively were the same in both language versions, as were the factors that correlated negatively, and those that were not significantly correlated. This final set of results further attests to the validity of the two language versions of the Sense of Self Scales with Filipino high school students.

In this paper, we described the process of developing a Filipino translation of the 26-item original Sense of Self Scale in English, and reported on our assessment of the validity of the four-factor structure of both the original English and translated Filipino versions of the scale. The results of confirmatory factor analysis, internal reliability analysis, and correlational
analysis provide consistent evidence for the validity and reliability of the four-factor structure of the two versions of the scale.

**TABLE 3**
Zero-order correlations among subscales/factors of Sense of Self Scale

<table>
<thead>
<tr>
<th>Factors</th>
<th>English version</th>
<th>Filipino version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of purpose (SOP)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Self reliance (SR)</td>
<td>0.43*</td>
<td>0.35*</td>
</tr>
<tr>
<td>Negative self-esteem (NSR)</td>
<td>-0.24*</td>
<td>-0.16*</td>
</tr>
<tr>
<td>Positive self-esteem (NSR)</td>
<td>0.25* 0.50* 0.02</td>
<td>0.23* 0.50* 0.05</td>
</tr>
</tbody>
</table>

*<p < .05

**DISCUSSION**

With this consistent set of evidences, we now have two possible measures to assess Filipino high school students' sense of self – their sense of purpose, sense of reliance, and positive and negative self-esteem. These two measures, or the specific subscales therein, can be used by researchers in psychology, education, and related fields to explore how specific beliefs held by the Filipino students related to his or her self and the learning activity or task (i.e., purpose, reliance, or esteem) predict and/or interact with important learning processes that have been shown to be related to learning and achievement of Filipino students such as their achievement goal orientations (Bernardo, 2005a, 2008b), self-regulation and metacognitive learning strategies (Magno & Lajom, 2008), language-related learning processes (Bernardo, 1999, 2002, 2005b), among others. Psychology researchers can also study how specific dimensions of the sense of self of Filipino students may interact and/or work with individual difference variables that have also been shown to be related to Filipino students' achievement such as their school aptitude (Magno, 2009), approaches to learning (Bernardo, 2003; Magno, 2009), thinking styles (Bernardo, Zhang, & Callueng, 2002;
Valencia, 2007), and epistemological and social beliefs (Bernardo, 2008a, 2009), among others. Studying how particular sets of self-beliefs of Filipino learners interact with these other learning-related constructs will provide a richer understanding of the processes that promote successful learning experiences in Philippine schools.

But the availability of these valid scales is not only useful for researchers. The two valid scales can also be used by teachers and school psychologists or counselors who wish to gain insight into how the students under their responsibility see themselves as learners. School psychologists and counselors can use the scales together with other psychological assessment tools to profile the sense of self of the students, and identify students who may need some form of counseling in order to enhance their sense of purpose, reliance, and positive self-esteem, while managing the negative self-esteem. Teachers can also use the information from the scales to better understand their students, particularly those who may have some problems in their classroom. Finally, both teachers and school psychologists can use the scale as an outcome measure to assess the effectiveness of either instructional activities or counseling programs.

Although we see potential usefulness for the two validated scales, we should underscore that our study was focused only on validating the four-factor structure of the scale. We did not study the other forms of validity that are important for similar psychological scales. Perhaps most important, we did not undertake a construct validation of the scale. It would be important to undertake these other validation studies in the future. For example, the specific subscales should be tested for convergent validity with related scales (e.g., sense of reliance with self-efficacy scales; positive and negative self-esteem with academic self-concept scales), and construct validity with predicted outcomes or correlates of the scales.

Moreover, as mentioned earlier, the Sense of Self Scale is only one of the three instruments developed within personal investment theory. In this regard, it would also be important to look into the validity of the other two related measures — Inventory of School Motivation and Facilitating Conditions Questionnaire — for use with Filipino students. The validation of these three measures will be a significant step towards allowing researchers and educators a means for understanding the various important facets of the Filipino students' motivations for learning and achievement, aside from providing further cross-cultural validation for both the scales and the underlying theory of personal investment.

As a final note, we wish to underscore the importance of validating a scale that has been translated into Filipino. The issue has been extensively
addressed in the cross-cultural psychology research community (see Hambleton, 2001; van de Vijver & Hambleton, 1996), but may not be given as much importance in psychology research with Filipino students because the students are assumed to be bilinguals with proficiency in English, since the medium of instruction in most Philippine schools is English. We feel it is not safe to assume that English psychological scales will be valid for use among Filipino students, even if they are studying in English medium-of-instruction schools. Indeed, there is earlier evidence that has shown that the language used in a psychological tool measuring the Filipino students' self concept has a significant impact on the students' responses. Fortunately, our findings show that the Filipino and English language versions of the Sense of Self Scales seem to be both valid in so far as they seem to tap the same four underlying constructs of sense of self. But we cannot assume that this is always the case with other psychological scales. Thus, we encourage more translations and validations of translations of psychological tests in Filipino and other Philippine languages, and ideally the development of more indigenous psychological tests in the local languages.

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**AUTHOR NOTES**

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