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Development and validation of the multicultural sensitivity scale for pre-service teachers

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ABSTRACT

This study developed and validated an instrument to measure the multicultural sensitivity among pre-service teachers. Items capturing the concept of multicultural sensitivity were developed through literature review, open-ended questionnaires, interviews, and focus-group discussions. The items were checked for content validity and then tested in different teacher education institutions in Mindanao, Philippines. The 45-item 7-point Likert scale was tested by 573 pre-service teachers and Exploratory Factor Analysis suggested a 28-item scale. The shortened version was tested by 461 pre-service teachers. Confirmatory Factor Analysis was conducted to verify the factor structure and results confirmed the 28-item scale composed of three factors for the personal dimension – ethnocentrism, intercultural effort, and intercultural stress – and two factors for the professional dimension – exhibiting multiculturalism and monocultural orientation. The scale demonstrated adequate internal consistency and the measurement of the construct was found to be invariant for both ethnic majority and minority.

In countries with diverse cultural landscapes in which people of various traditions and religious customs intersperse in spaces they all call their own, multicultural sensitivity is necessary. It is important for individuals to possess multicultural sensitivity (Cha & Ham, 2014) since it can contribute to the coexistence of diverse people. However, coexistence is a slow process (Rego & Nieto, 2000) because individuals have their own cultural perspectives and prejudices. These prejudices are learned – people are not born with them (Anti-Defamation League, 2013; Kinzler, 2016; Mitchell, 2013; Oxford Brookes University, 2017). Based on Albert Bandura's Social Learning Theory, people learn from others through observation, imitation, and modelling. Thus, one can say that prejudice can be learned from one's parents, other family members, peers, and teachers. On the other hand, studies show that children's awareness on racial differences and expression of negative racial attitudes start at a young age and if it is not addressed to modify the behaviour, it becomes more negative and crystallized (Aboud, 1988 & Ramsey, 1998, as cited in Banks, 2006).

Since teachers can influence the attitudes of students (Green, 2005), they are essential in helping eliminate prejudice, stereotype, and discrimination. However, it is also important for teachers to examine the ideological positions they hold to become more effective. 'Before teachers can recognise how issues such as race, religion, and social-economic inequality influence the learning experiences and cultural realities of students, teachers must learn to ponder on their own civic, cultural or socio-economic attachments' (Howard, 2003, as cited in Alviar-Martin & Ho, 2011, p. 128). Therefore, it is imperative for teachers to be prepared to effectively teach students with diverse backgrounds (Rego & Nieto, 2000). Extensive knowledge on content is not the only essential aspect to be a truly effective teacher since integral to teaching is being mindful of the different characteristics that learners possess (Rubio, 2009). Wilkerson (2006) even stated that as teachers' teaching career progresses, teachers' dispositions are more important than knowledge and skills in effective teaching. The key to the effectiveness of teaching are the teachers' attitudes, values, and beliefs which are demonstrated through verbal and non-verbal behaviours (Hachfeld et al., 2011; Jensen et al., 2018). Teachers can also demotivate their students if they possess deficit-mined belief systems (Ladson-Billings, 1999). Accordingly, an important aspect in pre-service teacher education is fostering critical values, attitudes, and beliefs (Castro, 2010) since the need for teachers to possess multicultural sensitivity is of primary importance (Arizaga et al., 2005).

One of the Sustainable Development Goals is to ensure inclusive and quality education for all (United Nations, 2015) and countries are taking strides to ensure that children coming from diverse backgrounds will have an equal opportunity to acquire quality education. This gives teacher education institutions the responsibility to train future teachers to effectively teach students whose cultural backgrounds are different from theirs. Thus, the field of teacher education will continue to face the need to prepare pre-service teachers who can effectively teach in a multicultural setting (Milner et al., 2003; Villegas & Lucas, 2002; Yuan, 2018).

Several studies show that pre-service teachers lack understanding about multiculturalism and multicultural issues (Castro, 2010; Gayle-Evans & Michael, 2006). This lack of understanding stems from inadequate multicultural preparation and lack of interaction with other ethnic groups or lack of meaningful experience with different cultures (Vincent et al., 2014). Notwithstanding the role of teacher education in developing cultural competence, it is quite understudied in Asian contexts (Yuen & Grossman, 2009). Studies conducted on multiculturalism and multicultural education were mostly done in the United States that there is a need to conduct similar studies in different contexts especially in culturally diverse countries (Agirdag et al., 2016) such as the Philippines.

The Philippines is home to 182 ethnolinguistic groups (Reyes et al., 2017) and 110 of which are considered indigenous (United Nations Development Programme [UNDP], 2013). Of the Philippines' population, an estimate of 14–17 million are indigenous peoples and 61% are in Mindanao (UNDP, 2013). Mindanao is the most culturally diverse island in the Philippines (Solidarity Philippines Australia Network, 2002) and it is known for its tri-people – the Moro, the Indigenous Peoples or Lumad, and the Christians. The Moro people have been living in Mindanao even before Philippines was colonized by Spain. The term Lumad is used to refer to groups that are neither Muslim or Christian (though some now profess Islam or Christianity). The Lumad have also been living in Mindanao even before Spanish colonization and they have a traditional concept of land ownership

based on what their communities consider their ancestral territories. The Christians from Luzon and Visayas (other main islands of the Philippines) came to Mindanao because of government-sponsored resettlement programmes. Due to Christian migration, the Moroand Lumad were outnumbered. The tri-people of Mindanao have seen the perpetuation of cultural insensitivity and discrimination which may be due to lack of appreciation for diversity and understanding of cultural differences. In addition to the Mindanao issue, Filipinos tend to be regionalistic and have a strong sense of ethnic pride that major ethnic groups contend (Palces et al., 2015). With this at hand, appreciation for diversity and respect for cultural differences is essential to coexistence. Considering that the Philippines is a culturally diverse country, it is quite dismal to note that studies conducted in the Philippines on multiculturalism, multicultural sensitivity, multicultural education, and multicultural teacher education are limited. Thus, the aim of this study is to develop and validate a Multicultural Sensitivity Scale for Pre-service Teachers which can be utilized by teacher education institutions as a tool to measure pre-service teachers' multicultural sensitivity. Since there is no existing scale that has been developed for the Philippine context and more particularly for the tri-people of Mindanao, the development of such scale will help assess the effectiveness or sufficiency of multicultural education courses or trainings that teacher education institutions provide as well as explore the factor-structure of multicultural sensitivity. Existing multicultural sensitivity scales were either developed in western countries, were not tested psychometrically, were designed to match course objectives, or were administered to a sample with a different cultural context: Hence, the significance to create one.

Defining Multicultural Sensitivity

Various definitions of multicultural sensitivity can be found, such as 'an awareness of the nuances of one's own and other cultures' (Public Health Service, 1992, as cited in Jibaja-Rusth et al., 1994, p. 350). Other studies defined it as 'the ability to demonstrate respect for and understanding of people of diverse cultural backgrounds, the ability to communicate effectively with people of diverse cultural backgrounds, and the ability to work collaboratively with people of diverse cultural backgrounds' (Garcia, 1995, as cited in Hunter & Elias, 2000, p. 552). Multicultural sensitivity is an important concept but literature show differences on how it is defined and measured (Ramos et al., 2015). Ramos et al. even cautioned that 'if measures are developed with inappropriate or incomplete conceptualization of cultural sensitivity, they run the risk of producing inaccurate or misleading findings' (p. 1).

In some studies, multicultural sensitivity is used interchangeably with cross-cultural competence, cross-cultural expertise, cross-cultural effectiveness, cultural responsiveness, cultural awareness (Ridley et al., 1994) and even defined similarly with cultural sensitivity. According to Hughes and Hood (2007), cultural sensitivity depicts attitude which directs behaviour while Ridley et al. (1994) identified awareness, knowledge, and skills as its components. Similarly, Ramos et al. (2015) state that cultural sensitivity is comprised of awareness, competence, and responsiveness which can be measured through attitudes, practices, and knowledge. Since the term has been defined variously, there are studies that analysed the concept of cultural sensitivity (Foronda, 2008), clarified the definitions of cultural sensitivity and cultural competence (Whaley, 2008), and described a model for understanding cultural sensitivity from a public health perspective (Resnicow et al., 1998).

It should be noted that cultural sensitivity is not only used in education but also in health care and business (Foronda, 2008).

Though the term cultural sensitivity is more commonly used, the term multicultural sensitivity will be utilized to emphasize the multiculturality of the context which the scale is being developed for. The core of the definitions mentioned will be used, and thus, our understanding of multicultural sensitivity is an individual's awareness of cultural differences, being able to respect these differences and respond to them appropriately.

Teacher Education

All students can learn and have the potential to succeed. This belief underscores teachers' responsibility regardless of their students' race, ethnicity, or culture (Gayle-Evans & Michael, 2006). Student performance is said to be affected by the kind of beliefs and expectations their teachers have (Agirdag et al., 2012; Russell & Russell, 2014). Teachers, being cultural workers, must therefore learn and accept their students' cultures since it can contribute to the improvement of students' performance (Irvine & Hawley, 2011; Liang & Zhang, 2009; Freire as cited in Stinson, 2009; Thomas & Kearney, 2008). Banks (2013) also claims that achievement of minority students increases when teachers use culturally responsive pedagogy. For teachers to effectively manage a diverse classroom, it is important that they self-examine and understand their own worldviews (Spanierman et al., 2011). This, therefore, poses a necessity for a more effective teacher preparation that can promote the development of necessary knowledge, skills, and sensitivity in relation to multiculturalism (Gayle-Evans & Michael, 2006; Hong, 2010). Banks (2004) identified dimensions of multicultural education that teachers need to be proficient: content integration, knowledge construction process, prejudice reduction, equity pedagogy, and empowering school culture and social structure. Though Bank's dimensions are criticized by some scholars, it is considered the most widely used framework in the field of multicultural education (Agirdag et al., 2016).

Research findings show significant correlation between the number of college courses and multicultural attitudes of teacher education students (Nadelson et al., 2012), increase in pre-service teachers awareness in multicultural issues after attending a diversity course (Gayle-Evans & Michael, 2006), increase in multicultural efficacy after taking classes in multiculturalism (Kwon, M.E., Kwon, & Lee, 2012 in Roh, 2015), and improvement in empathic listening and expressive speaking in conflictual multicultural situations after participating in a multicultural relationship enhancement programme (Arizaga et al., 2005). Indeed, multicultural education courses in teacher education programmes have been found to have a positive effect on pre-service and in-service teachers' views (Edwards & Kuhlman, 2007 & Wiggins, Follo, & Eberly, 2007 in Schoorman & Bogotch, 2010).

Cummins' (2016) review of several quantitative and qualitative research studies show that intercultural education fosters the success of students coming from socially marginalized communities. Hence, there is a need for teacher education programmes to develop teachers who possess multicultural sensitivity since studies have found that it can help student achievement. It is imperative that specific measures are taken to evaluate the

effectiveness of such programmes or trainings as well as determine pre-service teachers' degree of preparedness in teaching in a diverse classroom.

Scales on Multicultural Sensitivity and Related Constructs

In order to help improve practices of multicultural teacher education, one needs a tool to measure teachers' multicultural sensitivity, both to examine the current issues and to assess whether courses of multicultural education are effective. This section present scales that were intendedly developed for pre-service and in-service teachers. Some of the most common scales for a more general population are also mentioned.

Scales developed for pre-service teachers are the Multicultural Teacher Dispositions Scale (Jensen et al., 2018), Pre-service Teachers Cultural Competence Scale (Liang & Zhang, 2009), Multicultural Efficacy Scale (Guyton & Wesche, 2005), Ohio State University's Multicultural Teaching Scale and Multicultural Opinion Survey (1988), and Multicultural Teaching Competency Scale (Spanierman et al., 2011). The Multicultural Teaching Competency Scale was also intended for in-service teachers. While some of the previously mentioned scales were unidimensional, the Multicultural Teacher Dispositions Scale exhibited a three-factor structure (meekness, social awareness, and advocacy), the Pre-service Teachers Cultural Competence Scale a four-factor structure (personal beliefs, self-reflection, teacher expectations, and actions to change/actions to meliorate stereotyping and discrimination), and the Multicultural Efficacy Scale a three-factor structure (experience, attitude, and efficacy). The scales are said to be valid and reliable, however, they were developed in a context that is different from that of the Philippines. One tool developed in the Philippines is the Diversity and Sensitivity Tool (Palces et al., 2015). It was developed for an exploratory study on predicting priorities of multicultural education in a teacher education institution in the Philippines and was designed for its target respondents who are first-year students of the Philippine Normal University. The tool covered five aspects of multiculturalism, namely: race, ethnicity, gender, religion, and class.

Measures intended for use by in-service teachers are the Multicultural Sensitivity Scale by Ford (1979, as cited in Jibaja-Rusth et al., 1994) which was refined and tested by Jibaja-Rusth et al. (1994), Teacher Multicultural Attitude Survey (Ponterotto et al., 1998), and Educators' Beliefs about Diversity (Pohan & Aguilar, 2001). Among the scales mentioned, it was Pohan and Aguilar's scale that showed a distinction between personal and professional beliefs. According to Pohan and Aguilar, the two-dimensional approach is grounded on the view that there are instances in which one's personal beliefs are in contrast with one's beliefs in a professional context. The distinction between personal beliefs and professional beliefs is not salient among scales that were developed and previously mentioned in this paper.

There were also scales developed for a more general population (other than pre-service and in-service teachers) such as the Cultural Diversity Awareness Inventory (Henry, 1986), Intercultural Sensitivity Scale (Chen & Starosta, 2000), Munroe Multicultural Attitude Scale Questionnaire (Munroe & Pearson, 2006), Cultural Intelligence Scale (Van Dyne et al., 2008), and Intercultural Development Inventory (Hammer, 2011). However, the Cultural Diversity Awareness Inventory was utilized by Davis and Whitner (1994, as cited in Pohan & Aguilar, 2001) and Larke (1990) and a revised

version of the Intercultural Sensitivity Scale was utilized by Spinthourakis et al. (2009) in separate studies they conducted with pre-service teachers. It is worth noting that some scales tend to be context dependent. Based on the results of the studies conducted using Chen and Starosta's Intercultural Sensitivity Scale, it was found that further validation is needed when used in international contexts because there is conceptual overlap of the scale's factors when used in a different culture, especially with a non-western sample (Fritz et al., 2005, 2002; Petrović et al., 2015; Tamam, 2010; Wang & Zhou, 2016).

Although the Diversity and Sensitivity Tool (Palces et al., 2015) was developed in the Philippines, the scale is composed of items that measure multicultural biases and actual level of multicultural sensitivity in the school campus. The purpose of the previously mentioned scale is different from the purpose of the scale that is being developed in this study. This study aimed to develop a multicultural sensitivity scale for pre-service teachers in which items are dependent on the characteristics of the population to be examined, i.e. pre-service teachers from the culturally diverse island of Mindanao, Philippines. A distinction was made between items on the personal dimension and professional dimension. Items under personal dimension are those which a person perceives to be true about people and situations that they may face in everyday life while items under the professional dimension deal with interactions in the school setting. While the personal aspect is known to be inextricable from the professional aspect, the same may not be true in the case of multicultural sensitivity. Thus, it is also important to find out whether the same sensitivity is expressed in the personal dimension and in the professional dimension. Pre-service teachers may exhibit more sensitivity in the professional dimension since they feel that they should be more conscious on how a teacher acts or what a teacher should do. On the other hand, pre-service teachers may express more sensitivity in the personal dimension compared to the professional dimension due to lack of knowledge or exposure in teaching a culturally diverse student group. Lastly, this study also aimed to develop a scale that is valid for pre-service teachers coming from both ethnic majority and minority groups.

Methodology, Data Analysis, and Results

Item Development and Validation

The first step was the generation of an initial item pool in which the researchers conducted a review of literature and existing scales on multicultural sensitivity and similar constructs such as Multicultural Sensitivity Scale (Jibaja-Rusth et al., 1994), Cultural Diversity Awareness Inventory (Henry, 1986), Preservice Teachers' Cultural Competence (Liang & Zhang, 2009), Teacher Multicultural Attitude Survey (Ponterotto et al., 1998), Intercultural Sensitivity Scale (Chen & Starosta, 2000), and Cultural Intelligence Scale (Van Dyne et al., 2008). Furthermore, to create items that would reflect the context, open-ended questionnaires were administered, interviews and informal focus group discussions on multicultural sensitivity were conducted with pre-service teachers. Sixty items were generated in total. There were items on ethnic minority and ethnic majority groups, culture, religion, and language.

The second step was the evaluation of the 60 items by the researchers. Based on item wording and direct relevance to multicultural sensitivity, the number of items was

reduced to 44. Most importantly, a distinction was made between items for the personal dimension and professional dimension. Though the intended respondents are pre-service teachers, it is also important to examine the professional dimension since this will help determine how multicultural education courses can enhance their multicultural sensitivity.

In the third step, the items were checked for content validity by four basic education teachers (with at least 3 years teaching experience, and one of which is an ethnic minority), five teacher educators (one of which is also a sociologist), one Master's student (an ethnic minority and a graduate of teacher education), and a distinguished international expert in the field of quantitative social research. Aside from rating the items based on their relevance and clarity, the evaluators were also asked to give their suggestions to improve the scale. All the items were rated with at least 'very good' hence no item was deleted. However, some items were revised based on the suggestions given by the evaluators. The items were also grouped according to sub concept (ethnicity, language, religion, culture/cultural diversity, professional beliefs) and the number of positive and negative items per subset were then balanced to control for 'yes saying'. One item was also added since the majority of evaluators suggested its addition. The resulting scale was composed of 45 items (26 for personal dimension and 19 for professional dimension) in a 7-point Likert.

First Pilot Testing Procedure and Participants

The 45-item scale was tested by pre-service teachers at the College of Education (CED), Mindanao State University – Iligan Institute of Technology, Iligan City, Philippines. Based on the approval of the College Dean, the researchers gathered data in classes whose professors are willing to spare time for the data gathering. The average time to complete the scale was between 15 and 20 minutes.

Demographic information of the sample during the first pilot testing can be found in Table 1. The respondents were also asked to indicate their ethnicity and were classified as ethnic minority and ethnic majority. Ethnic minorities are the Moro and the indigenous

Table 1. Respondents profile.

Demographic	Categories	First Pilot Test		Second Pilot Test	
		n	%	n	%
School*	MSU-IIT	573	100%	-	-
	IMCC	-	-	69	15%
	MSU Main	-	-	127	27.5%
	USTSP	-	-	116	25.2%
	BSU	-	-	22	4.8%
	CMU	-	-	127	27.5%
Ethnic Classification	Minority	124	21.6%	170	36.9%
	Majority	425	74.2%	284	61.6%
	Missing/No answer	24	4.2%	7	1.5%

* MSU-IIT Mindanao State University – Iligan Institute of Technology, Iligan City.
IMCC Iligan Medical Center College, Iligan City.
MSU Main Mindanao State University (Main Campus), Marawi City.
USTSP University of Science and Technology of Southern Philippines, Cagayan de Oro City.
BSU Bukidnon State University, Malaybalay City, Bukidnon.
CMU Central Mindanao University, Musuan, Bukidnon.

groups (such as Subanen, Higaonon, Manobo) while the majority group are Tagalog, Cebuano, Ilocano, Bisaya, Ilonggo, Waray, and the like (Clarke, 2001; Rovillos & Morales, 2002).

Exploratory Factor Analysis

Data analysis

Exploratory factor analysis (EFA) was conducted to explore and identify the factor structure of the observed variables (Hair et al., 1998; Suhr, 2002). Using MPlus (Version 7), multi-group EFA was conducted separately for personal dimension and professional dimension. Maximum Likelihood was utilized for factor extraction since it provides Goodness of Fit evaluation, tests statistical significance of factor loadings, provides correlations among factors, and computes confidence intervals (Brown, 2006). To determine the appropriate number of factors and select items to be retained, the following were considered: (1) model fit; (2) relevance and interpretability of the factors; (3) a minimum of four items per factor; (4) factor loadings of at least 0.40; and (5) conceptual consistency with other items in the factor (Brown, 2006; Comrey, 1988 as cited in Lee & Nie, 2013).

Results and interpretation

From the original 26 items under personal dimension, 12 items were deleted because the items were either cross loading or have a very low factor loading which is below .40. The factor loading of the items retained can be found in Table 2.

Results of the EFA suggested three factors for the personal dimension. The first factor is composed of five items that mainly assess the culture of others based on the standards of one's own culture, thus the factor was labelled Ethnocentrism. According to Billiet et al. (1996), ethnocentrism consists of a positive attitude with one's own group and a negative attitude towards other groups regardless of any opportunity for contact. Items under the second factor are concerned with exerting effort to communicate, interact, and learn about the culture of others in order to improve one's interaction with them, thus the factor was labelled Intercultural Effort. The third factor was labelled Intercultural Stress since the items describe negative psychological feelings towards dealing with people from another culture. On a theoretical basis, seven items were allowed to be correlated. Following the guidelines given by Bowen (2014), the change of the model was theoretically justifiable, the alterations are few in number, and the adjustments made did not greatly affect its framework. Table 3 shows the values of the fit indices. The values of the fit indices for the first pilot show that the recommended guidelines for model fit are satisfied. Therefore, the measurement model exhibits a good fit. For the factor reliability, the Cronbach's Coefficient Alpha (α) per factor is shown in Table 2. The α value is considered the most popular estimate for internal consistency or reliability for scales (Peterson, 1994, as cited in Teo & Fan, 2013) and it shows how closely related are the set of items as a group. In examining the α values of the three factors under the personal dimension, all are greater than .70 which is considered acceptable.

The factor loadings of the items under the professional dimension are found in Table 2. In the conduct of the EFA, the two-factor solution was selected based on the recommendations found in literature. There were 14 items retained from the original 19 items. The factors under professional dimension were labelled Exhibiting Multiculturalism and

Table 2. Factor loadings and Cronbach's Alpha values.

Factor / Indicator (Item)	First Pilot Test — EFA Factor Loading	Second Pilot Test — Cronbach's Alpha	CFA Factor Loading Ethnic Minority	CFA Factor Loading Ethnic Majority	Invariance Ethnic Minority	Invariance Ethnic Majority	Cronbach's Alpha
Personal Dimension							
Ethnocentrism		.74					.70
I think ethnic minority groups are easily offended.	.52		.63	.61	.62		
I think ethnic minorities should learn to adjust to the ways of the majority.	.65		.47	.49	.47		
I think that the society gives too much consideration to ethnic minorities.	.62		.57	.54	.57		
I feel that people from my ethnic group are easier to trust than those coming from another ethnic group.	.54		.50	.45	.53		
I think ethnic minorities tend to overreact in different situations.	.60		.68	.67	.69		
Intercultural Effort		.78					.68
I try to learn culturally appropriate ways of communicating with other ethnic groups.	.72		.52	.52	.52		
I exert effort in interacting with people from another ethnic group.	.71		.63	.56	.65		
I exert effort to learn about the culture of others.	.73		.61	.51	.68		
I believe that learning about the culture of others will improve my dealings with them.	.53		.56	.54	.59		
Intercultural Stress		.72					.76
I do not like the thought of being around members of other ethnic groups.	.64		.66	.62	.66		
I find dealing with ethnic minorities a waste of time.	.47		.68	.62	.71		
I find it difficult to work well with people whose cultural background is different from mine.	.57		.43	.41	.43		
I find it stressful dealing with people from other cultures.	.62		.56	.54	.58		
I find it difficult to appreciate the diversity in my community.	.52		.62	.59	.63		
Exhibiting Multiculturalism		.88					.80
I am willing to teach in a culturally diverse classroom.	.53		.42	.43	.41		
I will provide opportunities for children to share cultural differences.	.69		.63	.64	.63		
I will exert effort to make students understand the customs of others.	.80		.76	.69	.83		
I will find ways to reduce prejudice among students.	.72		.46	.41	.49		
I will exert effort to acknowledge the cultural practices of my students.	.84		.54	.53	.55		
I will make sure that the instructional materials I will use will show cultural diversity.	.69		.67	.61	.71		
I will ensure a culturally diverse group composition during group activities in class.	.59		.64	.61	.65		
I will make adjustments on my teaching methods to be able to meet the needs of a culturally diverse student group.	.63		.46	.52	.45		
Monocultural Orientation		.68					.78
I think students should avoid using their dialects in the classroom.	.37		.52	.53	.53		
I believe that the use of home language should be discouraged in schools. (Examples: Cebuano, Maranao, Hiligaynon, Surigaonon, etc.)	.37		.43	.42	.44		
I prefer to teach students whose culture is the same as mine.	.54		.42	.40	.45		
I expect that teaching about cultural diversity will create conflict in the classroom.	.56		.69	.65	.74		
I think schools should separate students who are ethnic minorities so as to avoid conflict.	.54		.83	.85	.82		
I think it would be difficult dealing with students' parents coming from an ethnic minority group.	.57		.70	.72	.68		

Table 3. Model fit indices.

| Fit Indices | First Pilot Test | | Second Pilot Test | | | |
	Personal Dimension	Professional Dimension	Personal Dimension Invariance		Professional Dimension Invariance	
χ^2	183.00	207.87	167.08	291.68	144.18	298.79
df	69	73	68	164	72	171
χ^2/df	2.65	2.85	2.46	1.78	2.00	1.75
Root Mean Square Error of Approximation (RMSEA)	0.05	0.05	0.06	0.06	0.04	0.06
Comparative Fit Index (CFI)	0.94	0.95	0.93	0.91	0.96	0.93
Tucker – Lewis Index (TLI)	0.92	0.94	0.90	0.90	0.95	0.92
Standardized Root Mean Square Residual (SRMR)	0.05	0.04	0.05	0.06	0.05	0.08

Recommended guidelines for model fit indices (Hair et al., 2006, Hu & Bentler, 1999, & Kline, 2005 as cited in Lee and Nie, 2013):
χ^2/df < 3; RMSEA < 0.08; CFI > 0.90; TLI > 0.90; SRMR < 0.08.

Monocultural Orientation. The factor Exhibiting Multiculturalism deals with recognizing diversity and fostering acceptance of others in a school environment while six items under Monocultural Orientation lean towards ways or practices that manifest cultural and linguistic homogeneity in the classroom. As previously mentioned, items with factor loadings of at least .40 will be retained. EFA revealed that factor loadings of two items under Monocultural Orientation were less than .40. However, the researchers decided to retain the items due to practical significance and because the value is deemed acceptable considering the sample size which is 573. According to Hair et al.'s (1998) guidelines for identifying significant factor loadings based on sample size, a sample size of 350 is needed for a factor loading of .30 to be acceptable. Furthermore, the fit indices for professional dimension can be found in Table 3. It can be seen that values satisfy the recommended guidelines for model fit indices; therefore, the measurement models exhibit a good fit. Lastly, the Cronbach's Alpha of the two factors found in Table 2 show that both are within the acceptable level. While one of the α value is .68, this is still considered acceptable (Loewenthal & Lewis, 2001; Shankman & Allen, 2010; Ghazali, 2008, as cited in Mohamad et al., 2015). Lastly, the means and standard deviations of the subscales are shown in Table 4. Data in a normal distribution are more likely to fall close to the mean. The small values of the SD mean that the results are very close in value to the mean.

Table 4. Mean and standard deviation.

| Subscales | First Pilot Test | | Second Pilot Test | |
	M	SD	M	SD
Personal Dimension				
Ethnocentrism	3.47	.99	3.43	.87
Intercultural Effort	5.37	.94	5.65	.81
Intercultural Stress	4.84	.96	4.78	1.02
Professional Dimension				
Exhibiting Multiculturalism	5.94	.76	5.68	.70
Monocultural Orientation	4.68	1.01	4.80	1.10

Second Pilot Testing Procedure and Participants

To improve the scale's reliability and validity, a second pilot test was conducted. The 28-item scale was utilized. A sample of 461 pre-service teachers from five schools participated in the pilot test. The researchers were only allowed to gather data on a specific schedule the schools have set. Of the five schools, one is privately owned while the rest are state universities. Demographic information of the sample during the second pilot testing can be found in Table 1. Even with the reduced number of items, the average time to complete the scale was between 15 and 20 minutes which is similar with the first pilot test.

Confirmatory Factor Analysis

Data analysis

With EFA being able to identify which items should be retained, CFA is done to confirm the factor structure of the variables (Hair et al., 1998; Suhr, 2002). A multi-group analysis was also conducted to check group invariance between ethnic minority and ethnic majority. A multi-group analysis is necessary since ethnic majority and ethnic minority teachers may have different interpretations of the construct being measured. In other words, a multi-group analysis is needed to assess whether the scale measures the same construct across different groups.

Results and interpretation

Table 2 shows the factor loadings for ethnic majority and ethnic minority. Although differences can be found in the factor loadings, they were not significant, as it was found that invariance did not change fit. The values of the fit indices in Table 3 show that the measurement models exhibit a good fit. While two TLI values are .90, this is still considered acceptable based on various literature (Bentler, 1990, as cited in Kim et al., 2016; Lucas-Molina et al., 2017). Perry et al. (2015) also mentioned in their paper that some type two errors are created due to some researchers' view of Hu and Bentler's suggested cut-offs as golden rules even when caution of using the suggested cut-off values has been explained. Lastly, the means and standard deviations are shown in Table 4. The values show a normal distribution since the results fall close in value to the mean.

Discussion and Conclusion

Several studies show that teachers' multicultural sensitivity can significantly improve students' overall performance as well as develop positive attitude towards cultural others. While multicultural sensitivity has direct implication to pre-service teacher education, it is difficult to find a study conducted in the Philippines that focuses on multicultural pre-service teacher education, thus, this study worked towards a measurement of multicultural sensitivity among pre-service teachers.

The Philippine Government is responsive to the needs of Lumad and Moro students. The Department of Education has already included the Indigenous Peoples Education (IPED) and the Madrasah Education Programme (MEP) as important areas in the K to 12 Basic Education Programme. Different initiatives have also been pursued by the Philippine

Government for teacher quality reforms. However, it is difficult to conclude whether the prescribed teacher education courses are sufficient in preparing pre-service teachers to manage culturally diverse students since as of writing, it is difficult to find Philippine data on pre-service teachers' degree of preparedness in working with culturally diverse students. Therefore, this study can be an initial groundwork towards the collection of much needed data that could help in the improvement of multicultural pre-service teacher education.

Similar to Pohan and Aguilar's (2001) scale on teacher's beliefs on diversity, this study utilized the two-dimensional approach. In this study, the scale has items for personal dimension and professional dimension. For the personal dimension, the factors identified were ethnocentrism, intercultural effort, and intercultural stress while for the professional dimension were exhibiting multiculturalism and monocultural orientation. It should be noted that multicultural awareness, beliefs, and attitudes were spread across the different factors of the scale.

The scale reflects the indicators of multicultural sensitivity (Garcia, 1995, as cited in Hunter & Elias, 2000) which are the ability to respect and understand, communicate effectively, and work collaboratively with people of diverse cultural backgrounds. The scale also reflects Banks' dimensions of multicultural education. The factors under personal dimension reflect Banks' 'prejudice reduction' while those under professional dimension reflect 'knowledge construction, equity pedagogy, content integration, and empowering school culture and structure'.

The scale is similar to those that exhibit a multidimensional structure such as the Cultural Diversity Awareness Inventory, Intercultural Sensitivity Scale, Pre-service Teachers Cultural Competence Scale, and Cultural Intelligence Scale. However, the results of this study is not similar to the multicultural sensitivity scale in Jibaja-Rusth et al.'s study (1994) since the measure was found to be unidimensional.

During item development, the items were grouped according to personal dimension and professional dimension. The number of positive and negative items per group were also balanced to control acquiescence. Looking closely at the items that comprise the factors that were found, it was observed that the items were in one direction. However, it can be said that these are not artifactual factors because the items among the factors exhibit different constructs and are substantive. Moreover, the set of items as a group are closely related based on the Cronbach's α per factor which is a measure for scale's homogeneity (Walsh & Betz, 1990, as cited in Ponterotto et al., 1998). In addition, invariance was also tested and it was found that the measurement of the construct is the same for ethnic minority and ethnic majority. Therefore, the construct is interpreted in a conceptually similar manner by both groups and their responses were not dependent on their group membership. Furthermore, multiple fit indices rather than a single fit statistic were evaluated in determining model fit in this study.

Though the scale was developed for and tested in the Philippines, the scale's items are generic in nature due to ethical constraints. Making the items too specific (such as naming an ethnic group) might cross an ethical boundary or offend respondents coming from a mentioned ethnic group. There is however an item on home languages wherein specific examples are given. This item can still be used in a different context by replacing or removing the examples.

During item development, there were items on ethnic minority and ethnic majority groups, culture, religion, and language. After the Exploratory Factor Analysis, a total of 17

items were excluded due to low factor loadings. The low factor loadings can be attributed to the items' redundancy. It is worth noting that all items that specifically mentioned religion were excluded. This – in the context of Mindanao, the concept of religion and culture are tightly intertwined that separate items are not needed.

Teacher education programmes continue to face the challenge of preparing teachers who can ensure classrooms and schools are welcoming to all children. This leads us to the question on pre-service teachers' multicultural sensitivity and their capacity to work with diverse students. Teacher preparation programmes can utilize the scale to examine the multicultural sensitivity of aspiring teachers when they begin the teacher education programme and to determine whether it is able to increase their multicultural sensitivity. Therefore, the scale can be useful in assessing growth in pre-service teachers' multicultural sensitivity. The scale is useful in a broader context since it could encourage discussion about preparing teachers to welcome diversity especially in countries in which multicultural situation is similar to the Philippines. This will undoubtedly contribute to the international conversation on multicultural teacher education.

Disclosure Statement

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