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Research Article

Measuring Values in Modern School System

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Abstract:

Teaching values in modern schools is a new phenomenon. Malaysian national curriculum at both primary and secondary school levels ensures that students develop desirable attitudes and behaviors based on human, religious, and spiritual values. The inculcation of the values is made possible through various subjects and non-academic subjects and students' activities. However, knowledge about values education remains limited because there is no measurement device to assess the extent of values teaching in school. To fill this gap, the present study was designed to develop and examine the psychometric properties of an instrument measuring values teaching schools. Using data from 400 high school students, the study developed and validated a measure called Malaysia School Values Scale (MSVS) tailored to high school students in Malaysia. A robust analysis of Confirmatory Factor Analysis (CFA) in Structural Equation Modeling (SEM) provides a rigorous analysis of the model power in relation to construct and content validity, confirming the dimension and analyzing the fitness of the data collected in the hypothesized model. This paper provides insight construct and content analysis using the CFA approach to consider the 15 school values constructs. To achieve the intended research objective, the 15 school values were explored. The results provide evidence that the MSVS achieved sound psychometric properties. The overall reliability value of Cronbach's Alpha was acceptable. The CFA results showed that the goodness-of-fit indices for the hypothesized model were as follows: x2 (182) = 627.269, p = 0.00, x2/DF = 3.409, GFI = 0.852; AGFI = 0.814, CFI = 0.92; IFI = 0.921, RMSEA = 0.077. Each of the indices was above the threshold value. Results imply that MSVS is a valid measure to describe the school values among high school students. However, more studies are recommended to further validate the scale.

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INTRODUCTION

Teaching values in modern or western oriented school is a rather recent phenomenon, as values were regarded as exclusively the domain of families and religious institutions; schools, consequently, assumed a values-neutral role. Internationally, values instruction began in the 1990s and early 2000s. The move to teach values in school initially sparked debate about whose values and what values should be taught (Lovat & Toomey, 2009). The debate in the international arena subsided as policymakers finally decided to introduce a set of universal values to be taught in public school; The Character Education Partnership, Inc., 1996; The Council for Global Education, 1997 (Lovat & Toomey, 2009). After this development, later studies focused on the impacts of value education in schools.

Values Education

Valuing, in brief, is a process in which the student identifies with and accepts the standards or norms of the important individuals and institutions within his or her society.

Values education is an explicit attempt to teach about values and/or valuing in school settings. Some educators view values education from the perspective of inculcation, seeing values as socially- or culturally-accepted standards or rules of behavior. Values education is known by a number of names, including moral education (Malaysia & Auatralia), character education, and ethics education (Singapore) and Islamic education (Malaysia & Australia). Each variant has a slightly different meaning, pointing to its own distinctive emphasis. Overriding these differences, however, is a common theme born of a growing belief that teachers and schools have an increasingly important role to play in entering the world of personal and societal values.

In deciding which values will be taught in schools, each country deploys different strategies, including research and discussion with multi-religious consultative bodies. In the United States, the Josephson Institute of Ethics developed the following list of values: respect, responsibility, honesty, worthiness, caring, justice and fairness, and civic virtue and citizenship (1996). For its part, the Council for Global Education (1997) asserts the following set of values: compassion, courtesy, critical inquiry, due process, equality of opportunity, freedom of thought and action, human worth and dignity, integrity, justice, knowledge, loyalty, objectivity, order, patriotism, rational consent, reasoned argument, respect for others' rights, responsibility, responsible citizenship, rule of law, tolerance, and truth. In Australia, a report has suggested nine School values for Australian schools (Lovat & Toomey, 2009).

Values education draws on religious values prescribed by the scriptures as well as human values proposed by a number of social psychologists. Among the well-researched

values are those proposed by Rockeah and Schwartz. Rokeach (1973) conceptualizes what individuals and societies want to achieve (Rokeach, 1973; Schwartz, 2007). The importance of value is to serve as guiding principle in people's lives in various situation (Schwartz, 2007) and Malaysian school curriculum stated that the goal of values education is to develop a balanced and harmonious human being with high moral standards (Amla , Sharifah & Mahzan, 2014).

Values

Rokeach (1973) proposed that human values are comprised of two categories, terminal values and instrumental values. The first set, terminal values, refers to desirable end-states of existence, the goals that a person would like to achieve during his or her lifetime. Some of the terminal values proposed by Rokeach include true friendship, mature love, self-respect, happiness, inner harmony, equality, freedom, pleasure, social recognition, wisdom, salvation, family security, national security, and a sense of accomplishment. These values vary among different groups of people with multiple cultural backgrounds. The second set, instrumental values, refer to preferable modes of behavior for achieving the terminal values. Instrumental values include cheerfulness, ambition, love, cleanliness, self-control, capability, courage, politeness, honesty, independence, intellect, broad-mindedness, logic, obedience, helpfulness, responsibility, and forgiveness (Rokeach, (1973). Later, Schwartz, (2005) proposed ten basic values: self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism. These values were shaped by three universal requirements of the human condition: the needs of individuals as biological organisms, the requisites of coordinated social interaction, and the survival and welfare needs of groups.

As for religious values, belief in God as the Creator and the Sustainer of all his creations is the foundation of the value system. In Islam the goal of human existence is to worship Allah (Sh. Salleh al-Fozan, 1997). Value prescribed by the Holy book, the alQuran as in the case of Islam, serve as a guiding principle in one's relationship with God and in his relationship with his fellow human being as well as the environment including animals. Some of the value components of moral character stress on the following values; harmony, love, respect, cooperate, gratefulness, responsible, honest, just and tolerance.

Measuring Human Values Constructs

Studies on measuring value constructs gained global attention when Rokeach's classified value system was instrumentalised into the Rokeach Value Survey (RVS). The RVS has been translated and validated in many different countries using various samples

(Johnston, 1995; Debats, & Bartelds, 1996; Feather, 1986). These studies have examined several aspects of the survey's psychometric properties, including its constructs, structure, and items.

In their review of studies on RVS, Debats and Bartelds (1996) found that studies on RVS employed either the total of the RVS terminal and instrumental sub-scales, the sub-scales discriminated by Rokeach as operationalizing personal/social/competency/moral values domains, or the single RVS items (Debats and Bartelds, 1996). They added another dimension of RVS study by examining the structure of the 36 values. To achieve this objective, they used a principal components factor analysis followed by an orthogonal rotation varimax.

The ten human values suggested by Schwartz and colleagues (2001) also drew attention from researchers who examined the constructs across cultures using Schwartz's Portrait Value Questionnaire. For instance, researchers measured Schwartz's 10 value constructs (1990) using the Portrait Values Questionnaire (PVQ) on samples in South Africa (n = 3,210) and Italy (n = 5,867). They considered samples of 13- to 14-year-old Ugandan girls (n = 840), yielding structures of relations among values similar to the theoretical prototype (Schwartz, Melech, Lehmann, Burgess, Harris, & Owens, 2001. Cieciuch, Davidov, Vecchione and colleagues (2014) tested a new instrument (PVQ-5X) measuring Schwartz's refined value theory in order to measure 19 more narrowly-defined values. The study tested the measurement invariance of this instrument across eight countries. Configural and metric invariance were established for all values across almost all countries. Scalar invariance was supported across nearly all countries for 10 values. The analyses revealed that the cross-country invariance properties of the values measured with the PVQ-5X were substantially better than those measured with the earlier version of the PVQ (PVQ-21).

Azimi, Krauss, Noah, and colleagues (2007) have developed and tested a Muslim Religiosity Personality Inventory (MRPI) measuring Islamic practice among youth in Malaysia. The inventory has two subscales: Islamic worldview with 51 items (reduced from 74 items) and religious personality with 100 items (reduced from 141 items). These subscales were examined using factor analysis and supported by arbiter analysis. The study found that those who were more religious in the sense that they were more knowledgeable and observe more of religious values and practices were associated with more healthy life style compared to those in rehabilitation center for drug abuse and other minor crimes. Applying the same methodology of factor analysis (PCA) Abdullah Sahin (2013) measured attitude towards Islam and Islamic identity development among Muslim youth in Britain and Kuwait using 26 items instrument – You and Your Faith

Questionnaire to compliment his qualitative method. As in Hamzah et al's study Sahin's study found that youth's attitude towards Islam varies according several factors such as age, exposure to Islamic knowledge, formal/informal Islamic education which include parental guidance. Five factors of faith orientation were identified. They are strong faith orientation, inspirational faith orientation, self-focus faith orientation, socially-aware faith orientation, self-conscious Faith orientation. Both studies focus on general practice and attitude toward Islam without referring to specific values

Most studies assessing values constructs and structure used factor analysis with the principle component and varimax rotation. Schwartz (2007) used discriminant and convergent validity in his study to examine the relationship among constructs. The present study used a more robust structural equation modeling (SEM). The SEM is a multivariate statistical approach to test the causal relationships among variables (Gall, Gall, & Borg, 2005). One of the primary advantages of SEM, compared to other applications of the general linear model, is that it can be used to study the relationships among latent constructs that are indicated by multiple measures. It is also applicable to both experimental and non-experimental data as well as cross-sectional and longitudinal data. SEM takes a confirmatory (hypothesis testing) approach to the multivariate analysis of a structural theory, one that stipulates causal relations among multiple variables (Lei & Wu, 2007).

In the current study, to verify individual item reliability, a confirmatory factor analysis (CFA) was performed on independent and dependent variables of the theoretical research model. A single iteration of the CFA was necessary, given that all loadings of the variables were superior to 0.50, and no item was withdrawn or transferred into another variable in which the loading would have been higher. In general, items had high loadings, which suppose a high level of internal consistency of their corresponding variables. In addition, loadings of each variable were superior to cross-loadings with other variables of the model.

Background of the Study

In Malaysia, public education always has played a key role in promoting values, particularly national unity, progressive and disciplined citizenship, and religious and moral values (Balakrishnan, 2009). Therefore, values have been the essence of the school curriculum. Two education reports (Razak Report, 1956; Rahman Talib Report, 1960) recommended values education to promote national unity and to develop progressive and disciplined Malaysian citizens.

In 1982, various groups within and outside the Ministry of Education embarked on planning a national philosophy of education that would provide the foundation of the educational system in Malaysia (Langgulung, 1993). This effort aimed to produce knowledgeable and competent Malaysian citizens who possess high moral standards and who are responsible and capable of achieving a high level of personal wellbeing while contributing to the betterment of society and the nation at large (Ministry of Education Malaysia, 1989).

The values education policy was translated into three stand-alone subjects: Islamic education (Islamic conduct), moral education (for non-Muslim students), and local studies. To carry out this mission, the strategy involved making Islamic education and moral education the school subjects in school. Islamic education is compulsory for Muslim students, while moral education is compulsory for non-Muslim students. The National Framework articulates the process for schools to engage in the whole school values education programs. It also presents a vision for common values in Malaysian schools, identifying 16 universal values:

1. Belief in God;
2. Honesty: Be honest, sincere, and seek the truth;
3. Self-respect, identity, and self-esteem;
4. Responsibility: Be accountable for one's own actions, resolve differences in constructive, non-violent and peaceful ways, contribute to society and to civic life, take care of the environment;
5. Wisdom/politeness: Be civilised and polite;
6. Tolerance: The willingness to compromise, be patient, and exercise self-control for harmonised living;
7. Independence: Not having to rely on others;
8. Industriousness: Diligence and hard work in achieveing one's goals;
9. Love: Showing positive feelings towards others and environment and country;
10. Justice: Pursuing and protecting the common good where all people are treated fairly for a just society;
11. Rationality: Developing critical thinking;
12. Moderation: Not being arrogant;
13. Cleanliness: Hygeine, living in clean environment, and consuming clean food;
14. Health: Taking care of one's health;
15. Safety/security: Awareness of the importance of one' safety and others' safety; and
16. Sincerity

Purpose

As there is no measurement to assess the extend of value teaching in school both in formal classroom setting and informal setting outside the classroom, therefore knowledge in this area is very limited. To fill the gap, the present study was designed to develop and examine the psychometric property of an instrument measuring values teaching in Malaysian schools which is called Malaysian School Value Scale (MSVS). This study is a part of a larger study that measures the impact of value education in school. The purpose of the present study is to identify the convergent and discriminant validity of the MSVS and to investigate the reliability of these scales in secondary schools in Malaysia.

METHOD

Participants

The questionnaire was distributed among 400 year-four respondents from four high schools in Selangor state in Malaysia. One of the schools was a national Chinese school where the student population was Chinese. Another institution was an Islamic religious school where the student population was Malay and Muslim; the other two were national schools where the population was a mixture of Malay, Chinese, and Indian. Data was collected from students of three major races: Malay (247 [60.5%]), Chinese (102 [25%]), and Indian (51 [12.5%]), with (6 [2%]) other. The participants were current or active students in secondary schools (boys 190 [46.6%]), girls (218 [53.4%]). Participants were selected from secondary schools using a stratified random sampling method in order to represents various types of schools in the state of Selangor in Malaysia. A total of 400 participants were selected using Krejcie and Morgan's (1970) sampling size table

Instrument – The Development of the Malaysian School Value Scale (MSVS)

An initial 45 items was developed to measure 15 values (honesty and sincerity were collapse into one) inculcated in school as prescribed by School curriculum. In addition, the assessment added 19 items measuring students' beliefs and 28 items measuring students' values practices. The belief and practice scales were developed to measure the extent of students' positive behaviors aligned to the 15 School values taught in school. An expert panel discussed these items in terms of content validity and construct coherence. This panel consisted of two professional counselors, two school curriculum experts, an educational media expert, and a technical vocational education expert. After one round of discussion and one rephrasing session requiring a minimum of three items per construct, the final 92-item questionnaire was accepted for piloting. Items are comprised of statements with which respondents are asked to express agreement or disagreement by selecting one of five labeled choices (strongly disagree, disagree, neutral/undecided, agree, strongly agree).

The final school Value scale measure students' value using three major constructs i) School Inculcated School values, ii) Beliefs, and iii)Practice . There were a total of 92 items (45 for School inculcated values, 19 for belief, 28 for practice and). The school inculcated values has 15 dimensions, namely belief in God, honesty, self-esteem, responsibility, politeness, tolerance, independence, diligence, love, justice, rationality, moderation, hygiene, health, and safety. In addition, Belief had three dimensions: religion, self, and social. while, Practice was divided into five dimensions: self, family, environment, citizenship duty, and community. A pilot test of MSVS was conducted on 40 respondents to test the validity and reliability of the instrument. The reliability was higher than 0.7.

The study followed standard regulations in obtaining consent by obtaining permission from the Ministry of Education and individual school principals. As the questionnaire was distributed during class hours, the students were advised to inform their parents. Students also were assured of the confidentiality of their responses.

Data Analysis

Data was analyzed using descriptive statistics and Structural Equation Modeling (SEM) for determining the relationship among variables (Pui-Wa & Wu, 2007). SEM is an extension of the General Linear Model (GLM) and is used more as a confirmatory technique than an exploratory technique; to confirm models rather than to discover new ones (Garson, 2012). SEM is used to test 'complex' relationships between observed (measured) and unobserved (latent) variables and relationships between two or more latent variables. In this study, SEM is used in the measurement model for the 15 dimensions of School values, practices, and beliefs.

RESULTS

Descriptive Analysis

This study examines the Malaysian School Value Scale with three sub-scales: School Inculcated value scale, belief scale, and practice scale, with a total of 92 items. All dimensions have a minimum of three items. As described earlier, school inculcated values are measured through 45 items comprised of 15 dimensions: belief in God, honesty, self-esteem, responsibility, politeness, tolerance, independence, diligence, love, justice, rationality, moderation, hygiene, health, and safety. Each of the School value dimensions was measured with three items in 5-point Likert scale measurement ranging from 1 = "Strongly disagree" to 5 = "Strongly agree". The following discussion present the descriptive findings of the three subscales:

School Inculcated Values

Using 45 item measuring 15 school values, the analysis indicated that the most important dimension, according to students, was love with an overall mean of 13.34. The next most important was honesty with 13.32, followed by belief in God with an overall mean of 13.15. Health and hygiene held the least importance with overall means of 10.7 and 10.38, respectively.

Students' Beliefs

To measure the beliefs of the secondary school students, 19 items were applied based on a five-point Likert scale (ranging from 1 = "extremely unimportant" to 5= "extremely important"). Belief had three dimensions: the religion dimension had five items, the social dimension had three items, and the self dimension had 11 items. The most important dimension was religion, with a 4.68 overall mean; followed by social, with 4.57; and self, with 4.54.

Within religion, the most important item was "belief in the existence of God as the creator" (M = 4.71, SD = 0.67) followed by "adhere to religion" (M = 4.70, SD = 0.60). In the social dimension, the most important item was "care for personal safety" with (M = 4.70, SD = 0.60). The least important in the social dimension was "When I help, I do not expect a reward" (M = 4.37, SD = 0.77). The least important dimension was the self dimension. Within this dimension, the most important statement was "self-esteem: honor and protect dignity in life" (M = 4.72, SD = 0.54) followed by "take care of health and well-being" (M = 4.69, S.D = 0.59)

Students' Values Practice

Students' values practice was measured with 28 items within five dimensions: self, family, environment, citizen duty, and community. Each item was measured using a five-point Likert scale (ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree"). The family dimension had four items; community had six items; self and citizen duty had seven items each; and environment had four items. As illustrated in Table 3 the most important dimension was family with 4.43, followed by community with 4.21. The students noted the environment as the least important, with a 3.43 overall mean, a finding that indicates that students feel more strongly about their families and communities.

Discriminant Validity

Discriminant (also referred to as divergent) validity is evidence that a measure is not unduly related to other similar, yet distinct, constructs (Messick, 1989). In other words, it is the extent to which a construct is really different from other constructs with respect to

theoretical content. Discriminant validity is demonstrated when the Average Variance Extracted (AVE) of any constructs is greater than the squared correlation between the two constructs. Fornell and Larcker (1981) assert that a researcher can compare the AVE of each construct with the shared variance between constructs in order to assess the discriminant validity of two or more factors. If the AVE for each construct is greater than its shared variance with any other construct, discriminant validity is supported. Based on this criterion, which has been used in many studies, results of the present study showed that discriminant validity is adequate for the Malaysian School Value Scale (MSVS). A consequence of strong discriminant validity is that each measured indicator represents only one construct (absence of cross loadings) (Groenland & Stalpers, 2012). A construct will have adequate discriminant validity if the AVE exceeds the squared correlation among the constructs (Fornell. & Larcker., 1981; Hair, Black, Babin, Anderson, & Tatham, 2006). Table 4 demonstrates that the AVE for each construct is greater than the squared correlation between that construct and the other two constructs. Furthermore, in order to prove the discriminant validity of a construct, Maximum Shared Variance (MSV) and Average Shared Variance (ASV) should be below AVE. As indicated in Table 1, MSV and ASV are below AVE. Therefore, discriminant validity is adequate for school values, practices, and beliefs. The construct reliability and validity for the current study was calculated using Stat Tool Package (Gaskin, 2012).

Table 1

Discriminant Validity

Manifest (Observe) Variable	MSV	ASV	School Value	Practice	Belief
School cultivated School Value	0.393	0.255	0.723		
Practice	0.393	0.363	0.627	0.740	
Belief	0.333	0.225	0.341	0.577	0.923

Convergent Validity

Convergent validity refers to a set of variables that presume to measure a construct (Kline, 2005); it is also the extent to which the indicators of a construct share variance. In order to assess convergent validity, the Average Variance Extracted (AVE) is calculated on the basis of path estimates. As path estimates ideally should be 0.7 or higher, AVE should be 0.5 or higher (Groenland & Stalpers, 2012). An additional indication of convergent validity is reliability, which refers to the degree to which a set of indicators of a latent construct is internally consistent in its measurements. Reliability can be assessed by computing 'coefficient alpha', or CR (Construct Reliability). CR ideally should be 0.7 or higher, and is highlighted when reporting the results (Groenland & Stalpers, 2012). The results in Table 2 show that Composite Reliability (CR) is between 0.942 to 0.827 in this research. Average Variance Extracted (AVE) is another name for convergent validity. A

high AVE (>0.5) indicates a high convergent validity (Fornell & Larcker, 1981). High factor loadings (≥0.5) on a factor also indicate high convergent validity (Hair, Black, Babin, & RolphE, 2006). Thus, the results indicate that convergent validity (AVE) and Composite Reliability (CR) exist for the constructs of this study. Furthermore, all factor loadings are above 0.5 for all constructs (Table 2).

Table 2

Results of Convergent Validity

Construct and Indicators (Items/Parcels)	Standard Factor Loading (>0.5)	Composite Reliability (>0.7)	Average Variance Extract (AVE) (>0.5)
School Cultivated School Value			
Health	0.515	0.942	0.523
Safety	0.685		
Diligence	0.836		
Belief in God	0.739		
Honesty	0.766		
Self-esteem	0.814		
Responsibility	0.763		
Prudence	0.741		
Independence	0.671		
Tolerance	0.751		
Love	0.779		
Justice	0.653		
Rationality	0.706		
Moderation	0.769		
Hygiene	0.586		
Practice in Life			
Family	0.659	0.827	0.547
Environment	0.688		
Community	0.811		
Self	0.788		
Belief		0.920	0.853
Self	0.948		
Social	0.898		

SEM was performed to test overall fit and acceptability of the MCVS model in Malaysia. Therefore, in evaluating the overall goodness of fit for the model, chi-square/df (ratio) value was used, as suggested by Hooper, Coughlan, and Mullen (2008). They pointed out that chi-square is a traditional measure for evaluating overall model fit that

tests whether the covariance matrix of the original variable is different from the proposed matrix. A good model fit would provide an insignificant result at a .05 threshold (Barret, 2007). An insignificant p value means that there is no statistically significant difference between the observed data and the hypothesized model and the chi-square/df (ratio). The recommended ratio is ranged from as high as 5.0 to as low as 2.0 (Hooper et al., 2008). In this study, the ratio obtained is below 3, indicating a significant value (627.269/182=3.409). RMSEA (Root Mean Square Error of Approximation) is another criteria measuring the goodness of fit for a model. There is good model fit if RMSEA is less than or equal to .05. There is adequate fit if RMSEA is less than or equal to .08. Hu and Bentler (1995) suggested that values below .06 indicate good fit. The RMSEA values are classified into four categories: close fit (.00 – .05), fair fit (.05 – .08), mediocre fit (.08 – .10), and poor fit (over .10). In general, multiple goodness-of-fit tests are used to evaluate the fit between the hypothesized model (Figure 1) in order to accept or reject the study model (Abedalaziz, Jamaluddin, & Leng, 2013). Fit indexes show that the model met the cut-off criteria and can be considered a fit model. Root Mean Square of Error Approximation (RMSEA) is .07, which shows a fair fit (Hu & Bentler, 1995). The Comparative Fit Index (CFI) and Incremental Fit Index (IFI) are more than .9 and are acceptable (Hair, Black, Babin, & Anderson, 2010). These items fit the measurement model with x^2 (182) = 627.269, p = 0.00, x^2/DF = 3.409, GFI = 0.852; AGFI = 0.814, CFI = 0.92; IFI = 0.921, and RMSEA = 0.077.

The analysis shows that the most important category in the respondents' view was diligence because it has the highest factor loading among all categories of School values followed by self-esteem and independence. The least important factor loading was hygiene. The categories of justice and rationality, hygiene and health, and belief in God and honesty were merged as they were considered one category (Figure 1). After modification, two sub-dimensions was deleted. Citizenship duty belongs in the practice dimension, and religion belongs to belief dimension because the factor loadings were below 0.5.

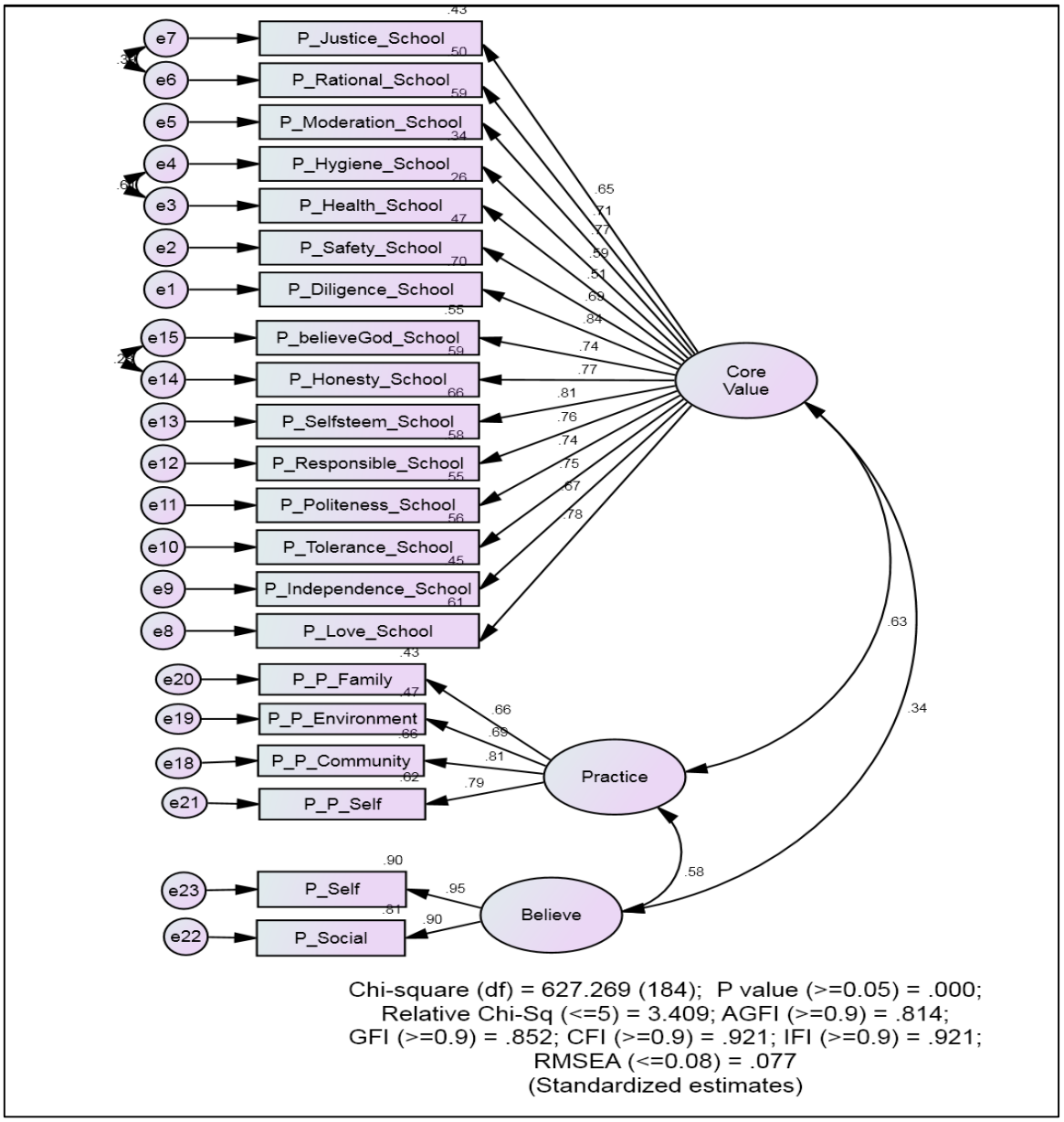

Figure 1. Measurement construct CFA model.

Based on the Table 3 in general all dimensions of values had effect on practice and belief constructs each at varying degrees. The relationship between school cultivated School value and belief was significant and positive (B=0.349, p<0.05) with 34% prediction. In addition, the relationship between school cultivated School value and practice was significant (B=0.657, p<0.05) with 65% prediction.

All the four dimensions of practice construct, including family, self, environment and community have positive effects by the practice. The relationship between family and practice was significant and positive (B=0.64, p<0.05) with 64% prediction, the relationship between self and practice was significant with 77% prediction (B=0.772, p<0.05). Furthermore, environment and practice was significant with 69%.

The highest influence of school cultivated School value was on diligent with 80% prediction, followed by moderation with 78%. The relationship between school cultivated School value and politeness and tolerance was positive and significant with 75% prediction. The impact of School value on honesty, love and responsible was the same with 74%. The relationship between school cultivated School value and rational and safety was significant and positive with 72% and 70% respectively. Lower prediction was found between school cultivated School values in the relationship with independence, justice and hygiene which were positive and range between 67% to 62% respectively. The last and least impact of school cultivated School value was on health with 54% prediction.

Table 3

Standard estimate for final model (School Cultivated values)

Items	B	S.E	β	C.R	P value
School cultivated Value -----> Belief	0.332	0.051	0.349	6.572	***
School cultivated Value -----> Practice	0.544	0.051	0.657	10.63	***
Practice-----> Family	0.85	0.082	0.644	10.393	***
Practice-----> Self	1.031	0.065	0.772	15.921	***
Practice-----> Environment	1.363	0.124	0.69	10.997	***
School cultivated Value -----> Diligence	1.152	0.073	0.806	15.856	***
School cultivated Value -----> Moderation	1.229	0.079	0.789	15.531	***
School cultivated Value -----> Politeness	1.145	0.077	0.752	14.806	***
School cultivated Value -----> Tolerance	1.103	0.075	0.752	14.805	***
School cultivated Value -----> Honesty	0.973	0.054	0.748	17.968	***
School cultivated Value -----> Love	0.972	0.066	0.746	14.646	***
School cultivated Value -----> Responsible	1.033	0.071	0.741	14.575	***
School cultivated Value -----> Rational	1.127	0.079	0.726	14.266	***
School cultivated Value -----> Safety	1.236	0.089	0.703	13.815	***
School cultivated Value -----> Independence	1.015	0.076	0.679	13.353	***
School cultivated Value -----> Justice	1.161	0.088	0.669	13.127	***
School cultivated Value -----> Hygiene	1.209	0.099	0.624	12.242	***
School cultivated Value -----> Health	1.103	0.103	0.547	10.726	***

The result of assessing structural model fits indicated that the data fit with the model with: x^2 (163) = 566.885, x^2/DF= 3.478, p=.000, GFI=0.833, CFI=0.921; IFI=0.922, AGFI=0.833; RMSEA= 0.078. The Goodness-of-fit indices of structure model showed that CFI and IFI were significantly close or passed the cut-off value (0.9). In addition, the RAMSEA was 0.078, which fell within the recommended range (Figure 2).

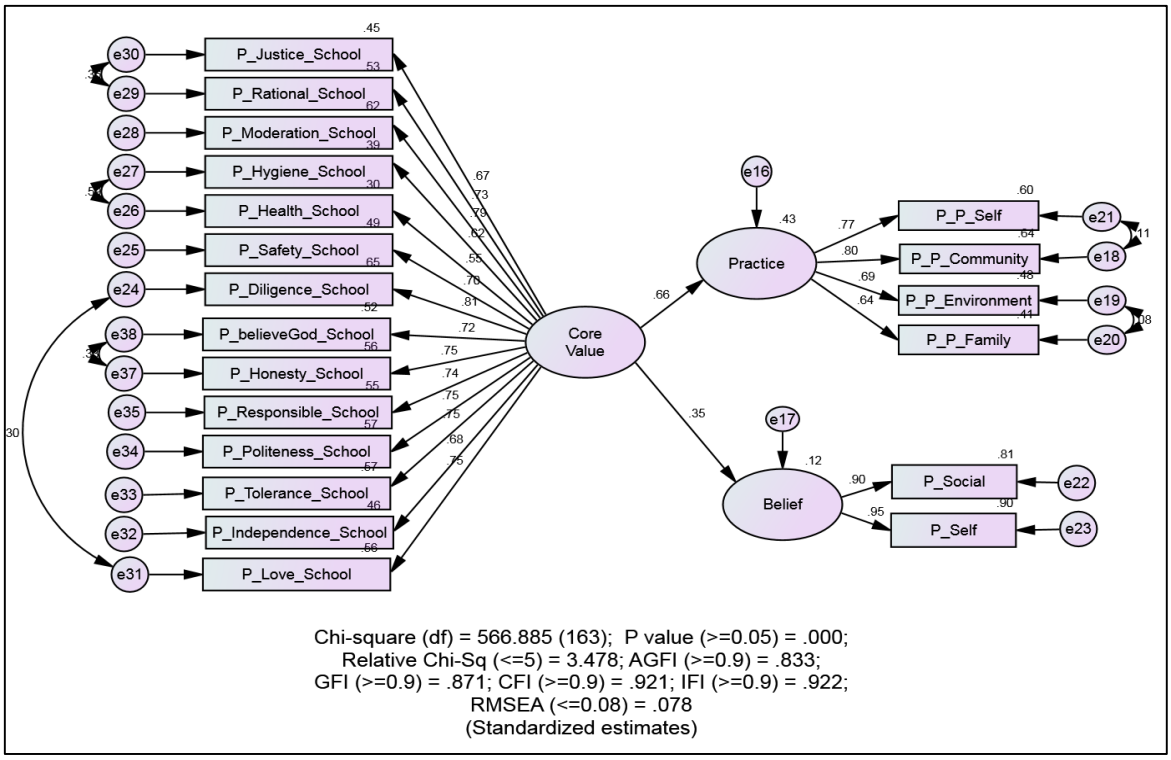

Figure 2. Overall structural model of School value and practice and belief with standardized path coefficients

Our first analysis shows that the instrument is valid and the measurement model in both, convergent and discriminant, illustrated that all the three sub-scales (School value, practice in life and belief) valid. All the relationship between School value and practice and belief are positive and significant in varying degrees.

DISCUSSION, CONCLUSION AND SUGGESTIONS

In the measurement model the overall composite reliability analysis showed that the data is reliable. However, the test of convergent and construct validity was further improved through the SEM approach. The results of the discriminant validity testing indicated that the MSVS is adequate for School value, practices, and beliefs. In addition, the findings showed that convergent validity (AVE) existed for all constructs in this study. In summary, higher standardized factor loading and higher AVE percentage values for endogenous variables enable examination of the significance of research variables more precisely, thus improving data analysis. Because measurement for this study is reliable and valid for School values, it can be used for further studies in Malaysia. It also can be applied to other countries for measuring School values and making comparisons.

These results also show that the model is fit. In general, multiple goodness-of-fit tests are used to evaluate the fit between the hypothesized model in order to accept or

reject the study (Abedalaziz, Jamaluddin, & Leng, 2013). Fit indexes show that the model met the cut-off criteria, and it can be considered a fit model. Root Mean Square of Error Approximation (RMSEA) is .07, which shows a fair fit (Hu & Bentler, 1995). The Comparative Fit Index (CFI) and Incremental Fit Index (IFI) are more than .9, which is acceptable (Hair, Black, Babin, & Anderson, 2010). The most important category from respondents' view was diligence, and the least important category was hygiene. Some categories were given same meaning by respondents for example justice with rationality, hygiene with health, and belief in God with honesty. In order to fit the model, adjustments have to be done. Therefore after modification, two sub-dimensions namely citizenship duty (from practice dimension), and religion (from belief dimension) were deleted as the factor loading was below 0.5.

The paper concludes that the present study provides evidence that the MSVS is fit to describe School values constructs of Malaysian school children. Hence, the instrument is psychometrically sound with two dimensions of the subscale reduced. The findings also provide initial evidence of the existence of 15 values constructs taught in school. Clearly, the MSVS is a reliable and valid tool for measuring the 15 school values in Malaysian schools. The findings imply that the MSVS could be used by school personnel in understanding student developmental processes, and by researchers in developing knowledge on Malaysian school values.

We note several limitations of the present study. Firstly, the sample is exclusive to a group of high school students aged between 15 and 16 years old. Therefore, the results cannot be generalised to other populations. In the future, further research replicating the present study is required with larger and different samples for the MSVS. Such research will not only confirm the present findings but also enable the results to be generalized to the youth population in Malaysia. Extending the sample to teachers and other school personnel also will confirm the present school values measurement model. Secondly, the setting was limited to school; thus, we cannot determine whether family factors or the environment has contributed to the development of such values. We suggest a combination of qualitative and quantitative methodology for future research. Such a mixed methodology could assist in obtaining a better understanding and comprehensive picture of Malaysian schools School value measurement model.

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