Policy Content Meaningfulness of School Leaders in Malaysia: Exploratory Factor Analysis

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Abstract

The purpose of this study is to develop a scale for assessing the policy content meaningfulness among school leaders in Malaysia. An exploratory factor analysis (EFA) revealed that the 3 components of the policy content meaningfulness construct; namely the personal meaningfulness, client meaningfulness and societal meaningfulness were maintained. Furthermore, the reliability analysis was also examined via the Cronbach alpha coefficient for all extracted components for the reason in ensuring the internal consistency of the scale. This study shall add up value to the current level of knowledge in the existing literature of policy content meaningfulness and commands some implications to the policy makers as well.

1.   Introduction / Background

In developing countries, education is believed to be a pillar that shapes and improve the nation's economy and society. Having faith that an educated person is an important asset for a country, government creates a sound and strong educational system, reforms and policies for the people. Without education, a nation cannot get the needed manpower for material advancement and enlightenment of the citizenry (Maekae, 2013) and poorly educated people limit the nation's economies capacity to produce, grow and innovate (Organisation for Economic Co-operation and Development, 2012). For this reason, transforming the structure of a country's education system via the educational policies should allow schools to better meet the need of students for the twenty-first century. The educational policies created shall not only raised the students' academic achievement but equipped students with the skills required to become a powerful contributor to the country's economic competitiveness.

Goggin (1986) claims that there three (3) clusters of independent variables in ensuring the performance and success in policy implementation, that are: (1) the form and content of the policy, (2) the capacity of the organisations responsible for making the policy work and (3) the qualifications of the people in charge of policy implementation. Therefore, based on the first cluster, it can be seen that content is crucially important to policy implementation since the substance of the policy content indicates clearly what are the guidelines, rules, regulations, laws, principles or directions. Similarly, the policy content will also inform what is to be done, who is to do it, how it is to be done and for whom or to whom it is to be done. Perceptive to policy content should persuade school leaders to be active implementers from beginning to end of the policy.

Policy content is not a simple and straightforward statements. Content of the policy has considerable scope for interpretation, even in the most explicit of policies, and it is as important to identify the "silences" - what is not stated as well as what is clearly and openly articulated (Jonson-Reid, 2013). In executing policies, it is necessary for school leaders to develop the meanings from the policy content as it will lead to engagement and commitment towards achieving policy goals. Instead, meaninglessness occurs when policy implementers are unable to comprehend the contribution of the policy to greater purpose (Tummers, Steijn & Bekkers, 2012).

Policies may require the establishment of some ongoing functions or actions (Oladipo, 2013). In a recent research on the execution of a districtwide policy to advance the principals' instructional leadership, Carraway and Young (2015) found that the lack of content knowledge regarding the policy has led the principals to feel insecure and uncomfortable implementing the policy. This implies that, to act according to the policy, the implementers must know the policy content thoroughly before are able to translate the policy into action and practise. It is fundamental to note that for policies to be effective, it must be meaningful to the policy implementers (Darling-Hammond, Jaquith & Hamilton, 2012).

Even more, the National Centre for Injury Prevention and Control (2012) contended that the understanding of policy content is essential in ensuring successful policy implementation as it leads to (1) clear articulation of the policy, (2) be able to compare policies in the area to capture the key differences and similarities, (3) recognise the process by which a policy is selected and passed, and (4) improve policy implementation now and future policy development. While implementers' actions to implement policies are influenced by how they examine and make sense of the policy content, then making meaning to the content is exceedingly important.

2. Methods

Tummers, Steijn and Bekkers (2012) trace the three (3) type of meaninglessness, contrary to the "meaningfulness", namely, the societal meaninglessness, client meaninglessness and personal meaninglessness. Professionals identify a policy to be societal meaningless if it fails to deliver any apparently beneficial outcomes for society as a whole, client meaninglessness happen when the proposed policy is not effective or helping for their clients and personal meaninglessness can be defined as a professional's perceptions that the implementation of a policy has no value for him or herself (Tummers, Steijn & Bekkers, 2012). Since, every policy that a country develops should have the content that clearly states matters of standard or principle, actions that needs to be done and by whom, and have legitimate statements that is instructed by a person or body with power to do so, then, the construct of policy content in this research focuses on the meaningfulness of the policy.

Essentially, to assess the policy content meaningfulness construct of the public primary school leaders in Malaysia, 16 items are adapted and customised from the personal meaninglessness (7 items) by Holt, Armenakis, Field and Harris (2007), client meaninglessness (5 items) and societal meaninglessness (4 items) (Tummers, 2012). However, more items were included in each of the dimension in ensuring that the measurement is adequately measure the policy content meaningfulness construct. Conclusively, the policy content meaningfulness construct consist of twenty-two (22) items that measured three (3) dimensions; namely the personal meaningfulness, client meaningfulness and social meaningfulness. The personal meaningfulness dimension and client meaningfulness dimension has eight (8) items each, while the social meaningfulness has six (6) items only. This study intended to reduce the number of items by grouping the items together into few components using factor analysis procedure.

These items that measure the policy content meaningfulness were presented in a self-

administered questionnaire to the school leaders. Prior to collection of the responses from school leaders located in the public primary schools of the five (5) randomly selected states representing Malaysia, that are Kedah (Northern), Selangor (Central), Pahang (Eastern), Melaka (Southern) and Sabah (East Malaysia), the researcher had requested appropriate permission and approval from the Educational Planning and Research Department (EPRD) of Ministry of Education of Malaysia and the State Education Department of the five (5) states that involved in this study. Later, the researcher randomly selected and identified three (3) to five (5) District Education Departments located in the each state. The District Education Departments were utilized to be the core of influence for randomly choosing the primary schools, directing and distributing the questionnaires to the school administrators in their district for the pilot study.

Once the respondent had completed the questionnaire, a self-addressed stamped reply envelope was given to return the questionnaire to the researcher. One hundred sixty one (161) questionnaires were returned by the school leaders. However, seven responses were dropped out since more than 10% of missing data was detected from the questionnaire. Eventually, for the purpose of exploratory factor analysis of the policy content meaningfulness construct, only one hundred fifty four (154) responses were employed.

When a researcher employed multiple items to measure underlying latent constructs, it is recommended to reduce those items into a manageable number before further analysis can be carried out (Awang, 2012; Hoque et al., 2018). Due to this reason, this research had obtained data from the pilot study and performed the Exploratory Factor Analysis (EFA) procedure in SPSS 21.0. As stated by Awang (2012), Hoque et al. (2018) and Kline (2014), the major reason for performing EFA is to reduce a large number of items into a smaller and manageable number of dimensions measuring the latent constructs.

The EFA procedure was conducted based on the "5-Steps Exploratory Factor Analysis Protocol" developed by Williams, Onsman and Brown (2010). Firstly, the sample size for pilot data followed the suggestion by Hair et al. (2010) and Hoque et al. (2018) where the sample size should be a minimum of 100 in order for the EFA results to be consistent and valid. This study decided to retain with factor loading more than 0.60 since the items in the questionnaire are adapted from established items (Awang, 2012; Hoque et al., 2018). In addition, the value of the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy should be higher than 0.6 and the Bartlett's Test of Sphericity should be significant ($p < .05$) for factor analysis to be suitable (Hair et. al, 2010; Tabachnick & Fidell, 2007; Hoque et al., 2018).

Secondly, the factors in this research was extracted using the Principal Component Analysis, as the most commonly used in EFA since it is set as the default method in many statistical programs (Thompson, 2004). Thirdly, in determining the criteria for factor extraction, this research retained to the Cumulative Percentage of Variance Extracted, Kaiser's Criteria with eigenvalue greater than 1 rule (Kaiser, 1960) and Scree Test (Cattell, 1966). According to Hair et al. (2012), the acceptable total variance explained in factor analysis for a construct to be valid should be not be less than sixty percent.

Fourthly, the rotational method adopted for this research was the orthogonal varimax rotation established by Thompson (2004) since this rotational method is the most common rotational technique used in factor analysis and produces factor structures that are not correlated (Costello & Osborne, 2005). The final step was the interpretation and labeling process. Interpretation is the process of examination to select variables which are attributable to a construct and allocating a name for that construct (Taherdoost, Sahibuddin & Jalaliyoon, 2014).

3.   Result / Discussion

The policy content meaningfulness construct consist of 22 items that are measured on 3 dimensions; namely the personal meaningfulness, client meaningfulness and social meaningfulness. The Principal Component Factor Analysis (PCA) with varimax rotation was performed on the twenty-two (22) items of the policy content meaningfulness construct. The results in Table 4.3 showed that the Bartlett's Test of Sphericity was significant (Chi-Square = 4828.755, p-value < 0.000). The measure of sampling adequacy by Kaiser-Meyer-Olkin (KMO) is 0.933; considered to be marvelous. Certainly, when KMO value is close to 1.0 and the significance value of the Bartlett's Test of Sphericity is close to 0.0, suggested the data of the policy content meaningfulness construct with twenty-two (22) items was adequate to proceed to Factor Analysis (FA).

Table 3.1 revealed the result of the Factor Analysis of the twenty-two (22) items under the policy content meaningfulness items. The result showed that the Factor Analysis procedure has extracted four (4) distinct dimensions with eigenvalue exceeding the value of 1.0, with the total variance explained for all four (4) components to be 83.274 percent, exceeding the sixty percent value as the minimum percentage of acceptable variance explained in factor analysis for a construct to be valid. Originally, the literature only established three (3) dimensions for the policy content meaningfulness construct, whereas after the FA procedure, four (4) dimensions of policy content meaningfulness had appeared. The more component extracted is better as long as their eigenvalues are reasonably close to 1.0 (Awang, 2012).

Table 3.1: Total Variance Explained for Policy Content Meaningfulness Items

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**14.162**	64.372	64.372	6.318	**28.718**	28.718
2	**1.639**	7.449	71.821	6.203	**28.197**	56.915

| 3 | 1.405 | 6.388 | 78.209 | 4.321 | 19.640 | 76.555 |
| 4 | 1.114 | 5.066 | 83.274 | 1.478 | 6.720 | 83.274 |

Next, Table 3.2 disclosed the factor loadings for all the twenty-two items under each of the four (4) components; namely Component 1, Component 2, Component 3 and Component 4. This study decided to uphold only for items with factor loading more than 0.60 since the items in the questionnaire are adapted from established items (Awang, 2012) and afterward, the research be going to proceed with Confirmatory Factor Analysis (CFA). Hence, the items that loads greater than 0.6 under one component and loads lower than 0.35 under the other component, shall be grouped under the earlier component (Igbaria, Guimaraes & Davis, 1995). Nonetheless, an items is considered to have a positive cross-loading and must be dropped from further analysis if the item has a loading of higher than 0.6 in one component but also loads higher than 0.35 in another component. Taken together, the items that has a factor loading less than 0.6 under all components must be deleted from the analysis.

Table 3.2: Rotated Component Matrix for Policy Content Meaningfulness Construct

Policy Content Meaningfulness Items	Component			
	1	2	3	4
CS4 - Policies are valuable for society	.877			
CS6 - Policies should benefit the society	.864			
CS5 - Policies seek the good of the society	.849			
CS3 - Policies lead to societal values	.840			
CS2 - Policies lead to societal goals	.755			
CS1 - Policies will improve the society in the long run	.717			
CP2 - Policies in the long term are beneficial to me		.835		
CP3 - Policies have meaning to me when they were introduced		.829		
CP4 - Policies expand my job now		.813		
CP1 - Policies make me experience positive work outcomes in school		.791		
CC2 - Policies are important to teachers		.718		
CP5 - Policies expand my job in the future		.704		
CC1 - Policies are important for students		.632		
CP8 - Policies expand my role as a school administrator		.612		

CC6 - Policies contribute to the welfare of my teachers		.768	
CC4 - Policies can solve the problems of my teachers		.726	
CC3 - Policies can solve the problems of my students		.724	
CC8 - Policies assist my teachers to be more efficient		.674	
CC5 - Policies contribute to the welfare of my students		.610	
CP7 - Policies make me do a lot of administrative work			.854
CP6 - Policies make me worry since I will lose some of my status			.717

Based on the factor loadings showed in the rotated component matrix for the policy content meaningfulness items (Table 3.2), the 6 items that collapsed under Component 1 were items that measure social meaningfulness, hence the label for Component 1 as social meaningfulness remains. For Component 2, there 6 items that measure personal meaningfulness and 2 items measuring the client meaningfulness. The 2 items that originally belong to client meaningfulness give the impression that students and teachers in the Malaysian context were also considered to be personally connected when it comes to policies content meaningfulness. Therefore, the label of Component 2 with 8 items remain as personal meaningfulness.

Furthermore, Component 3 confirmed the dimension of client meaningfulness for policy content. From the initial items of client meaningfulness, three items were deleted due to factor loading less than 0.6 and cross-loading, leaving only 5 items to measure client meaningfulness dimension. Conversely, Component 4 that has only 2 items that originally belongs to personal meaningfulness was removed after the analysis for the fact that a minimum of three (3) items are needed in a factor. Specifically, each latent construct should contain at least three (3) items to be better explained. Additionally, the correlation between the 2 items is 0.314, considered to be weak. According to Worthington & Whittaker (2006), it is possible to retain a factor with only 2 items if the items are highly correlated (i.e., $r > .70$) and relatively uncorrelated with other variables. Thus, deleting Component 4 that contained the 2 items from measurement of policy content meaningfulness was righteously to undertake. Besides, the Cronbach's Alpha

values are 0.979, 0.947, and 0.966 for Components 1 to 3 respectively. The internal consistency for Component 1 to Component 3 were categorized as excellent (Cronbach, 1951). Certainly, after the Exploratory Factor Analysis, only 18 items were maintained out of 22 items to measure policy content meaningfulness under the dimensions mentioned in the literature; namely personal meaningfulness, client meaningfulness and social meaningfulness.

4.   Conclusion

The focal purpose of this paper is to furnish an empirical support on the reliability of the measurement developed for assessing policy content meaningfulness among school leaders in Malaysia, via item-level analysis using exploratory factor analysis. On the whole, the result of the exploratory factor analysis revealed that from 3 sub-constructs under the policy content meaningfulness construct, it maintains.

Further investigations should be conducted to the reliability and validity of this measurement. Accordingly, it is prescribed to utilize the similar instrument to proceed with confirmatory factor analysis (CFA). With more thorough analysis, CFA shall endorse the uni-dimensionality, validity (convergent, construct and discriminant validity), and reliability (internal, construct validity and average variance extracted), thru the fitness index of the model (Awang, 2012; Awang et al., 2015). By means of CFA, any items that does not fit into its measurement model shall be deleted, wherein this procedure should then be relied upon to bring about a superior measurement model to further demonstrate the soundness of the policy content meaningfulness scale in the context of Malaysia.

5.   References

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