Developing a Validated and Reliable Instrument of Principal's 'Rabbani' Leadership, Early Climate Culture and Student Personality Formation

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ABSTRACT

Principal leadership was the main factor cited when predicting teacher job satisfaction, organizational commitment, and intention to stay in the school. An exploration of related studies has shown that authority directly affects the hierarchical responsibility of representatives. The classroom teacher is the primary source for influencing student learning and the principal's 'Rabbani' leadership is second only to classroom instruction on student outcomes. The head teacher's influence on teaching and learning is seen through the impact on school organization and school culture as well as teacher behavior and classroom practice. This study was conducted to develop and validate an instrument based on the EFA process for measuring the Principal's 'Rabbani' Leadership (based on Practice of Building Kindness, Principal Capacity Building Practices, Group Resilience Building Practices, Practices for Building a Culture of Knowledge, Teaching Process Development Practices), Early Climate Culture and Student Personality Formation selected Terengganu state secondary school. This study uses quantitative research methods based on Structural Equation Modeling (SEM) to analyze various relationships between variables in the study model. Before the data is analyzed using SEM, Exploratory Factor Analysis (EFA) is carried out to identify the appropriateness of the items used in the research instrument. This study describes in detail the procedure of conducting EFA analysis for each construct. The findings of this study show validity values based on Kaiser-Meyer-Olkin (KMO), Total Variance Explained (TVE), Factor Loading (FL) and reliability values based on Cronbach's Alpha (CA), have met all the required values.

Keywords: Exploratory Factor Analysis (EFA), Validity, Total Variance Explained, Factor Loading, Reliability

INTRODUCTION

Excellence in education is closely related to the practice of high discipline among school leaders and has a great impact on student achievement. Parents will send their children to excellent schools to ensure academic improvement and the formation of children's personalities (Ahmad Marzuk, 2013). Various methods have been used by the Ministry of Education Malaysia (KPM) to improve the quality of national education and one of them is through the Malaysian Education Development Plan 2013-2025 (Preschool to Post-Secondary Education). Through this 12-year development plan, the School Transformation Program 2025 (TS25) has been formulated to improve student achievement in schools through effective leadership of principals, competent teachers and strong commitment from the Parent-Teacher Association (Noraziyanah & Aida Hanim, 2019).

In achieving TS25, the level of principal leadership practice needs to be high in order to ensure that the country's direction is achieved. However, according to Suzana (2019), there is a leadership crisis involving various issues related to organizational management such as corruption and poor governance, including abuse of power among leaders. This statement is supported by Samsiah and Khalip (2019) who found that the level

of practice of Religious National Secondary School (RNSS) Principals for the element of Formulating School Goals is moderate and the mean of this instructional leadership is the lowest compared to other elements, while this element is very important as a basis for planning and driving forces in achieving the school's direction. To overcome this problem, one way is to revive the early childhood climate in schools.

Explortory Factor Analysis (EFA)

EFA is conducted to identify some components that exist in the set of questionnaires that have been formed. EFA is a statistical technique that transforms a set of original construct data linearly into a set of smaller constructs that can give a comprehensive picture of all the information contained in the original construct (Duntemen, 1989). The purpose of EFA is to reduce the dimensions of the original data to several smaller components that can be interpreted more easily and meaningfully (Duntemen, 1989; Lewis-Beck, 1994 & Field, 2006). According to Tabachnick and Fidell (2013), EFA needs to go through several stages. The first stage calculates the correlation matrix between all the factor-analyzed constructs. The next stage involves extracting some factors from the correlation matrix and determining the number of factors formed. The rotation of the factors is done to improve the interpretation so that the factors are more meaningful and can be interpreted. The final and most important stage in factor analysis is to interpret the results of the factors obtained and give an appropriate name to each factor.

This study uses items in an instrument that has been built by the researcher himself. According to Chik and Abdullah (2018), Awang (2012) and Hoque et al. (2016; 2017), if a researcher adapts an item that has been built by a previous researcher or builds a new item in the instrument or modifies the statement to fit the current study, then they need to re-run the EFA (Exploratory Factor Analysis) procedure. This is because the current study area may be different from previous studies, or the current study population is much different from previous studies in terms of socio-economic status, race and culture. Therefore, there may be some items that were built before, no longer suitable for the current study or there may also be a different item structure in the current study compared to the structure in the previous study. Thus, researchers need to recalculate the Internal Reliability value for the current instrument, which is the new Alpha Cronbach value (Chik & Abdullah, 2018, & Hoque et al., 2016; 2017).

FINDINGS

Exploratory Factor Analysis (EFA) for Principal's 'Rabbani' Leadership Based on Practice of Building Kindness

The Practice of Building Kindness which uses as many as six (6) items and is labeled as PI1 to PI6. Next, the use of an interval scale for the measurement of items is between one (1) to 10. Principal Component Analysis (PCA) in the EFA process using varimax rotation for the Practice of Building Kindness for the measurement of six (6) items. Table 1 below shows the Bartlett's test results that are significant for P values less than 0.05 ($P < 0.05$) and measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.903. The value obtained has exceeded the minimum limit value of 0.6 and the achievement of both of these tests (Bartlet's test is significant and KMO value > 0.6), showing that the data used in this study is appropriate according to the EFA procedure (Chik & Abdullah, 2018; Hoque et al., 2017 & Awang, 2012).

Table 1 KMO Values and Bartlet's Test for Practice of Building Kindness

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.903
Bartlett's Test of Sphericity	Approx. Chi-Square	882.986
	df	28
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 2 below found that Practice of Building Kindness measured using six (6) items in one (1) component can measure Practice of Building Kindness as much as 87.957%. This

value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018; Hoque et al., 2017).

Table 2 Total Variance Explained for Practice of Building Kindness

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.362	87.957	87.957

Thus, the researcher wants to know the selected items to measure the component. Table 3 below shows the distribution of items accepted to measure Practice of Building Kindness. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded because they do not contribute to the measurement of the construct (Chik & Abdullah, 2018).

Table 3 Factor Loading for One (1) Component Practice of Building Kindness

Component Matrix[a]	
Items	Component
PI1	0.844
PI2	0.852
PI3	0.879
PI4	0.760
PI5	0.886
PI6	0.815

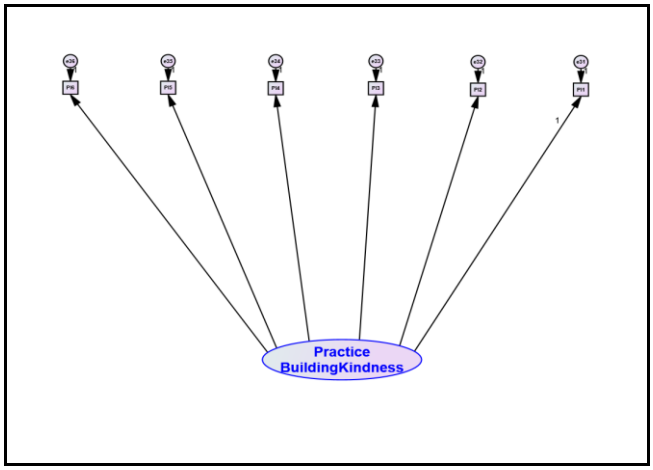

Figure 1. Position of Components and Items for Practice of Building Kindness (Before & After EFA)

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 4 below shows the Cronbach's Alpha value for each item in the Practice of Building Kindness that exceeds 0.7 and can be used in this study (Chik & Abdullah, 2018 and Hoque et al., 2017).

Table 4Cronbach's Alpha Value for Each Item in the Practice of Building Kindness

Component	Number of Items	Cronbach's Alpha
1	6	0.927

Exploratory Factor Analysis (EFA) for Principal's 'Rabbani' Leadership Based on Principal Capacity Building Practices

The Principal Capacity Building Practices which uses as many as six (6) items and is labeled as PK1 to PK6.

Next, the use of an interval scale for the measurement of items is between one (1) to 10. Principal Component Analysis (PCA) in the EFA process using varimax rotation for the Principal Capacity Building Practices for the measurement of six (6) items. Table 5 below shows the Bartlett's test results that are significant for P values less than 0.05 (P < 0.05) and measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.943. The value obtained has exceeded the minimum limit value of 0.6 and the achievement of both of these tests (Bartlet's test is significant and KMO value > 0.6), showing that the data used in this study is appropriate according to the EFA procedure (Chik & Abdullah, 2018; Hoque et al., 2017 & Awang, 2012).

Table 5 KMO Values and Bartlet's Test for Principal Capacity Building Practices

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.943
Bartlett's Test of Sphericity	Approx. Chi-Square	835.542
	df	28
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 6 below found that Principal Capacity Building Practices measured using six (6) items in one (1) component can measure Principal Capacity Building Practices as much as 88.370%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018; Hoque et al., 2017).

Table 6 Total Variance Explained for Principal Capacity Building Practices

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	5.470	88.370	88.370

Thus, the researcher wants to know the selected items to measure the component. Table 7 below shows the distribution of items accepted to measure Principal Capacity Building Practices. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded because they do not contribute to the measurement of the construct (Chik & Abdullah, 2018).

Table 7 Factor Loading for One (1) Component Principal Capacity Building Practices

Component Matrix[a]	
Items	Component
PK1	0.873
PK2	0.782
PK3	0.813
PK4	0.869
PK5	0.789
PK6	0.846

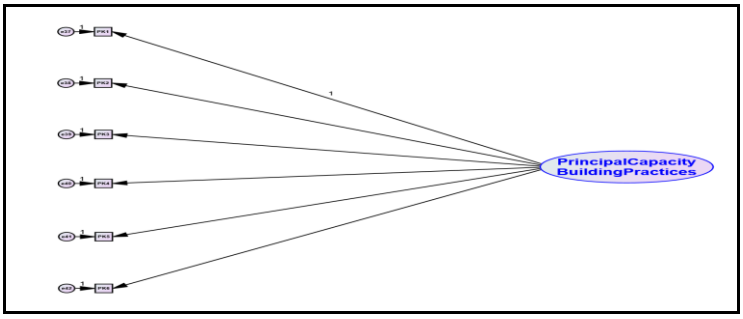

Figure 2. Position of Components and Items for Principal Capacity Building Practices (Before & After EFA)

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 8 below shows the Cronbach's Alpha value for each item in the Principal Capacity Building Practices that exceeds 0.7 and can be used in this study (Chik & Abdullah, 2018 and Hoque et al., 2017).

Table 8 Cronbach's Alpha Value for Each Item in the Principal Capacity Building Practices

Component	Number of Items	Cronbach's Alpha
1	6	0.933

Exploratory Factor Analysis (EFA) for Principal's 'Rabbani' Leadership Based on Group Resilience Building Practices

The Group Resilience Building Practices which uses as many as six (6) items and is labeled as KK1 to KK6. Next, the use of an interval scale for the measurement of items is between one (1) to 10. Principal Component Analysis (PCA) in the EFA process using varimax rotation for the Group Resilience Building Practices for the measurement of six (6) items. Table 9 below shows the Bartlett's test results that are significant for P values less than 0.05 ($P < 0.05$) and measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.924. The value obtained has exceeded the minimum limit value of 0.6 and the achievement of both of these tests (Bartlet's test is significant and KMO value > 0.6), showing that the data used in this study is appropriate according to the EFA procedure (Chik & Abdullah, 2018; Hoque et al., 2017 & Awang, 2012).

Table 9 KMO Values and Bartlet's Test for Group Resilience Building Practices

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.924
Bartlett's Test of Sphericity	Approx. Chi-Square	833.912
	df	28
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 10 below found that Group Resilience Building Practices measured using six (6) items in one (1) component can measure Group Resilience Building Practices as much as 72.544%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018; Hoque et al., 2017).

Table 10 Total Variance Explained for Group Resilience Building Practices

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	6.529	72.544	72.544

Thus, the researcher wants to know the selected items to measure the component. Table 11 below shows the distribution of items accepted to measure Group Resilience Building Practices. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded because they do not contribute to the measurement of the construct (Chik & Abdullah, 2018).

Table 11 Factor Loading for One (1) Component Group Resilience Building Practices

Component Matrix[a]	
Items	Component
KK1	0.823
KK2	0.812

KK3	0.850
KK4	0.862
KK5	0.869
KK6	0.884

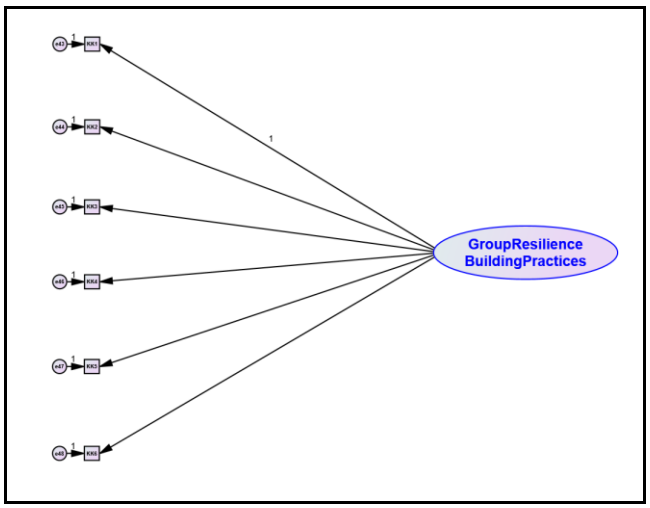

Figure 3. Position of Components and Items for Group Resilience Building Practices (Before & After EFA)

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 12 below shows the Cronbach's Alpha value for each item in the Group Resilience Building Practices that exceeds 0.7 and can be used in this study (Chik & Abdullah, 2018 and Hoque et al., 2017).

Table 12 Cronbach's Alpha Value for Each Item in Group Resilience Building Practices

Component	Number of Items	Cronbach's Alpha
1	6	0.752

Exploratory Factor Analysis (EFA) for Principal's 'Rabbani' Leadership Based on Practices for Building a Culture of Knowledge

The Practices for Building a Culture of Knowledge which uses as many as six (6) items and is labeled as BI1 to BI6. Next, the use of an interval scale for the measurement of items is between one (1) to 10. Principal Component Analysis (PCA) in the EFA process using varimax rotation for the Practices for Building a Culture of Knowledge for the measurement of six (6) items. Table 13 below shows the Bartlett's test results that are significant for P values less than 0.05 ($P < 0.05$) and measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.888. The value obtained has exceeded the minimum limit value of 0.6 and the achievement of both of these tests (Bartlet's test is significant and KMO value > 0.6), showing that the data used in this study is appropriate according to the EFA procedure (Chik & Abdullah, 2018; Hoque et al., 2017 & Awang, 2012).

Table 13 KMO Values and Bartlet's Test for Practices for Building a Culture of Knowledge

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.888
Bartlett's Test of Sphericity	Approx. Chi-Square	838.514
	df	28
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 14 below found that Practices for Building a Culture of Knowledge measured using six (6) items in one (1) component can measure Practices for Building a Culture of

Knowledge as much as 75.124%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018; Hoque et al., 2017).

Table 14 Total Variance Explained for Practices for Building a Culture of Knowledge

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.584	75.124	75.124

Thus, the researcher wants to know the selected items to measure the component. Table 15 below shows the distribution of items accepted to measure Practices for Building a Culture of Knowledge. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded because they do not contribute to the measurement of the construct.

Table 15 Factor Loading for One (1) Component Practices for Building a Culture of Knowledge

Component Matrix[a]	
Items	Component
BI1	0.873
BI2	0.866
BI3	0.815
BI4	0.847
BI5	0.808
BI6	0.845

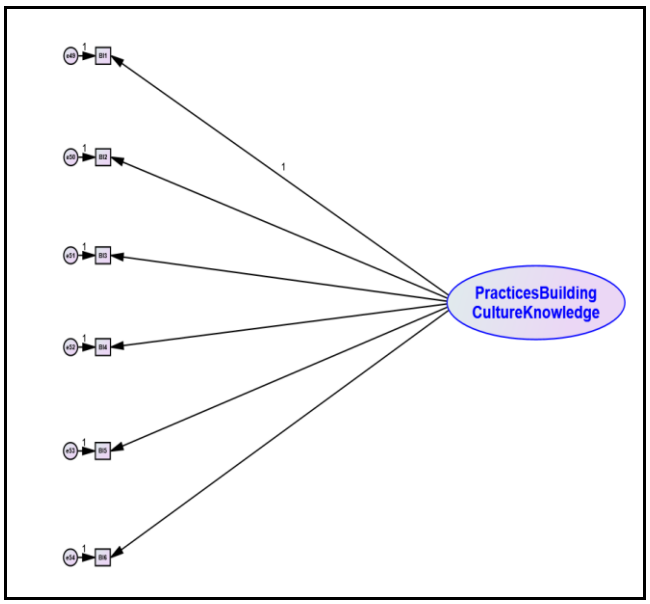

Figure 4. Position of Components and Items for Practices for Building a Culture of Knowledge (Before & After EFA)

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 16 below shows the Cronbach's Alpha value for each item in the Practices for Building a Culture of Knowledge that exceeds 0.7 and can be used in this study (Chik & Abdullah, 2018 and Hoque et al., 2017).

Table 16 Cronbach's Alpha Value for Each Item in the Practices for Building a Culture of Knowledge

Component	Number of Items	Cronbach's Alpha
1	6	0.895

Exploratory Factor Analysis (EFA) for Principal's 'Rabbani' Leadership Based on Teaching Process Development Practices

The Teaching Process Development Practices which uses as many as six (6) items and is labeled as PP1 to PP6. Next, the use of an interval scale for the measurement of items is between one (1) to 10. Principal Component Analysis (PCA) in the EFA process using varimax rotation for the Teaching Process Development Practices for the measurement of six (6) items. Table 17 below shows the Bartlett's test results that are significant for P values less than 0.05 ($P < 0.05$) and measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.792. The value obtained has exceeded the minimum limit value of 0.6 and the achievement of both of these tests (Bartlet's test is significant and KMO value > 0.6), showing that the data used in this study is appropriate according to the EFA procedure (Chik & Abdullah, 2018; Hoque et al., 2017 & Awang, 2012).

Table 17 KMO Values and Bartlet's Test for Practices for Building a Culture of Knowledge

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.872
Bartlett's Test of Sphericity	Approx. Chi-Square	851.618
	df	28
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 18 below found that Teaching Process Development Practices measured using six (6) items in one (1) component can measure Teaching Process Development Practices as much as 78.644%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018; Hoque et al., 2017).

Table 18 Total Variance Explained for Teaching Process Development Practices

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.231	78.644	78.644

Thus, the researcher wants to know the selected items to measure the component. Table 19 below shows the distribution of items accepted to measure Teaching Process Development Practices. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded because they do not contribute to the measurement of the construct.

Table 19 Factor Loading for One (1) Component Teaching Process Development Practices

Component Matrix[a]	
Items	Component
PP1	0.789
PP2	0.737
PP3	0.760
PP4	0.777
PP5	0.741
PP6	0.752

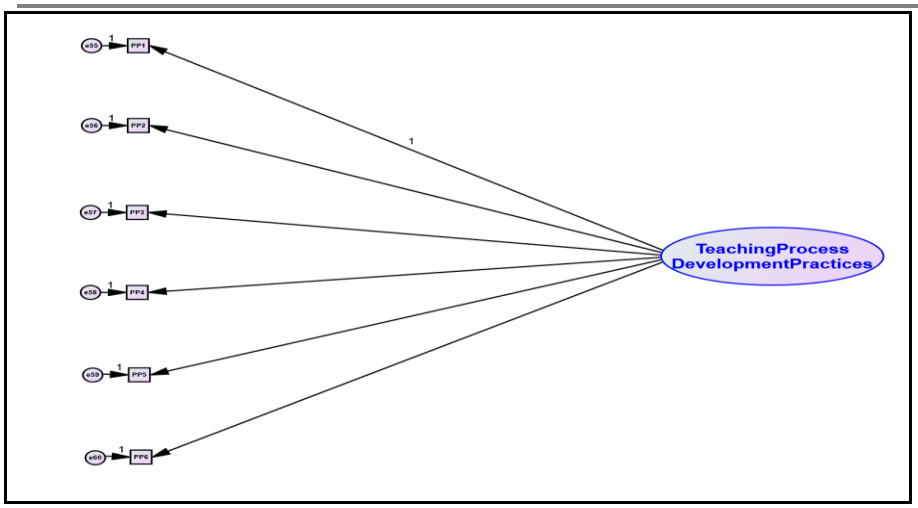

Figure 5. Position of Components and Items for Teaching Process Development Practices (Before & After EFA)

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 20 below shows the Cronbach's Alpha value for each item in the Teaching Process Development Practices that exceeds 0.7 and can be used in this study (Chik & Abdullah, 2018 and Hoque et al., 2017).

Table 20 Cronbach's Alpha Value for Each Item in the Teaching Process Development Practices

Component	Number of Items	Cronbach's Alpha
1	6	0.822

Exploratory Factor Analysis (EFA) for Early Climate Culture

Each item in the Early Climate Culture uses a total of 30 items. The EFA procedure using the Principal Component Analysis (PCA) method with Varimax Rotation was conducted on 30 items that measure the Early Climate Culture. The results of Table 21 below show that the value of Bartlet's Test is significant (P-Value < 0.05) and measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.814 which is above the minimum value of 0.6 (Chik & Abdullah, 2018; Hoque et al., 2017). Both of these achievements (Bartlet's Test significant, & KMO value>0.6) reflect the observed data is suitable for the next procedure in EFA (Chik & Abdullah, 2018; Hoque et al., 2017).

Table 21 KMO Values and Bartlet's Test for Early Climate Culture

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.814
Bartlett's Test of Sphericity	Approx. Chi-Square	1474.955
	df	435
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 22 below shows the total variance value estimated by the items used to measure the Early Climate Culture as much as 74.808%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018).

Table 22 Total Variance Explained for Early Climate Culture

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
1	7.668	25.559	25.559	6.046	20.153	20.153
2	3.763	12.543	38.103	4.697	15.658	35.811
3	2.012	6.705	74.808	2.699	8.997	74.808

Thus, the researcher wants to know the selected items to measure the component. Table 23 below shows the distribution of items accepted to measure Early Climate Culture. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded (Chik & Abdullah, 2018; Hoque et al., 2017).

Table 23 Factor Loading for Three (3) Component Early Climate Culture

	Component Matrix[a]		
Items	1	2	3
AS1			0.889
AS2			0.798
AS3			0.788
AS4			0.756
AS5			0.841
AS6			0.871
AS7			0.881
AS8			0.831
AS9			0.792
AS10			0.768
AM1	0.789		
AM2	0.745		
AM3	0.792		
AM4	0.732		
AM5	0.811		
AM6	0.832		
AM7	0.833		
AM8	0.846		
AM9	0.787		
AM10	0.791		
QW1		0.811	
QW2		0.777	
QW3		0.763	
QW4		0.734	
QW5		0.812	
QW6		0.842	
QW7		0.855	
QW8		0.871	
QW9		0.787	
QW10		0.763	

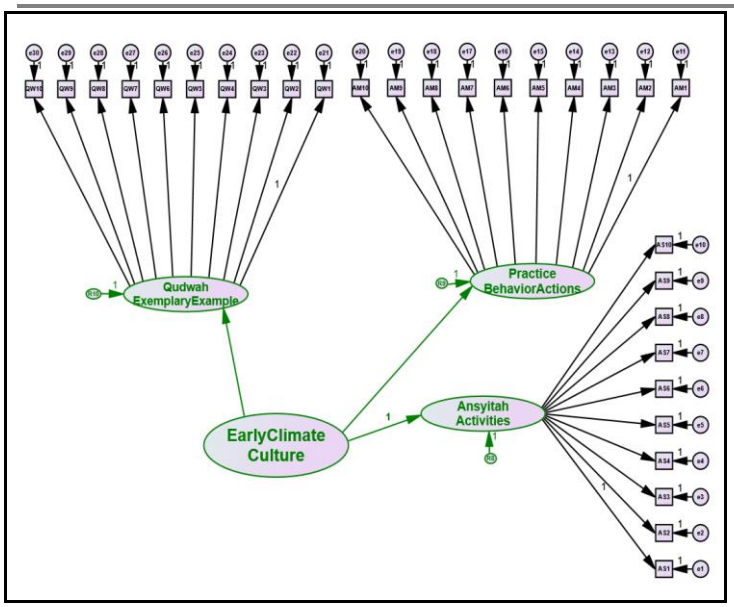

Figure 6. Position of Components and Items for Early Climate Culture (Before & After EFA)

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 24 below shows the Cronbach's Alpha value for each item in the Early Climate Culture that exceeds 0.7 and can be used in this study (Chik & Abdullah, 2018 and Hoque et al., 2017).

Table 24 Cronbach's Alpha Value for Each Item in the Early Climate Culture

Component	Number of Items	Cronbach's Alpha
1	10	0.835
2	10	0.819
3	10	0.872
Total	30	0.862

Exploratory Factor Analysis (EFA) for Student Personality Formation

Each item in the Student Personality Formation uses a total of 40 items. The EFA procedure using the Principal Component Analysis (PCA) method with Varimax Rotation was conducted on 40 items that measure the Student Personality Formation. The results of Table 25 below show that the value of Bartlet's Test is significant (P-Value < 0.05) and measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.834 which is above the minimum value of 0.6 (Chik & Abdullah, 2018; Hoque et al., 2017). Both of these achievements (Bartlet's Test significant, & KMO value>0.6) reflect the observed data is suitable for the next procedure in EFA (Chik & Abdullah, 2018; Hoque et al., 2017).

Table 25 KMO Values and Bartlet's Test for Student Personality Formation

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.834
Bartlett's Test of Sphericity	Approx. Chi-Square	2589.555
	df	780
	Sig.	0.000

Total Variance Explained (TVE) is important for researchers to know what percentage of the items used can measure a research construct. Reading from Table 26 below shows the total variance value estimated by the

items used to measure the Student Personality Formation as much as 83.474%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018).

Table 26 *Total Variance Explained for Student Personality Formation*

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
1	9.294	23.234	23.234	4.983	12.459	12.459
2	4.721	11.801	35.036	4.929	12.322	24.781
3	2.974	7.434	42.470	4.852	12.129	36.910
4	2.372	5.930	48.400	4.198	10.496	47.406
5	2.030	7.074	83.474	2.427	8.068	83.474

Thus, the researcher wants to know the selected items to measure the component. Table 27 below shows the distribution of items accepted to measure Student Personality Formation. All items have a factor loading value exceeding the minimum limit of 0.6 and items that are less than 0.6 should be discarded because they do not contribute to the measurement (Chik & Abdullah, 2018).

Table 27 Factor Loading for Five (5) Component Student Personality Formation

Items	Component Matrix				
	1	2	3	4	5
KS1		0.843			
KS2		0.818			
KS3		0.888			
KS4		0.836			
KS5		0.835			
KS6		0.847			
KS7		0.865			
KS8		0.872			
KS9		0.832			
KS10		0.868			
LR1					0.879
LR2					0.845
LR3					0.892
LR4					0.892
LR5					0.831
LR6					0.819
LS1	0.825				
LS2	0.812				
LS3	0.798				
LS4	0.779				
LS5	0.785				
LS6	0.812				
LB1				0.836	
LB2				0.794	
LB3				0.789	
LB4				0.778	
LB5				0.836	
LB6				0.815	
AP1			0.838		
AP2			0.845		

AP3			0.851		
AP4			0.867		
AP5			0.882		
AP6			0.799		
AP7			0.747		
AP8			0.834		
AP9			0.817		
AP10			0.812		
AP11			0.795		
AP12			0.787		

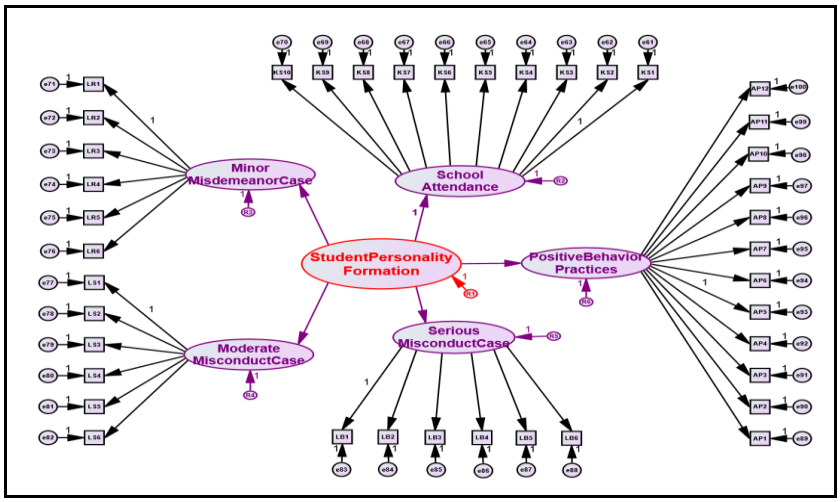

Figure 7. Position of Components and Items for Student Personality Formation (Before & After EFA)

Another piece of information that researchers need to report is the reliability value of the items that have been built to measure that construct. The measure of instrument reliability is estimated through Cronbach's Alpha value that exceeds the minimum limit of 0.7 to be adopted in the study. Table 28 below shows the Cronbach's Alpha value for each item in the Student Personality Formation that exceeds 0.7 and can be used in this study (Chik & Abdullah, 2018 and Hoque et al., 2017).

Table 28 Cronbach's Alpha Value for Each Item in the Student Personality Formation

Component	Number of Items	Cronbach's Alpha
1	10	0.842
2	6	0.822
3	6	0.772
4	6	0.788
5	12	0.767
Total	40	0.819

Overall Results of Exploratory Factor Analysis (EFA)

Based on the results of the EFA analysis on the questionnaire items, no items were excluded. Table 29 below shows the overall latest position of the items after the EFA analysis was carried out.

Table 29 Overall Exploratory Factor Analysis (EFA)

No	Constructs	Validity				Reliability
		Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO>0.6)	Bartlett's Test of Sphericity (Sig.< 0.05)	Total Variance Explained (>60%)	Items Factor Loading (>0.60)	Cronbach's Alpha (>0.70)
1	**Principal's 'Rabbani' Leadership**					
	a) Practice of Building Kindness	0.903	0.000	87.957	6 items > 0.60	0.927
	b) Principal Capacity Building Practices	0.943	0.000	88.370	6 items > 0.60	0.933
	c) Group Resilience Building Practices	0.924	0.000	72.544	6 items > 0.60	0.752
	d) Practices for Building a Culture of Knowledge	0.888	0.000	75.124	6 items > 0.60	0.895
	e) Teaching Process Development Practices	0.872	0.000	78.644	6 items > 0.60	0.822
2	Early Climate Culture	0.814	0.000	74.808	30 items > 0.60	0.862
3	Student Personality Formation	0.834	0.000	83.474	40 items > 0.60	0.819

CONCLUSION

Overall, the requirements of the items in each Principal's Instructional Leadership (based on Practice of Building Kindness, Principal Capacity Building Practices, Group Resilience Building Practices, Practices for Building a Culture of Knowledge, Teaching Process Development Practices), Early Climate Culture and Student Personality Formation selected secondary school, as a whole meet the achievement of Bartlet's Test (significant), KMO value (> 0.6), factor loading value exceeds the minimum limit of 0.6 and Cronbach's Alpha exceeds the minimum limit of 0.7 to be used in the study. This reflects that the items are not set aside and qualified to be used in this study (Chik & Abdullah, 2018 & Hoque et al., 2017). Figure 8 shows all the items in the study model after EFA.

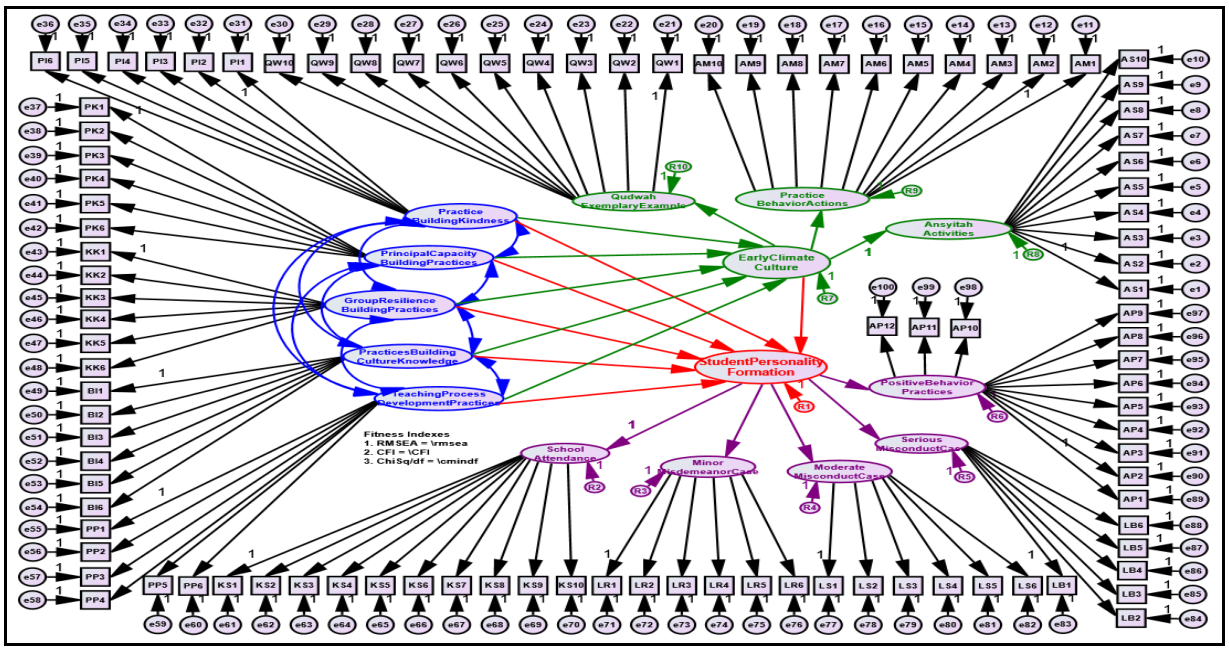

Figure 8. Overall Principal's 'Rabbani' Leadership, Early Climate Culture and Student Personality Formation

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