Research Instrument Development on Educational Leadership: A Confirmatory Factor Analysis

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Abstract — This paper describes the development and validation of scale to measure potentiality toward becoming a great educational leader. It employed a quantitative study that used Confirmatory Factor Analysis (CFA) in developing a scale to measure the potentiality of school heads toward becoming great educational leaders. It allows researchers to assess how well their measurement hypotheses match the data collected by respondents. Seven out of the 13 original factors and 20 out of the 56 initial set of items made the final cut after undergoing Confirmatory Factor Analysis (CFA) using responses to the scale administered to 595 public school heads in Region III in the Philippines. The Influence of Teachers (IT) factor edged all others by registering the highest Average Variance Extracted (AVE) at .677 and topmost composite reliability at .861. Data analysis resulted in the hypothesized hierarchical model transfiguring into two oblique models with the latter being adjudged as the best and preferred among the three competing models; albeit the goodness of fit is not acceptable statistically (p-value of Chi-square is less than .05), all the fit indices (e.g. RMSEA, SRMR, NFI, GFI, ECVI) are within the acceptable range. Implications for school management and leadership are discussed amid the plethora of concepts that abound in literature.

Keywords — CFA, great educational leader tool, development, scale

Introduction

The terms "leadership," "management," and "administration" are all used interchangeably but have distinct connotations depending on the period and place. The way they're used differs from country to country and from industry to industry. Pedagogical leadership emphasizes the significance of setting clear educational objectives, preparing the curriculum, and assessing instructors and teaching, while transformational leadership typically emphasizes inspiration and vision. A leader's primary focus is credited with improving student results, thus the emphasis is on teaching and learning, with their quality being improved as a result.

According to Di Giulio and Giulio (2015) who studied leadership theories and definitions. Achieving a common goal is defined as influencing people in new ways. Sorensen agreed, tracing the term's origins back to the 1300s. The most dangerous leadership myth, according to Bennis, is that leaders are genetically predisposed. A person is either charismatic or not. Di Giulio and

Giulio's research sheds light on whether leadership is a pre-programmed trait in the human DNA or something acquired and developed over time. To provide a physiological answer to the debate, medical doctors published an article in the American Journal of Pharmaceutical Education on the role of genetics in leadership. The American Association of Colleges of Pharmacy (2005) examined leadership heritability using twin studies to assess both genetic and environmental influences. As stated in the article, these studies used various methods such as questionnaires and mathematical models to assess twins' genetic and shared or unique environmental experiences.

In the Philippines, where education is highly regarded not only as an achievement but also as wealth (Doyle 2005), several studies on educational leadership have been explored primarily with the aim of proposing solutions to the problems and challenges being faced by school leaders. School leadership in the Philippines, Sutherland and Brooks (2013) explained, has historical, cultural and policy dynamics underpinnings. The influences of foreign colonizers shaped Philippine education in terms of system and policy. This in turn, according to the study, is translated on how school leaders manage schools. Kinship, for example, considered as the nucleus of the Filipino social organization, induces leadership practice in schools.

Despite the abundance of literature on educational leadership, the interest in educational leadership persists due to the same problematic situation in schools. Even the Department of Education (2015) agrees that school heads play a critical role in ensuring quality education in public schools. The Principal's Development Framework and Guidelines describe the factors that help and hinder principals. Aside from that, results of the Principals' Test in the last two years reflect an alarming situation regarding educational leadership in the country (D.M 11, Secs. 2016 & 2017), considering that most test-takers are already designated as school heads, officers-in-charge pending their permanent appointment as principals (D.M. 11, Sec. 2016).

The present study, however, centered on significant human experiences in the developmental stages of life, including childhood experiences as indicated by Premuzic, as well as leadership qualities and attributes, which were based on the grounded theory, as possible determinants of potentiality toward becoming a great educational leader. Accordingly, the conceptual paradigm of the present study may be described graphically as:
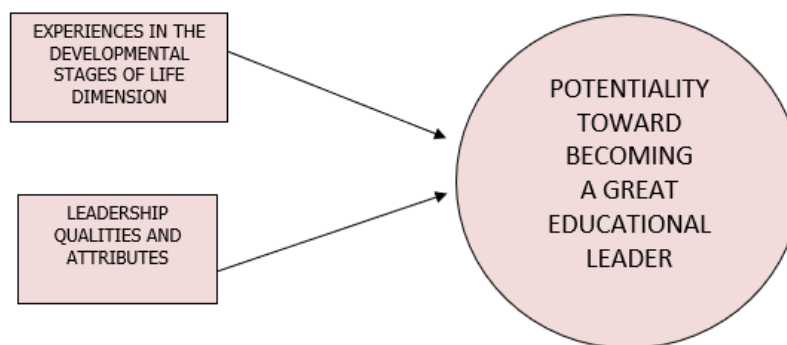

Figure 1. The Conceptual Paradigm: Hypothesized Model Scale to Measure Potentiality Toward Becoming a Great Educational Leader

Confirmatory factor analysis was used in this study. According to Malo (2016), CFA requires a theory. A theory is a set of causal relationships that explain a phenomenon (Statistics Solutions, 2013). Malo adds that the scale can be new or old. Clearly, this study met both criteria. While Exploratory Factor Analysis is widely used in the literature, Confirmatory Factor Analysis appears to be a rare research method.

The present study is, nevertheless, worth pursuing because of the following reasons, namely: (1) the continuing problematic situation in Philippine education with regard to the lack of great educational leaders; (2) the apparent scarcity on the use of CFA as a research method in scale development; and (3) the novelty of the present study being anchored on a previous study which generated a grounded theory. Undoubtedly, these underlying reasons point to the gap in knowledge that this study humbly aims to address and the contribution that it may offer to the body of knowledge on educational leadership and future research undertakings.

Method

Anchored on the previous study which generated a grounded theory, this is a quantitative study that used Confirmatory Factor Analysis in developing a scale to measure the potentiality of school heads toward becoming great educational leaders. A scale's internal structure can be evaluated using CFA, according to Furr (2013). It allows researchers to assess how well their measurement hypotheses match the data collected by respondents. To test measurement hypotheses, three key sets of results (parameter estimates, fit indices, and modification indices) are examined.

Preliminary Steps

Based on the current grounded theory, a 55-item scale was created for this investigation. Option one (1) represented the "very untrue of me" category while Option five (5) alluded to the "very true of me" category. Scale 6 demonstrated stronger discrimination and reliability than scale 5 (Liart) (Chomeya, 2010). The initial questionnaire was content validated by five (5) specialists in instrument development and validation. Each expert was asked to score each item on a scale of one (1) for "not manifestive" to four (4) for "highly manifestive".

The respondents for this study consisted of 595 public school heads from two (2) provincial Schools Division Offices (SDOs) and one city Schools Division Office (SDO) under the Department of Education Regional Office III. The sample size was collected through random sampling. The questionnaire was pilot tested to a group of 46 school heads coming from 14 out of the 20 schools division offices (SDOs) in Region III.

Coordination with concerned authorities was made through formal communication in order to secure their permission in administering the instrument. The objective of the study was

explained to the respondents prior to the administration of the instrument. Their right to withdraw from the study was also discussed as well as the provision of confidentiality. Respondents who opted to answer the questionnaire online were provided a supplementary note regarding this clause.

The data were then prepared for statistical analysis. For reference, the 13 factors were coded as follows: FU (Family Upbringing); AF (Academic Foundation); CI (Church Involvement); CF (College Formation); JT (Joy in Teaching); AL (Administrative and Leadership Preparation); FG (Faith in God); SF (Support of Family); V (Values); PW (Passion for Work); LR (Love for Reading); CL (Continuous Learning); and IT (Influence of Teachers). The overall construct was coded PGEL (Potentiality towards becoming a Great Educational Leader).

Analysis

The analysis involves a four-phase process with the statistical software performing the following functions: (1) computes the collected data to get the items' actual variances and covariances; (2) uses the item's actual variances and covariances to estimate item parameters and to gauge the model's accuracy; (3) uses the estimated parameters to create "implied" item variances and covariances; and (4) generates information reflecting the overall adequacy of the hypothesized model.

Covariance measures the relationship between two variables/factors. It depicts how two variables/constructs fluctuate together (Hall, 2018). The model analysis data and scale responses assist measure the model's accuracy. The software used the item's actual variances and covariances to estimate the researcher's parameters. The software calculated two items' factor loadings based on their connection. For factor loadings, inter-factor correlations, and error variance estimation. The software then computed "implied" item variances and covariances. Because the study's hypothesized model was faulty, the inferred values were probably off. The software generated data on the model's overall appropriateness in step 4. As shown by Model 1, the predicted measuring model could not adequately account for the scale's data. They discussed how to alter the suggested measuring methodology.

The Chi-square was computed to indicate model mis-fit. Small numbers suggest model support or excellent fit, whereas big values indicate model opposition or poor fit. Because sample size influences Chi-square (big samples generate large Chi-square values), different fit indices were examined to improve outcomes. According to Stapleton (1997), the Chi-square statistic is very sensitive to sample size, making it difficult to determine if the Chi-square result is due to poor model fit or sample size.

The following fit indices were used to evaluate the acceptance or rejection of the measurement models in the present study: Root Mean Square of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), Normed Fit Index (NFI), Goodness of Fit Index (GFI), Adjusted Goodness of Fit statistic (AGFI), Comparative Fit Index (CFI), Akaike

Information Criterion (AIC), Consistent AIC (CAIC), and the Expected Cross-Validation Index (ECVI). (For the range of the acceptability of each of the said fit indices, please refer to the aforementioned sources on fit indices. As an example, a discussion on model fit indices by Hooper, Coughlan, & Mullen).

After examining the overall fit of the hypothesized measurement model, parameter estimates were examined, particularly the items' factor loadings, inter-factor associations, and error variances. These parameters were vital in evaluating the scale's factorial structure and psychometric properties.

The following statistical tools were used to validate and verify the results: AVE = % of variance explained by construct/latent variable (2) Composite Reliability and Cronbach's Alpha. On the composite reliability rule and Cronbach's alpha, Kock says, Composite reliability and Cronbach's alpha should both be 0.7 or higher (Fornell & Larcker; Nunnaly; Nunnally & Bernstein, cited in Kock). This criterion is relaxed to one of the two coefficients being 0.7 or higher. The composite reliability coefficient usually wins (Fornell & Larcker, cited in Kock). The relaxed version is 0.6. Kock cites Nunnally & Bernstein. No indicator loads strongly on a latent variable, so it doesn't meet any of these criteria. These indicators must go" (p.1).

Model Modification and Re-Analysis (if necessary)

The researcher felt it was important to alter and re-analyze the model due to its poor fit indices, weak and non-significant factor loadings, and low validity and reliability. In CFA, more than one model may properly represent the data, and fit indices should be used to compare the models' fit. The researcher used the software to examine the measurement model's modification indices. Each modification index corresponded to a parameter in a measurement model that was zeroed. The magnitude of the modification index represented the advantage of changing the relevant parameter, thus improving the model's overall fit. Then the program re-analyzed. This resulted in new models with updated fit indices and parameter estimations, among other things.

Comparing Models

With the fit indices of the hypothesized measurement model, referred to in this study as Model 1, landing outside the acceptable range, the said model was modified and re-analyzed as described in the previous CFA step. It is important to note that in interpreting the findings of CFA analysis, more than one model can be determined that will adequately fit the data (Biddle & Marlin; Thompson & Borrello, cited in Stapleton, 1997) and other ways can be evaluated in order to improve the model.

Model 2 was evaluated as a replacement for Model 1. Model 2 has issues with fit indices, validity, and reliability. Because the two CFA models (Models 1 and 2) were deemed

unsatisfactory, a third model (Model 3) was developed, which was shown to have the best match to the observed data. The computations and analysis were done using SPSS 23.

Results

This chapter presents the results of the study following the steps in conducting Confirmatory Factor Analysis: (1) Specification of Measurement Model; (2) Data Analysis; (3) Model Modification and Re-Analysis; (4) Comparing Models; and (5) Interpreting and Reporting Output.

Results of Confirmatory Factor Analysis

Statistical tools indicated that half of Model 1's fit indices were beyond the allowed range. Model 1's concept validity (convergent and discriminant) proved troublesome. Many products have factor loadings below the.5 criterion. (See Table 1 Column 2 for Model 1 fit indices and Appendix E for Model 1 statistical software analysis outputs.) Because the described predicted measurement model was troublesome, Model 2 was evaluated as an alternate measuring model. Model 2 (oblique): There are 13 variables, and each one causes a collection of things. Oblique models employ double-headed arrows to show factor association. However, Model 2 was still problematic in terms of fit indices, validity, and reliability. (See Column 3 in Table 1 for the fit indices of Model 2 and Appendix F for the statistical software analysis outputs of Model 2). Considering that the two measurement models (Models 1 and 2) were problematic, an improved model (called Model 3) was proposed. This oblique model is composed of seven (7) factors which are assumed to be correlated and each factor causes the corresponding set of items (See Appendix G for the statistical software outputs of Model 3). After evaluating the three models, Model 3 was chosen as the best match to the observed data. Thus, the present study's results will be presented and interpreted using this model.

Results of Goodness-of-Fit and Fit Indices

As can be gleaned from the results, Model 3 emerged as the best and preferred model because all the fit indices (e.g., GFI, RMSEA, SRMR) are within the acceptable range although the goodness of fit is not acceptable statistically (p-value of Chi-square is less than .05).

Table 1 presents the goodness-of-fit and fit indices of the three models which shows that Model 3 emerged as the best among the three competing models because of the strong statistical evidence that the estimates are acceptable.

Table 1. Goodness of Fit and Fit Indices

Goodness-of- Fit and Fit Indices	Model 1	Model 2	Model 3	Remarks
Chi-square P value	3273.36 0.000	2933.396 0.000	396.888 0.000	Model 3 has the smallest chi-square; hence, it is better than Models 1 and 2
Chisquare/df	2.225	2.086	2.646	All three models within the acceptable fit range.
RMSEA	.047	.048	.055	Model 3 within the acceptable fit range.
SRMR	.062	.055	.042	Model 3 is the best among the three models.
NFI	.720	.726	.922	Model 3 is the best among the three models.
GFI	.810	.831	.934	Model 3 is the best among the three models.
AGFI	.794	.809	.908	Model 3 is the best among the three models.
CFI	.822	.849	.949	Model 3 is the best among the three models.
AIC	3523.36	3313.396	516.888	Model 3 is the best among the three models.
CAIC	4186.87	4321.935	835.374	Model 3 is the best among the three models.
ECVI	6.429	6.046	.943	Model 3 is the best among the three models.

Legend: RMSEA= Root mean square error of approximation; SMSR= Standardized Root mean square residual; NFI= Normal Fit Index; GFI = Goodness of Fit Index; AGFI = Adjusted Goodness of Fit Index; CFI= Comparative Fit Index; AIC= Akaike Information Criterion; CAIC= Consistent AIC; ECVI= Expected Cross Validation Index.

Figure 3 illustrates Model 3 which emerged as the best and preferred measurement model composed of seven (7) factors with each factor consisting of a set of items.
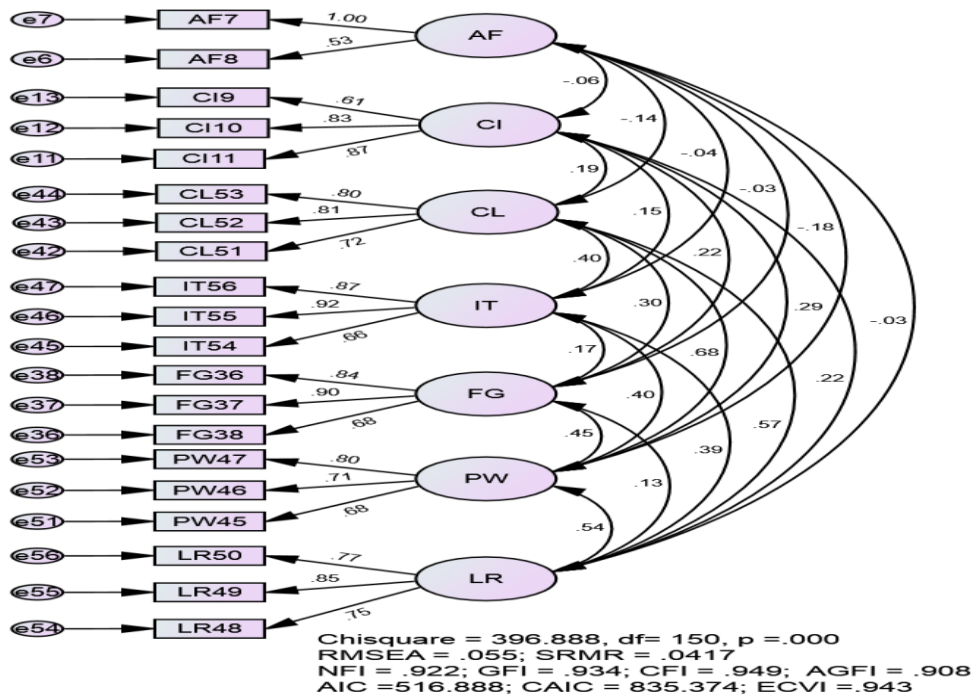
Legend: AF (Academic Foundation); CI (Church Involvement); CL (Continuous Learning);

IT (Influence of Teachers); (FG) Faith in God; (PW) Passion for Work; LR (Love for Reading)

Figure 3. Measurement Model 3

Results of Convergent and Reliability Statistics

It can be deduced from Table 2 that all the AVE's of the constructs/factors are above 0.5, hence the scale has good convergent validity. All the composite reliability values are all above .7 suggesting that the scale has internal consistency.

Table 2. Convergent Validity and Reliability Statistics

Constructs/Items	Item Loadings	Average Variance Extracted	Composite Reliability
Academic Foundation (AF)		.642	.766
1. I was not 'conscious' of academic awards when I was in elementary and high school.	0.532		
2. I preferred to be just in the corner with no active involvement in extra or co-curricular activities when I was in elementary and high school.	1.000		

Constructs/Items	Item Loadings	Average Variance Extracted	Composite Reliability
Church Involvement (CI)		.605	.821
3. My family exposed me to parish/Church activities, which characterized my very active parish/Church life at a young age.	0.871		
4. I joined in parish/Church organizations and served in simple acts such as cleaning the chapel or assisting in the Eucharistic celebrations/worship service during my childhood and adolescence.	0.829		
5. I was a regular churchgoer when I was growing up.	0.611		
Faith in God (FG)		.662	.853
6. I have a personal relationship with God.	0.682		
7. I lift up and attribute everything to God.	0.901		
8. God is at the center of my life.	0.841		
Continuous Learning (CL)		.605	.821
9. I continue to seek out for new knowledge.	0.716		
10. I view learning as a continuous process.	0.813		
11. New learning excites me.	0.801		
Influence of Teachers (IT)		.677	.861
12. I had (a) teacher/s who greatly influenced my life.	0.657		
13. My former teacher/s inspired me.	0.917		
14. I was motivated by my former teachers.	0.872		
Passion for work (PW)		.540	.778

15. I see to it that I always exert my best effort in any work or project.	0.682		
16. I got interested in managing schools because I have a passion for education.	0.714		
17. I have a passion for excellence.	0.805		
Love for Reading (LR)		.627	.834
18. I love reading books and content materials.	0.754		
19. The books that I read help me in managing my school.	0.850		
20. I regularly read books on management and other fields.	0.768		

Results of Discriminant Validity Statistics

Table 3 shows the discriminant validity statistics. Obviously, the scale has discriminant validity since the diagonal elements are all larger than the off-diagonal elements.

Table 3. Discriminant Validity Statistics

	AF	CI	FG	CL	IT	PW	LR
AF	0.801						
CI	-0.061	0.779					
FG	-0.029	0.221***	0.814				
CL	-0.144**	0.194***	0.298***	0.778			
IT	-0.04	0.154**	0.170***	0.404***	0.823		
PW	-0.181***	0.286***	0.455***	0.675***	0.404***	0.735	
LR	-0.03	0.217***	0.132**	0.575***	0.385***	0.535***	0.792

Note: Diagonal elements are the square root of AVE between constructs.

For discriminant validity, the diagonal elements should be larger than the off-diagonal elements.

In conclusion, after having satisfied all the foregoing validity and reliability indicators, it could be said that Model 3, the emerged scale for measuring the potentiality of school heads toward becoming great educational leaders, is deemed valid and reliable.

The Validated Scale

Confirmatory Factor Analysis identified Measurement Model 3 as the best and preferable measurement model for designing a scale to assess school heads' ability to be outstanding educational leaders. The first five (5) items are from Measurement Model 3, which were taken from statements in the categories of the grounded theory that addressed the prior study's first aim,

which related to the participant-great leaders' childhood experiences. The remaining 15 items are from the other five (5) factors in the CFA model which were taken from the statements in the categories of the said theory that answered the second objective of the study, which pertained to the participants' insights as to what other reasons to which they attribute their being acknowledged as great educational leaders.

VALIDATED SCALE TO MEASURE POTENTIALITY TOWARD BECOMING A GREAT EDUCATIONAL LEADER

	INDICATORS	1	2	3	4	5	6
1	I preferred to be just in the corner with no active involvement in extra or co-curricular activities when I was in elementary and high school.						
2	I was not 'conscious' of academic awards when I was in elementary and high school.						
3	I was a regular Churchgoer when I was growing up.						
4	I joined in parish/Church organizations and served in simple acts such as cleaning the chapel or assisting in the Eucharistic celebrations/worship service during my childhood and adolescence.						
5	My family exposed me to parish/Church activities, which characterized my very active parish/Church life at a young age.						
6	God is at the center of my life.						
7	I lift up and attribute everything to God.						
8	I have a personal relationship with God.						
9	I see to it that I always exert my best effort in any work or project.						
10	I got interested in managing schools because I have a passion for education.						
11	I have a passion for excellence.						
12	I love reading books and content materials.						
13	The books that I read help me in managing my school.						
14	I regularly read books on management and other fields.						
15	I continue to seek out for new knowledge.						
16	I view learning as a continuous process.						
17	New learning excites me.						
18	I had (a) teacher/s who greatly influenced my life.						
19	My former teacher/s inspired me.						
20	I was motivated by my former teachers.						

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Discussion

The results show that from the original 13 factors and 56 items in the scale, seven (7) factors consisting of 20 items, namely: (1) Academic Foundation; (2) Church Involvement; (3) Continuous Learning; (4) Influenced of Teachers; (5) Faith in God; (6) Passion for Work; and (7) Love for Reading were confirmed after undergoing Confirmatory Factor Analysis. The statistical outcome, illustrated in the measurement model, referred to in this study as Model 3, implies that the aforementioned factors and items met the optimal combination of the following: Goodness-of-fit and fit indices, Convergent Validity (e.g., factor loading, AVE), Discriminant Validity and Reliability.

This goal was not achieved by the previous two models. CFA refines the model by removing components. An AVE of.50, for example, increases convergent validity. It is not necessary to delete items with low factor loadings if the AVE is already.50 (Stapleton, 1997). The six (6) components that were deleted were: (1) Family Upbringing, (2) College Formation, (3) Joy in Teaching, (4) Academic and Leadership Preparation, (5) Family Support, and (6) Values. They are thus statistically irrelevant to the scale's growth. Except for Values, the study's rejected factors and items mirrored significant life experiences of outstanding educational leaders at various developmental stages. On the contrary, the confirmed factors and items that surfaced from the CFA were from the emergent categories in the same theory which asked for the insights of the participant-great leaders, the other research objective, as to what other reasons aside from experiences (which turned out to be leadership qualities and attributes) contribute to their being acknowledged as great educational leaders. The CFA findings may undermine the dominant grounded theory. To test the idea, full structural equation modelling is required (SEM). Rather, it focuses on the idea's potentiality.

Among the items under Academic Foundation (AF), item 7, which is the "preference of the respondents to take no involvement in extra and co-curricular activities when they were in elementary and high school", exhibited the highest loading of 1.000 not only inside this factor but also in the entire measurement model. On the contrary, according to Billah (2017) and prior research by Daniyal, Nawaz, Hassan and Mubeen (2012), extracurricular and co-curricular activities enhance a child's academic education. Enrichment programs are essential to a student's academic growth and future. As indicated earlier, the scale under study is based on an existing idea. A complete SEM investigation will establish the claim's validity.

The second factor that was confirmed by CFA in the scale under study is Church Involvement (CI). "Exposure to parish/Church activities at a young age" scored the highest loading in this cluster followed by "membership in organizations" and "regular attendance to Church". As a result, this component has a substantial impact on the scale, implying that this particular early life experience is a predictor of the respondent-school leaders' ability to become excellent educational leaders. The impact of the Church on the overall development of adolescents and

ultimately on their destiny cannot be understated. Clarke (2014) argued the youth are the Church's future.

The Faith in God (FG) factor ranks second among the verified seven (7) variables in terms of composite dependability and second in terms of Average Variance Extracted. It assesses how closely a group of latent construct indicators/items measure a construct/factor, whereas the AVE measures the degree of shared variation among latent construct indicators/items (Hair, Black, Bain, Anderson, & Tatham, 1998).

For the statistical measurements of the FG factor, this finding suggests that "having a personal relationship with God", "lifting up and attributing everything to God", and "God being at the center of one's life" are internally consistent. That the respondents' responses on this factor and items are good measures for the scale. As part of his research on educational leadership, Robertson (2012) emphasized the role of spirituality. Then, when basic needs are met, most people identify as religious or spiritual, and many faiths ask people to respect and care for all life (p. 4).

Another component, Continuous Learning (CL), was validated as a good factor to fulfill the scale's aims. The items "seeking for new knowledge", "viewing learning as a continuous process", and "learning as exciting" all satisfied the item loading requirements. So, this component and its items contribute to the scale and measurement model's overall fitness.Leadership is a lifetime process, according to Bennis and Nanus (cited in Robbins, 2013). It cited Schlechty's study, which said that school principals must continuously improve themselves in order to help their teachers grow. A strong school leader's desire to learn is stressed by Senge (Robbins, 2013).

The scale's validity is determined by the Influence of Teachers (IT) component and its components. This component appears to be a great predictor of participant-school heads' capacity to be extraordinary educators. The items "having inspiring former teachers", "teachers who were motivational" and "teachers who influenced one's life" all point to the role of teachers in shaping the lives of their students and the legacy that they leave that transcends the four walls of the classroom. These phrases are best captured in the famous quote by Henry Adams, "A teacher affects eternity; he can never tell where his influence stops" (Albom, 1997,p.23).

Passion for Work (PW) is a legitimate factor for the scale, according to CFA. This cluster includes "giving one's all to any task or project," "passion for education," and "passion for excellence." The later item earned the highest in terms of item loading, meaning it matched the greatest criteria. What constitutes an effective school leader? asked Sutcliffe (2013). The interviews revealed a strong desire for education. This refers to a passion for children and teaching. A school leader's passion drives them to achieve (McConnell, 2016). The author defined passion as a powerful emotion felt when performing important work that inspires others.

The final legitimate component for the scale, according to CFA, is Love for Reading (LR). The items "reading books help in managing the school," "regularly reading books on management and other fields," and "the love for reading books and content materials" are all strong markers of

this characteristic. Thus, the factor and items are important in the scale's validation. Many school leaders claim that the authors and books they read have affected their leadership styles and management techniques. According to Rosenthal (2017), a successful school leader is creative. Building a "library of career," or reading leadership and management literature, according to the author, fosters innovation.

Overall, the seven (7) confirmed factors and 20 items were proven to be well-defined and internally consistent measures of the scale. With the use of CFA, the study generated three measurement models where Model 3 emerged as the best and preferred model in terms Goodness-of-Fit, fit indices, factor loadings, validity and reliability. Evidently, this model is valid and reliable.

The researcher suggests CFA in another sample to support the generalizability of the instrument. The study's grounded theory may be refined and revalidated using additional methods such as exploratory factor analysis or qualitative analysis. To identify the interrelationships between and among the variables of the theory, a complete Structural Equation Modelling (SEM) is advised. Finally, educational institutions, especially the Department of Education, can use the validated scale to assess and improve their human resource and development initiatives. Potentiality might be connected to RSPI (Recruitment, Selection, Placement, and Induction) and (2) L and D. (Learning and Development). Likewise, researchers may learn about using Confirmatory Factor Analysis as a research method in instrument creation, including its benefits and shortcomings. Finally, the study's findings will most benefit school leaders and teachers aspiring to become school leaders. That they are making a difference in the lives of students and society is the hallmark of potentiality, regardless of whether or not they are born leaders or if they become leaders through time and experience.

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