

AN EXPLORATORY FACTOR ANALYSIS (EFA) IN DETERMINING DIMENSIONS OF SCHOOL CULTURE IN MORALITY OF SECONDARY SCHOOL STUDENTS SOUTH-WESTERN NIGERIA

Adam Adesina Muhammed-Lawal¹, Adnan Abd Rashid²

Department of Curriculum and Instruction, Faculty of Education, International Islamic University Malaysia (IIUM), MALAYSIA.

¹adam_in_cairo@yahoo.com, ²adnan@iium.edu.my

ABSTRACT

Students do not develop in isolation because they need to mingle with their colleagues in order to develop physically, academically and morally; which will assist the students in all spheres of life. Few studies however have been conducted to empirically examine the underlining factors determining the influence of School culture on the morality of secondary school students in southwestern part of Nigeria. The primary objective of this study was to validate the major components of School culture by using explanatory factor analysis (EFA). The cross sectional research design was utilized to answer the research questions. A sample comprised 365 respondents was selected from the population of secondary school students in southwestern Nigeria to answer a self-developed questionnaire. The study validates the factors structure of School culture using SPSS version 24. From the Exploratory Factor Analysis (EFA), the findings from the study have successfully identified four factors with (52%) percentage of total variance explained.

Keywords: School Culture, Morality, Student.

INTRODUCTION

Students' interactions with their family at home, schoolmates, community and society at large play vital role in nurturing students morality. Students spend an incredible amount of time in school to a large extent with their teachers and co-classmates. School culture has a great impact on students' moral values development. School culture is the unwritten rules and assumptions, the combination of rituals and traditions, the collection of symbols and artifacts, the language that is of the population of the school that the students must understand. Students develop confidence and a more positive attitude in an optimistic school culture. However, in a contaminated school culture, students start to improve negative behavioral attitude (Maila Dinia H. R; Nur Surayyah M. A. & Husni R. 2012). Consequently, the study of Benson (2007) states that school moral is the ethnical training given to students directly or indirectly during their school years which focuses the child's training or talent on how to build him or herself and not following the pure cultural ethics of where he or she comes from. School moral can also be termed "School Discipline" or "School Culture". According to, Adejuyigbe, (2009) argue that to uphold and enforced the existing policy rules and regulation in the school, the school ought to make positive that the school rules are strictly followed such that any student that is found guilty will be given proper adequate care will be given to that child thereby if it is constantly repeated that child will be punished because he or she has not heed to the advice given to him or her and others will learn from them. For example, rules guiding fighting, examination mal-practices, lack of respect to the teacher, violating school rules and regulation and the likes need to be efficient: Nevertheless, school rules and regulations ought not to be ambiguous to the students so that they can behave properly, practice the culture of politeness and respect in the school premises. They must be basically

defined and easy to interpret. Therefore, Mclean and Errold (1992) illuminate that morality is to conserve standard order in society, to train how to respect others, tolerant, obedient and to regard them “holistically”.

Secondary Schools Education System in Nigeria: Goals and Objectives

According to Thungu, J. (2008), the term ‘education’ in its literal meaning is derived from two Latin words, ‘educare’ which means to rear, to bring up or to nourish a child and ‘educere’ which means to bring forth, to lead, to draw out or to train. Hereafter, education is one of the very prominent aspects in any nation for progress and the most significant social activity in any society. Thus, the aim of education is to spread a common set of beliefs, morals, norms, skills and understanding from the educationalists to the young one (Noraini & Langgulung, 2008). To encourage moral upright and goodness is the main purpose of education in any society.

Consequently, primary education in Nigeria begins at around the age of 6 for the majority of Nigerians. Students spend six years in primary school and graduate with a school-leaving certificate which is the (SLC). Subjects taught at the primary level include mathematics, English language, Christian Religious Knowledge, Islamic knowledge studies, science, cultural and creative art, pre-vocational studies, moral and physical education and one of the three main indigenous languages and cultures, Hausa-Fulani, Yoruba, and Igbo. That insinuates that religious knowledge that cater for teaching of development of individual to be benefits and useful for both World emphasizes in primary education curriculum that will develop a child’s moral attitude and dignity of the nation.

Right to education in Nigeria requires that student should be given the opportunity necessary for the acquisition of the knowledge, skills, attitudes and values which will enable them to lead happy and productive lives as individuals, and discharge their social duties for the betterment of life in the society (Ofoha et al 2009). Realized the effectiveness of education as a powerful instrument for national progress and development, Nigeria adjusted her educational philosophy and methodology to march the ideals and challenges of changing economic and social structure of modern society (National Policy on Education 1981, revised 2004). Education is known to be playing a very important role to develop the civilization of the nation. It also functions as a medium to structure the culture, identity, of individuals and society. Hence, it can be an important element in the process of one’s growth and maturity.

According to the National Policy on Education 1981; 2004, the broad aims and objectives of secondary education in Nigerian educational system are to prepare for useful living within the society and preparation for higher education. It is at this level that students will prepare themselves for the next level of education. Education is described as the totality of life experiences that people acquire, and which enables them to cope with and derive satisfaction from living in the world (Babafemi, 2007). This is said to enable people achieve social competence and optimum individual development. It is on this premise that it is believed that the quality of a nation’s education is proportional to the level of its prosperity.

THEORETICAL FRAMEWORK OF THE STUDY

This present study was directed by Kolberg’s theory of Moral Standard Development which deals with that youths who tend to integrate moral thought and reasoning from those who are older and who appear to have touched a stage above them precisely the youths (Simanowitz & Pearce, 2003). The theory, consequently, enlightens in what way significant it is for instructor or educator to impart moral values or good manners in behavior to the young one (11-18years Old) who, in the context of Nigeria society, are in secondary school level of education (Junior secondary school I, to Senior Secondary School 3). This theory is favored

by Harish (2011); Raley & Preyer (2010); and Winch & Gingel (2004) who claims that elimination of Moral Education in secondary school curriculum which will assist the students, therefore a big influence and support towards moral decadence collapse in the society. Geiger & Turiel in Tuckman & Monetti (2011) have it that students who score low in moral judgment are probable to display troublesome behavior in the school surroundings. This can cause disciplinary cases that may interfere with students' and the counselling department to trash it out in the student performance and behavior. With this regard, schools need to encourage and motivate moral growth and embolden moral value and standard in the students. This is as significant as having students develop and progress in other aspects of learning.

OBJECTIVES OF THE STUDY

The main objective of the present paper is to explore:

1. The different dimensional factors of School culture (SC).
2. The dominant factors and loadings of the items in exploring the School culture (SC).

RESEARCH QUESTIONS

The following are the questions that the present paper attempts to answer:

1. What are the different dimensional factors of School culture (SC)?
2. What are the dominant factors and loadings of the items in exploring the School culture (SC)?

METHODOLOGY OF THE STUDY

The population of the study was secondary school students south-western part of Nigeria. The total numbers of 365 students were selected as a sample from the total population. The study validates the factors structure of School culture using SPSS version 24. The exploratory factor analysis (EFA) was employed for data analysis in order to determine the numbers of factors or components of School culture. From the Exploratory Factor Analysis (EFA), the findings from screen plot have identified four factors while four (4) factors also have been identified based on the initial eigenvalues and percentage variance of factors that orthogonally rotated (52%). Both factors from screen plot and factors that orthogonally rotated were in line with the theoretical basis of this paper. The findings from this study would provide insightful information to the curriculum designers and teacher also ministry of education in Nigeria.

The study used a 13-items questionnaire containing statement related to influence of school culture in morality of secondary school students. The questionnaire was designed by the researcher with the critical assistance of the five experts. Face validation of the instrument was presented to check grammar, sentences not too short and not too long. Also, Content validation from the five experts (lecturers) at the institute of education, IIUM in order to determine the ambiguities of the words embodied in the instrument. These lecturers vetted the items in terms of sentence structure and adequacy of the instruments was modified to suit the study. Instrument reliability established using Crobach's alpha coefficient was .768, with the total number of thirteen (13) items. items of questionnaire required the students to respond to 5 point Likert scale, Never, Rarely, Sometimes, often and Frequently, was adopted for the responses on the questionnaire.

The primary objective of the study was to validate the factors structure of School culture (SC) among secondary school students' south-western part of Nigeria. Therefore, factor analysis, specifically exploratory factor analysis (EFA), was performed using the statistical software SPSS (Version 24) The purpose of factor analysis according to the statistical literature is to reduce the data into controllable size (Kim & Mueller, 1978; & Hair, J. F., Black, W. C., Babin, J. B. & Anderson, R. E. 2009), In order to determine the actual number of items for each dimension, Kaiser's rule was used whereby the minimum eigenvalue of 1.0 was determined. Likewise, correlation matrix co-efficient must be .3 and this study correlation above .3 also communalities value must be from 0.3 and above (Pallant, 2011).

RESULTS

The instrument reliability is said to be acceptable with Cronbach's alpha of .768. Similarly, the findings from the construct validity were relevant since that the total variance explained of items in the factor was more than 40%. It has been shown from existing literature that when variance explained of items in each factor exceeds 40%, it means that the construct was relevant and valid to be considered for a particular study.

The Bartlett's Test of Sphericity (BST) was used as the measurement for using factor analysis. In so doing, Kaiser Meyer Olkin popularly known as (KMO) measuring the sampling adequacy was displayed in the output as .806 which is greater than 0.5. Actually, the initial criteria of KMO is said to be .6 or .5 and above. This means that, the recorded KMO is greater than the minimum requirement of .5 or .6. Table 1 below shows the results of KMO and Bartlett's Test (Pallant, 2011).

Table 1. KMO and Bartlett's Test

	SC
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.806
Bartlett's Test of Approx. Chi-Square Sphericity.	742.914
df	78
sig.	.000

*Notes: School Culture (SC)

Table 1 above obviously displays the sampling adequacy of EFA whereby KMO is .806. It could be posited that, KMO (0.806) is greater than (> 0.5). Likewise, the Bartlett's Test of Sphericity is another indicator of sampling adequacy which has been demonstrated according the Approx. Chi-Square (742.914), df (78) and Sig. (.000). All these outputs from EFA are essential indicators that the selected sample size was acceptable (Pallant, 2011).

INITIAL EIGENVALUES AND PERCENTAGE VARIANCE OF FACTORS THAT ORTHOGONALLY ROTATED

The criterion set out by Kaiser's rule is another way to decide on the actual number of dimension (factor) to eliminate with exact focus on the detail that eigenvalues more than one would be recognized. It has been shown in Table 2 that, the initial eigenvalues of all four components are more than one. The first factor is the most important factor derived from the data analysis because it recorded eigenvalue at 3.511. The second, third and fourth factors recorded at 1.242, 1.073, and 1.001 respectively. Accordingly, factor 1 contained four items. Factor 2, 3 and 4 contained three items. The following Table 2 demonstrates the Initial Eigenvalues of all factors, percentage variance of that orthogonally rotated. Therefore, it's clear from the Table 2 that the communalities and factors loadings of each factor greater than

minimum requirement of .3 values. For the factor 1 ranging from .461 to .581 communality and loading between .563 and .728. Also, communality for factor 2 ranging from .428 to .535, and loading .544 to .709. Likewise, factor 3 ranging from .414 to .608 communalities and .580 to .749 loading. Communality values factor 4 from .514 to .646 and loading between .527 and .751 respectively.

Table 2. Initial Eigenvalues and Percentage Variance of Factors that Orthogonally Rotated

Components	Initial Eigen values	% variance	of Cumulative %	Communalities	Loadings
1	3.511	27.007	27.007	.461 to .581	.563 -- .728
2	1.242	9.550	36.557	.428 to .535	.544 -- .709
3	1.073	8.255	44.813	.414 to .608	.580 -- .749
4	1.001	7.702	52.514	.514 to .646	.527 -- .751

CONCLUSION

The primary aim and objective of this present paper has been reached because the use of exploratory factor analysis (EFA) has re-confirmed various factors of school culture factor in morality of secondary school students southwestern part of Nigeria. Correspondingly, exploratory factor analysis (EFA) has permitted the researcher to reduce the data into controllable size (Kim & Mueller, 1978; Pallant, 2011). Based on the research findings, it is clear that various criteria were taken into account to retain the identified factors. Of such considerations were eigenvalues greater than one (>1), KMO, Bartlett's test of sphericity (BST), communality greater than minimum requirement of 0.3, also, factor loadings ranging from 0.4 to 0.7, and so forth. Finally, the study came out with successful four factors that explained School culture (SC) factor in morality among selected secondary school students South-Western Nigeria.

REFERENCES

- [1] Baraka, M., Ngussa, L., Makewa, N., & Allida, D. (2006). Integration of moral values in the secondary school humanities curriculum across Lake Zone, Tanzania. *International Journal of Educational Policy Research and Review*, 3 (7), 117-125.
- [2] Hair, J. F., Black, W. C., Babin, J. B., & Anderson, R. E. (2009). *Multivariate data analysis (7th Ed.)*. New Jersey: Prentice-Hall, Inc.
- [3] Harish, B. (2011). Challenges of higher education in 21st Century. *J. Educ. and Practice*, 2(6), 78-81.
- [4] Kim, J. O., & Mueller, C. W. (1978). *Factor analysis: Statistical methods and practical issues*. Newbury Park, CA: Sage.
- [5] McLean, F.G., & Errold, F. E. (1992). *Philosophical foundation for moral education and character development: Act and agent*. Washington D.C: Cardinal station.
- [6] Noraini, H., & Hasan, L. (2008). *The teaching and learning approaches of Prophet Muhammad (peace be upon him)*. Kuala Lumpur: Teacher Education in Muslim World (ICTEM).
- [7] Pallant, J. (2011). *Survival manual: A step by step guide to data analysis using SPSS for windows (Version 10)*. Chicago: Open University Press.
- [8] Raley, Y., & Preyer, G. (2010). *Philosophy of education in the era of globalization*. New York: Routledge.
- [9] Simanowitz, V., & Pearce, P. (2003). *Personality development England*. London: Open University Press.
- [10] Thungus, J. (2008). *Master primary teacher education*. Nairobi: Oxford University Press.
- [11] Tuckman, B.W., & Monetti, D. M. (2011). *Educational psychology international edition*. United States: Wadsworth.
- [12] Winch, C., & Gingell, J. (2004). *Philosophy and educational policy: A critical introduction*. London: Routledge Falmer.