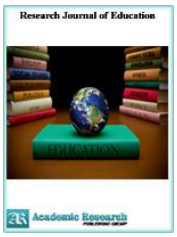

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Partial Least Square Analysis of School Leadership on Quality Assurance in Higher Education

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Abstract: The importance of quality education in nation building cannot be over emphasized. The research objective of this study is to investigate school leadership on quality assurance in higher education, Adamawa State. The population made up of senior lecturers in 10 departments in the universities. Stratified random sampling method was used to sample 10 lecturers from each of these departments, which makes the total sample size of 100 lecturers. The instrument for data collection was 20-item questionnaire titled ''Quality Assurance in Higher Education Questionnaire'' (QAHEQ). PLS- 3 measurement models was used to assess the reliability, validity of instruments and data analyses in this study. The result shows that the instruments were reliable and pilot study indicated strong evidence of validity. Findings revealed that, the research is significant because it explores the use of autocratic leadership style to improve quality assurance in higher education. It was therefore recommended that, authority should re-address the issue of funding university with adequate budget for training and re-training of staff.

Keywords: Education; Management; Quality assurance; Institution and Measurement Model.

1. Introduction

Since the turn of the new century, there have been drastic impacts in information technology and socio-political demands on quality and affordable education in nearly every States in Nigeria. Education has been described as the bedrock of every societies and tool for nation building (Olowoselu *et al.*, 2015). For quality education to be achieved in a nation, the teachers, learners and environment must be cooperatively organized. In other words, teacher must be adequate in quality and quantity, students must be well trained and facilities must be provided as well (Olowoselu, 2016). Leadership is a process where by an individual influence people to achieve common objectives (Northouse, 2015). School leader is a fellow who leads a group of teachers and students in school. Olowoselu (2016) further contended that, leadership includes adherence to common goals, effective abilities toward subordinate in order to achieve stated goals. Quality assurance in education system is therefore an umbrella for lots of activities that are designed to improve the process, input and output of education (Aworanti, 2012). Quality assurance in the education also involves the process of monitoring, assessing, evaluating all aspects of education activities and communicating the outcome to all concerned with a view of improving the education system (Kadir, 2012).

Ijaiya (2001) asserted that school supervision, termly assessment, student representation, school board decisions and performance-based funding were some typical measures to effectiveness in educational institution. Olowoselu *et al.* (2014) posited that, there are paradigm shift in teaching, learning, content, practice, and management of education at different levels in order to ensure their relevance in the system. Joda and Olowoselu (2016) asserted that new vision and aims at different levels of education, lifelong learning, global networking, information and technology were some emerging evidence in development of education.

Similarly, the higher achievement in education goals implies on better quality in education (Olowoselu, 2016). In other words, quality of education can be posited as educational effectiveness of a school. Accurately, quality assurance refers to efforts for improving internal working system and processes, such that effectiveness of teaching and learning can be ensured to students (Adegbesan, 2011).

Additionally, quality assurance relies heavily on institutional monitoring and reporting to ensure no significant challenges arising from its operation and structure (Fadokun, 2005). The need for quality assurance in Nigerian schools cannot be overemphasized. However, Adegbesan (2011) posited the following as major needs of quality assurance in higher education in Nigeria: (i) To serve as indispensable component of quality control strategy in education, (ii) To ensure and maintain high standard of education at all levels, (iii) To assist in monitoring and

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supervision of education, (iv) To determine quality of teacher input, (v) To determine numbers of classrooms needed based on average class size and ensure quality control of education, (vi) To determine level of teaching and learning facilities available in schools (vii) Ensuring how financial resources available could be prudently and judiciously utilized.

Similarly, Ajayi and Adegbesan (2007) argued that, quality assurance is related to accountability both of which are concerned with maximizing effectiveness and efficiency of educational services, in relation to the stated missions and vision. Apparently, Fadokun (2005) sums the definition of quality assurance as all these objectives, actions, attitudes and procedures that are used together with quality control activities, in other to ensure appropriate academic standards and programme in education sector. Empirically, Osage and Olowoselu (2015) contended that education environment is very challenging, demanding and competitive. In this context, education institutions have to meet-up to demands for accountability with value for money (Onocha, 2002). However, in order to achieve excellent, education institutions have to win support of community, build up good public image and show evidence of accountability (Bello *et al.*, 2016).

Arguably, in line with the main objective of higher education which is to prepare graduates with appropriate skills and professional competence for self-reliant. This objective seems not to have been achieved due to high rate of unemployment in Adamawa state (Badau and Olowoselu, 2015). This forms part of the problem statement as the author observed that most graduates were seen as applicants roaming streets in search of jobs that are not available.

This observation has laid credence on interview conducted by the researchers with ten lecturers of Universities in Adamawa State, Nigeria. The lecturers concluded that they have seen graduates in less occupations other than area in which they were trained. They further called for total review of quality assurance process in the higher education sector, which they asserted that it has lots of challenges. It is to this effect that the researcher embarked on this study so as to investigate school leadership style on quality assurance in higher education, Adamawa State, Nigeria.

2. Research Objectives

Specifically the research objectives of the study are to: (a) Determine the relationship between autocratic leadership style and quality assurance in higher education in Adamawa State, Nigeria (b) Investigate the relationship between democratic leadership style and quality assurance in higher education in Adamawa State, Nigeria.

3. Research Questions

The following research questions guided the study:

RQ1: What is the relationship between autocratic leadership style and quality assurance in higher education in Adamawa State, Nigeria?

RQ2: What is the relationship between democratic leadership style and quality assurance in higher education in Adamawa State, Nigeria?

4. Research Hypotheses

The following hypotheses were tested at 0.05 level of significance.

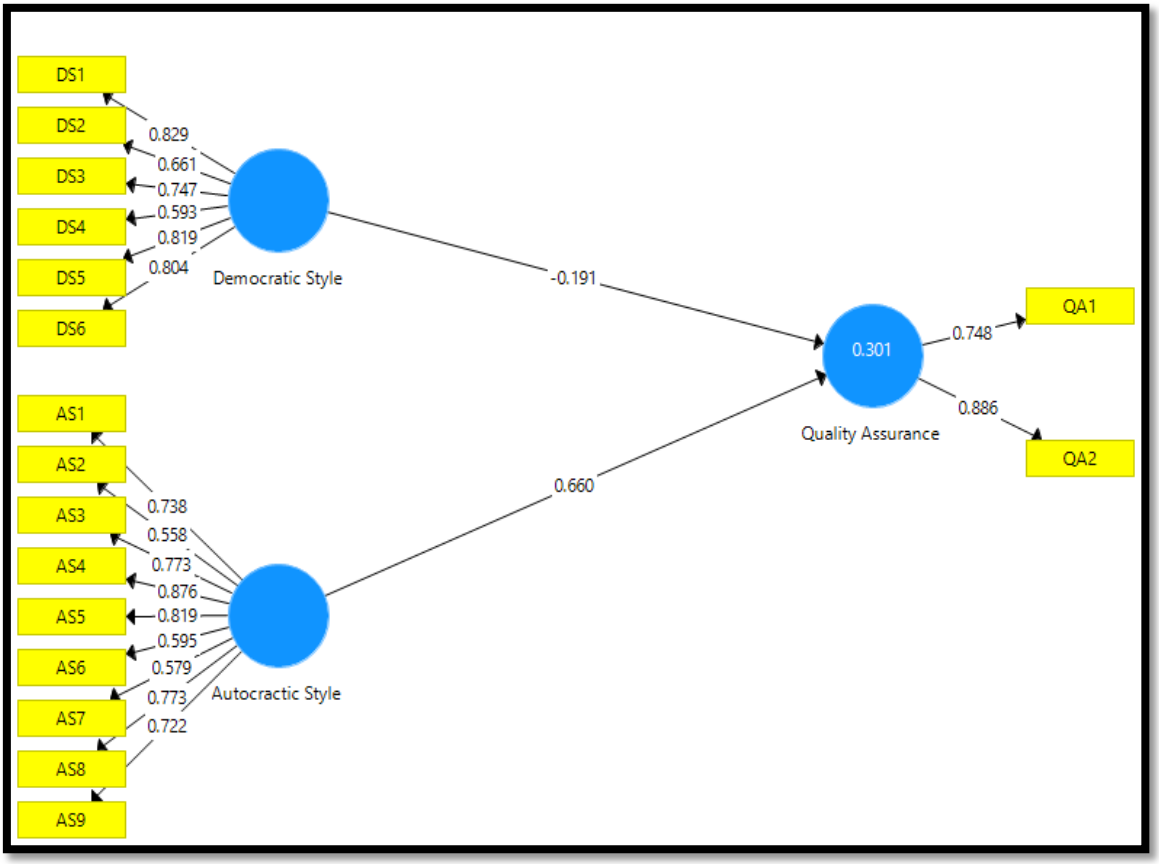
Ho1: There is no significant relationship between autocratic leadership style and quality assurance in higher education in Adamawa State, Nigeria.

Ho2: There is no significant relationship between democratic leadership style and quality assurance in higher education in Adamawa State, Nigeria.

5. Research Model

Previous research on concept of school leadership and quality assurance has shown a logical need for a model that will link leadership styles role and quality assurance in schools (Adegbesan, 2011). Certainly, in this study quality assurance is dependent variable, while independent variable is the school leadership such as democratic style and autocratic style. These are factors that monitor effective quality assurance in higher institution. Laissez-faire style is not empirically part of this study. However, the measurement model for this study is shown in Figure 1.

Figure-1. Measurement Mode



Source: Olowoselu (2016).

5.1. Quality Assurance

Quality assurance in higher education therefore involves process of monitoring, assessing, evaluating all aspects of education activities with a view of improving the products of education institution (Adegbesan, 2011). In this model, school leadership is term as the use of authority by school leaders' to achieve stated goals of the school. Empirically, two distinct styles of school leadership were used in this model. It was concluded that as one increases the other will decrease and this will have major impact on the way school leaders' ensure effective quality assurance in higher education.

5.2. Autocratic Leadership

This is a style of school leadership in which leader likes to centralise power of authority and directives (Olowoselu *et al.*, 2016). The leader exercises its power from position of authority and control (Olowoselu and Bello, 2015).

5.3. Democratic Leadership

These are school leaders that delegates teachers, empower staff and encourages participation. Personal qualities and respect from teachers are ways in which they derive their directive, and power in school (Fabunmi, 2005). Furthermore, it is posited that these two leadership styles are necessarily in monitoring quality assurance in school as suggested by Olowoselu (2016). School leaders will make perfect use of delegation of authority, in assigning senior teachers to monitoring quality assurance (Aina, 2011). Some situations such as an emergency situation warrant quick decision making in school (Joda and Olowoselu, 2015).

6. Methodology

Quantitative research design was adopted for this study. The study was conducted in Adamawa States. Target population consisted of senior lecturers in 10 departments in the university. Simple random sampling method was used to sample 10 lecturers from each of these departments, which makes the total sample size of 100 lecturers. Questionnaire was distributed and recorded higher rate of return for data screening.

6.1. Instrumentation

Creswell (2015) affirmed questionnaire as one of the appropriate survey instrument for research. To ascertain that all variables in this study are all measured, items for this study were adapted from various sources in order to create content validity which includes previous research findings on constructs of this study (quality assurance in higher education, autocratic and democratic school leadership styles. These items were adapted and modified from

preceding literatures (Adegbesan, 2011; Kadir, 2012; Olowoselu and Bello, 2015) with the purpose of ensuring adequate validity of constructs. The questionnaire had five-point likert scale rating of Strongly Agree (SA=5), Slightly Agree (SA=4), Agree (A=3), Disagree (D=2) and Strongly Disagree (SA=1) to measure the feedback of the questionnaire.

7. Data Analysis and Discussion of Results

Partial Least Square (PLS) (SmartPLS version 3) was used in analyzing data for this study. Partial Least Square is a popular technique used in data analysis, mainly due to its capacity to accommodate relatively small sample size (Goodhue *et al.*, 2006). Therefore, PLS 3 is considered appropriate for this study.

7.1. Reliability and Validity Assessment

The researcher posited reasons of using composite reliability coefficient in this study. Firstly, composite reliability coefficient affords a less biased evaluation of reliability than Cronbach's alpha coefficient (Gotz *et al.*, 2009). This is because all items will have equal contribution to its construct, without minding the actual contribution of individual item loadings (Adeleke *et al.*, 2015).

Another reason for using composite reliability coefficient was that, it takes cognizance of indicators with different loadings and can be easily interpreted in the same way as Cronbach's α. However, a value of 0.70 is regarded as satisfactory for a good model. The explanation of internal consistency reliability using composite reliability coefficient was based on the benchmark suggested by Bagozzi (2007), who contended that composite reliability coefficient should be minimum of 0.70 and above. It is important to note that, this study has composite reliability value of 0.906 for autocratic style, 0.882 for democratic style and 0.803 for quality assurance.

7.2. Validity

This study adopted content, convergent and discriminant validity which were all used in this study. Content validity was carried out from academics prior to the design of questionnaire. Certainly, three experts were selected from Modibbo Adama University of technology. Their suggestions and feedbacks form part of final design of the questionnaire. Adeleke *et al.* (2015) state that convergent validity refers to degree to which items in the constructs truly represent the intended construct, and indeed have correlation with other measures of same construct. In this study, convergent validity has been assessed by determining the Average Variance Extracted (AVE) of each construct, as suggested by Farrell and Rudd (2009). Also, in order to achieve adequate convergent validity. Chin (1998) posited that the Average variance Extracted of each construct should be at least .50 and above. In this context, the AVE values exhibited in this study shows high loadings of 0.522, 0.559 and 0.672 on their respective constructs, postulating adequate validity.

Table 1. Composite Reliability and Convergent Validity

Constructs	Cronbach Alpha	Composite Reliability	Average Variance Extracted
Autocratic Style	0.887	0.906	0.522
Democratic Style	0.847	0.882	0.559
Quality Assurance	0.724	0.803	0.672

Source: Olowoselu (2016).

7.3. Discriminant Validity

Chin (1998) defines discriminant validity as extent to which a particular construct differs from other constructs. Average Variance Extracted (AVE) is used to determine discriminant validity as recommended by (Farrell and Rudd, 2009). Similarly, square root of AVE is posited to compare the correlations among the constructs (Chin, 1998). Discriminant validity can be determined by comparing the indicator loadings with cross-loadings as suggested by (Adeleke *et al.*, 2015). Apparently, indicator loadings should be higher than cross-loadings. Table 2 below compares indicator loadings with other indicators. All indicator loadings were greater than the cross loadings, indicating adequate discriminant validity.

Table-2. Discriminant Validity

	Autocratic Style	Democratic Style	Quality Assurance
Autocratic Style	0.723		
Democratic Style	0.679	0.747	
Quality Assurance	0.530	0.257	0.820

Source: Olowoselu (2016).

7.4. Factor Loadings and Cross Loadings

Factor loadings and cross loadings are used to discover if there is any challenge with an item (Adeleke *et al.*, 2015). Table 2 illustrated the loadings and cross loadings of indicators in their corresponding constructs. In this analysis, all the items loaded appropriately on their corresponding constructs in which they all loaded above 0.5 as

the recommended threshold measures (Hair *et al.*, 2010). As displayed in Table 3, all items loaded on their mother constructs from a lower range of 0.558 to an upper range of 0. 886.

Table-3. Factor Loadings and Cross Loadings

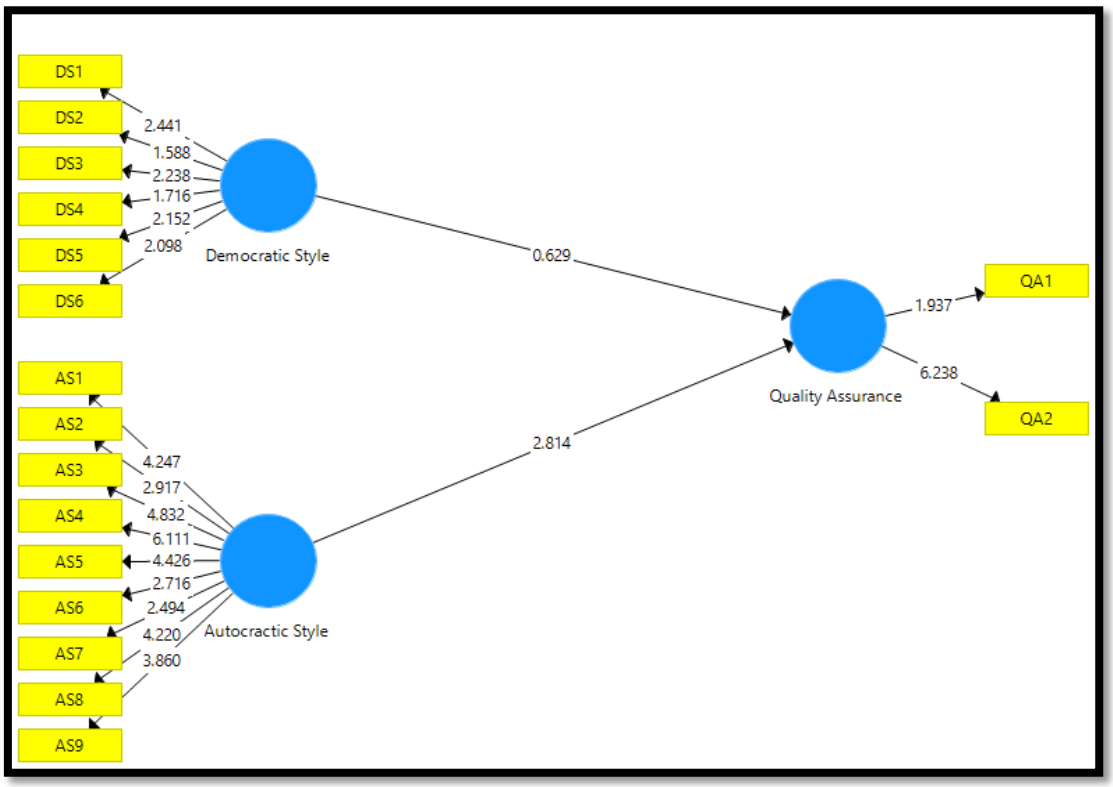
Construct	Autocratic	Democratic	Quality Assurance
AS1	0.738	0.564	0.223
AS2	0.558	0.351	0.178
AS3	0.773	0.471	0.410
AS4	0.876	0.397	0.542
AS5	0.819	0.331	0.602
AS6	0.595	0.689	0.249
AS7	0.579	0.780	0.335
AS8	0.773	0.502	0.228
AS9	0.722	0.760	0.223
DS1	0.470	0.829	0.147
DS2	0.271	0.661	0.030
DS3	0.360	0.747	0.178
DS4	0.716	0.593	0.206
DS5	0.536	0.819	0.266
DS6	0.447	0.804	0.139
QA1	0.298	0.012	0.748
QA2	0.539	0.370	0.886

Source: Olowoselu (2016).

7.5. Assessment of Significant of the Structural Model

Having determined the measurement model and assessed the structural model as suggested by Hair *et al.* (2006). The application of standard bootstrapping method was used to assess the significance of path coefficients in determining the structural model (Adeleke *et al.*, 2015). Figure 2 below shows the estimates for the full structural model.

Figure-2. Structural Model of the Study



Source: Olowoselu (2016).

7.6. Significance Level

School leadership shows level of significance which is supported by the structural model in this study. Autocratic style is significance since, it has 0.508 mean with standard deviation of 0.235 and P-value of 0.005 which supported the decision, of using autocratic style of leadership to enhance effective quality assurance in school.

Furthermore, democratic style with P-value of 0.530 significance level is not supported in this analysis. This means that, democratic style probably not appropriate for monitoring effective quality assurance in higher education in Adamawa state as depicted below.

Table-4. Significance level

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values	Decision
Autocratic Style	0.660	0.508	0.235	2.814	0.005	Supported
Democratic Style	-0.191	0.001	0.304	0.629	0.530	Not Supported

Source: Olowoselu (2016).

7.7. Contribution to Knowledge

This study has outlined the relationship between school leadership and quality assurance in higher education in Adamawa state. It has therefore presented a model that integrates leadership styles and quality assurance in a single model. This research is one among others that considers relationship of autocratic, democratic leadership styles and quality assurance in higher education. The model was developed through a thorough review of literatures to provide a deep understanding to academicians, practitioners on school leadership and quality assurance. The result of this study indicated that variables were appropriately analysed in the context of figures and tables in this research.

8. Conclusion

This study is limited to autocratic style and democratic style of leadership in relation to quality assurance in school. Therefore, future researchers are charged to investigate the laissez- faire style and empirically validate the model in this study. Similarly, among the aims of this study is to validate the research instrument and establish their respective reliability, which has been achieved. However, the Structural Model of the Study has contributed significantly to the research knowledge, as all constructs were properly measured, showing their statistical significance. It was therefore recommended that, authority should re-address issue of funding university with adequate budget for training and re-training of staff.

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