

**EXTENT OF UTILIZATION OF DATABASE AND WEB SERVERS E-COMMERCE COMPONENTS BY SMALL AND MEDIUM ENTERPRISES (SMEs) IN ANAMBRA STATE, NIGERIA**

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**Abstract**

*The study was undertaken to determine the extent of utilization of database and web servers e-commerce components by Small and Medium Enterprises (SMEs) in Anambra of Nigeria. Two research questions and two null hypotheses guided the study. The study adopted a survey research design. The population of the study was comprised of 296 employees of the Small and Medium Enterprises (SMEs) in Anambra State. No sample was taken due to the manageable size of the population. A structured 35-item questionnaire with five response categories on the degree of utilization was used as instrument for data collection. The internal consistency of the questionnaire items was determined using Cronbach Alpha reliability method and the overall reliability coefficient of the instrument was .81. Copies of the questionnaires returned were 280 constituting 95 percent of the targeted population. Mean and standard deviation were used to answer the research questions. The two null hypotheses were tested using Analysis of Variance (ANOVA) statistic as they involved more than two groups in each case at 0.05 level of significance. The result of the study revealed that database and web servers were found to be utilized at low extent leaving a far reaching implication for marketing education and Small and Medium Enterprises (SMEs) in Nigeria. The result of the null hypotheses showed that there was no significant difference in the mean ratings of the opinions of Marketing Managers, Sales Managers, Computer operators, Accounts Managers and Sales Representatives on the extent of utilization of Web Server with respect to their years of experience in marketing of their organizations' products. There was significant difference in the mean ratings of the opinions of Marketing Managers, Sales Managers, Computer Operators, Accounts Managers and Sales Representatives on the extent of utilization of Database and Database Server component of e-commerce. It was recommended among others that educational institutions offering marketing education should urgently review their curriculum to fall in line with the current global practices. This will help Lecturers to teach properly and the graduates to acquire the right knowledge and skills.*

**Keywords:** E-commerce, Database Server, Web Server, Utilization and Small and Medium Enterprises (SMEs).

## **INTRODUCTION**

Globalization, internationalization and the internet had greatly lowered barriers in terms of trade, politics, economies and technology, forcing many organizations to either conform to modern trends of doing business or be left behind in their old ways and become extinct in no time. Globalization largely driven by Information and Communication Technology (ICT) is radically changing ways of doing things at home, school, in government and in business. This change has brought about a new method in buying and selling through the internet known as electronic commerce.

Electronic commerce (E-Commerce) is the buying and selling of goods and services over a variety of computer networks (World Trade Organisation, 2013 and Oborah, 2011). Chaffey (2009) added that e-commerce is all electronically mediated information exchanges between an organization and its external stakeholders. Palan and Phapruek (2009) argued that e-commerce is not just about buying and selling product but also covers information for customer inquiry, production information and price comparison. Therefore e-commerce has direct impact on business owners, suppliers and customers. E-commerce has become the most popular application in marketing, earning large revenues and forging a rapid growth in related technology. Companies are now adopting social computing technologies that were designed for individual use (such as blogs, wikis, file sharing and social networks) to increase the effectiveness and efficiency of their operations (Turban, Lee and Chung, 2008).

E-commerce is an innovation in Information and Communication Technology that is changing the way marketing is being conducted globally and is a driving force of the current globalization by ensuring that marketing activities take place with minimum barrier in terms of location and time. Noor in Iddris (2012) pointed out that policy makers and managers are certain that e-commerce conveys wide range of benefits and companies that are left behind in adopting this new system cannot compete favourably in the global market place. Benefits accruing to the implementation of e-commerce include improvements in operational efficiency and revenue generation by integrating e-commerce into their value chain activities, access to wider range of markets, greater potential for partnership with suppliers and vendors, improved customer services, accessibility, flexibility in administration and partnership, information update, lower transaction costs and product/service differentiation (Vaithianathan, 2010). According to Akintola, Akinyede and Agbonifo (2011), e-commerce is conventionally divided into different domains such as Business to Business (B2B), Business to Consumer (B2C), Consumer to Business (C2B) and Consumer to Consumer (C2C) e-commerce. Business to Business Electronic Commerce is the use of Information and Communication Technology to facilitate payment management, inventory management and distribution management between business organizations. Business to Business e-commerce concentrates on supply chain and procurement issues. Business to Consumer Electronic Commerce on the other hand, involves online selling of goods to the final consumers. The business offers a set of merchandise at given prices, discounts, shipping and delivery options. Consumer to Consumer e-commerce involves the online exchange of goods and services and information among consumers. E-commerce activities are carried out in organizations with the help of e-commerce technical components (Vaithianathan, 2010). E-commerce technical components include Database and database Server, Web Server, Client or PC Workstation, Transaction Server, Internet Communication Line and Router (Osuala, 2009

and Agomuo, 2005). This study centered on Database and database Server and Web server e-commerce components.

Database stores detailed data about the operations of an organization. A database is an organized collection of data for one or more purposes, usually in digital form. A database server is a computer in a network dedicated to database storage. Database server enables an organization to build, maintain and use customer information for the purpose of contacting and building customer relationships (Kotler and Keller, 2009). Workstation in one organization is used to update data in a database server. When the data is correct, the user tells the system to transmit the data via a Web Server.

A web server is an e-commerce component that is used to transmit data. It can be referred to as either hardware or the computer application that helps to deliver content which can be used to access information through the internet. The Web Server transmits the data over the Internet to another organization via the router. The Web Server also enables manufacturers to sell their products and services directly to retail customers, bypassing intermediaries such as distributors or retail outlets (Laudon and Laudon, 2006). Many organizations utilize these two e-commerce components since the race for survival in business in this digital age is defined by the effective and efficient utilization of e-commerce components (Oborah, 2011 and Kotler, 2004). In this study, the use of Database and Web Servers refers to their utilization for business and marketing activities.

Utilization connotes the use of an item, idea or object to solve a problem or to achieve an objective. To utilize, according to Hawkins (2005), is to find a use for something. The utilization of e-commerce components such as database and web servers has brought a new trend in the concept of marketing. Global marketing realities indicate that the extent of utilization of e-commerce determines successful marketing in today's internet-driven marketing environment. E-commerce is utilized by Small and Medium Enterprises (SMEs) in Nigeria.

Adeniji (2015) stated that Small and Medium Enterprises (SMEs) was defined by the National Council of Industries as business enterprises whose total cost excluding land is not more than Two Million Naira (N2,000,000) only. The Federal Ministry of Commerce and Industry defined SMEs as firms with a total investment (excluding cost of land but including capital of up to N750,000 and paid employment of up to fifty (50) persons. Osuala (2009) argued that the definition of what constitutes a small business defies precision because of it being variously defined in different economies of the world. Small and Medium Enterprises (SMEs) are often seen as vital for the growth and innovation of dynamic economies as they help to diversify economies (Iddris, 2012). Gordon in Iddris (2012) stated that SMEs account for 70 percent to 80 percent of jobs in most developed and developing countries and for most new jobs that are created, within Africa, several countries in Africa have prioritized their investment in SMEs. To Oborah (2015), SMEs are seen to be a critical factor to the economic development of any nation. There are many SMEs in Anambra State. This sector is strategically positioned to improve per capital income, increase value addition to raw materials supply, improve export earnings and set up capacity utilization in key industries. These enterprises utilize e-commerce in marketing of their products through different categories of employees. For the purpose of this study, these employees include Marketing Managers, Sales Managers, Computer Operators, Accounts Managers and Sales Representatives.

Unfortunately, SMEs in Africa have lagged behind most of the world's economies in tapping into these possibilities and emerging technologies and therefore could not realize

the full potential benefits of e-commerce (Idris, 2012). Nigeria is no exception. Adeniji (2015) pointed out that most SMEs in Nigeria die within their first five years of existence. A small percentage goes into extinction between the sixth and tenth year while only about five to ten percent survive, thrive and grow to maturity.

A preliminary study was carried out by the researcher to determine whether e-commerce is in use in SMEs in Anambra state. The study revealed that e-commerce is in use in SMEs especially to exchange information on the internet with their business partners like e-mail and web. However, it was observed that SMEs are experiencing low sales, leakages, mismanagement of funds, ineffective and inefficient marketing of products, lost of global profitability, irregular power supply and inadequate market research. It has also been observed that many SMEs are losing competition in favour of their contemporaries in today's globalized economy. It is therefore expected that determining the extent of utilization of database and database server and web server e-commerce components will address these issues. Hence, this study was aimed at determining the extent of utilization of database and web servers components of e-commerce by SMEs in Anambra State in particular and Nigeria in general.

Specifically, the study sought to determine the extent to which:

1. database and database server is utilized by Small and Medium Enterprises (SMEs) in Anambra State;
2. web server is utilized by Small and Medium Enterprises (SMEs) in Anambra State;

The study answered the following research questions:

1. To what extent is database and database server utilized by Small and Medium Enterprises (SMEs) in Anambra State?
2. To what extent is web server utilized by Small and Medium Enterprises in Anambra State?

In addition, the following null hypotheses were tested at 0.05 level of significance.

**H<sub>01</sub>:** There is no significant difference among the mean ratings of Marketing Managers, Sales Managers, Computer Operators, Accounts Managers and Sales Representatives on the extent of utilization of database and database server by Small and Medium Enterprises (SMEs) in Anambra State.

**H<sub>02</sub>:** There is no significant difference among the mean ratings of respondents with respect to their years of experience (1-5, 6-10 and 11+ years) on the extent of utilization of Web Server by Small and Medium Enterprises (SMEs) in Anambra State.

## **MATERIALS AND METHOD**

The study adopted descriptive survey research design which Azuka (2011) defined as a research method that uses questionnaire or interview to collect data from a sample that has been selected to represent a population in which the findings of the data analysis can be generalized. Descriptive survey is considered appropriate for this study because it sought to find out the opinions of employees of Small and Medium Enterprises (SMES) on the extent of utilization of database and web servers in the business and marketing operations of the organization. The population for this study was 296 staff of Small and Medium Enterprises (SMEs) registered with Ministry of Trade, Commerce, Market and Wealth Creation in Anambra State. This population consists of Marketing Managers, Sales Managers, Computer Operators, Accounts Managers and Sales Representatives. No

sample was taken owing to the manageable size of the population. Hence, the entire population of 296 was studied.

A structured questionnaire was used for the study. The Questionnaire items were developed in line with each of the research questions. The structured questionnaire was developed from the literature reviewed by the researcher. The questionnaire is divided into two parts. Part one contained 5 items that sought information on personal data of the respondents. Part two contained sections A and B with 35 items. Section A contained 20 items (1-20) designed to determine the extent to which Small and Medium Enterprises (SMEs) utilize database and database server in their business operations in Anambra State. Section B contained 15 items (21-35) designed to determine the extent to which Small and Medium Enterprises (SMEs) utilize Web-server in their business operations in Anambra State.

The questionnaire items were structured on a five-point rating scale. The response categories for sections A and B were Very High Extent (VHE) 5points, High Extent (HE) 4points, Moderate Extent (ME) 3points, Low Extent (LE) 2points and Very Low Extent (VLE) 1point. The respondents were required to tick (✓) against the response categories that best satisfy their opinions.

The reliability of the instrument was determined by administering 21 copies of the questionnaire to Marketing Managers, Sales Managers, Computer Operators, Accounts Managers and Sales Representatives of SMEs in Enugu State. Cronbach Alpha reliability method was used to ascertain the internal consistency of questionnaire items. The overall reliability co-efficient of the entire instrument was .81. 296 copies of the questionnaire were administered through personal contact by the researcher with the help of two research assistants. The researcher briefed the research assistants on how to administer the instrument in order to ensure good completion and return of the questionnaire. The researcher personally supervised the questionnaire administration and retrieval. The number of copies of the questionnaire returned was 280 and this constituted 95 percent of the studied population. The analysis was based on the 280 copies of the questionnaire that were returned.

Data generated from the questionnaire were analyzed using Mean, Standard Deviation and Analysis of Variance (ANOVA). The analyses were done with Statistical Package for the Social Sciences (SPSS) in order to ensure that precision is attained. Mean and Standard deviation were used to answer the research questions. Each item was interpreted based on the real limit of the mean corresponding to each item categories as follows:

Very High Extent =	4.50-5.00
High Extent	= 3.50-4.49
Moderate Extent =	2.50-3.49
Low Extent	= 1.50-2.49
Very Low Extent =	1.00-1.49

Analysis of Variance (ANOVA) statistic was however used to test the null hypotheses. The null hypothesis of no significant difference was not upheld where the significance value to the F-value is less than the criterion P-value of 0.05. However, the null hypothesis was upheld where the corresponding significant value to F-value is greater or equal to the criterion P-value of 0.05 level of significance.

## **RESULTS**

### **Research Question 1**

*To what extent is database and database server utilized by Small and Medium Enterprises in Anambra State?*

The data used for answering this Research Question are presented in Table 1.

**Table 1:**  
**The Mean Ratings and Standard Deviations on the Extent of Utilization of Database and Database Server by Small and Medium Enterprises in Anambra State.**

(N = 280)				
S/No	Item Statements	$\bar{X}$	SD	Remarks
1	Utilization of database to draw inferences about customer's needs and responses	1.57	.70	LE
2	Utilization of database software for inventory control	2.35	.75	LE
3	Utilization of database records for online ordering of products	1.67	.72	LE
4	Creation of form using access tools for customers	1.41	.57	VLE
5	Identification of types of queries through customers' data	1.40	.70	VLE
6	Preparation of tables to facilitate business operations	2.13	.82	LE
7	Using table records to create queries in database	1.66	.84	LE
8	Creation or designing of reports from database for effective business operations.	2.82	.62	ME
9	Utilizing database to identify prospects	2.73	.63	ME
10	Updating of customers queries using customer database	1.66	.74	LE
11	Utilization of macros for operations such as opening a form or printing a report	1.99	.86	LE
12	Utilization of operational database to facilitate business operation	2.81	1.11	ME
13	Utilization of customer database to record contact, credit and demographic information about customers	1.97	1.01	LE
14	Use of enterprise resource planning to record details about product components and parts inventory	1.75	.83	LE
15	Utilization of database server for order and purchase confirmation	1.74	.69	LE
16	Utilization of database server for payment confirmation	1.82	.88	LE
17	Utilization of information resources to validate data in database	2.26	1.19	LE
18	Banking of data in database	3.63	1.23	HE
19	Utilization of database software for analysis of inventory management records	3.14	.78	ME
20	Utilization of database to facilitate the installation of automatic mailing programme for sending out birthday or anniversary cards, Christmas shopping reminders or off-season promotions	3.40	1.08	ME
*	<b>Overall Mean</b>	<b>2.19</b>	<b>.41</b>	<b>LE</b>

Key:  $\bar{X}$  = Mean, SD =Standard mean, N = Number of respondents, VLE = Very low extent, LE = Low extent, ME = Moderate extent, HE = High extent, VHE = Very High extent

Table 1 presents the mean ratings of respondents on the extent of utilization of database and database server by Small and Medium Enterprises (SMEs) in Anambra State. The Table 1 has 20 items statement out of which one item (item 18) had mean score of 3.63 implying that it was utilized to a high extent. Five of the items (items 8, 9, 12, 19 and 20) have mean scores of 2.82, 2.73, 2.81, 3.14 and 3.40 indicating that they were utilized to a moderate extent. However, items 1, 2, 3, 6, 7, 10, 11, 13, 14, 15, 16, and 17 have mean scores ranging from 1.50 to 2.26 implying that they were utilized to a low extent. Only items 4 and 5 have mean scores of 1.41 and 1.40 respectively indicating that they were utilized to a very low extent. The overall mean of 2.19 however, indicated that the items in the cluster were utilized to a low extent. The standard deviation of the items ranged from .57 to 1.23 indicating that the respondents were not too far apart in their opinions.

### **Research Questions 2**

*To what extent is Web Server utilized by Small and Medium Enterprises (SMEs) in Anambra State?*

The data used for answering this Research Question are presented in Table 2



**Table 2**  
**The Mean Ratings and Standard Deviation on the Extent of Utilization of Web Server by Small and Medium Enterprises in Anambra State. (N = 280)**

S/No	Item Statements	$\bar{X}$	SD	Remarks
1.	Use of Web Browser by company and customers to communicate ideas or obtain information	1.69	.85	LE
2.	Utilization of Server-side sampling to generate dynamic Web Page	2.75	1.13	ME
3.	Navigating for Web sites using search engines	1.61	1.05	LE
4.	Use of Web Chatting to host various groups	1.12	.49	VLE
5.	Use of Web casting to broadcast audio and video communications	1.21	.56	VLE
6.	Use of Web Crawler for web indexing	1.21	.55	VLE
7.	Use of Bandwith Throttling to limit the spread of responses	2.13	.88	LE
8.	Use of Hyperlinks (web links) to link other sites for business operations	1.39	.80	VLE
9.	Use of web conference to communicate ideas to wider audience	1.12	.49	VLE
10.	Utilization of interactive features of web pages to hold consumers' attention or to capture detailed information about consumer tastes and interests.	1.09	.44	VLE
11.	Utilizing web features to improve customers' experiences and creating additional value	1.07	.36	VLE
12.	Utilization of chick stream tracking to get detailed information about customer behaviour, preferences, needs and buying patterns	1.06	.37	VLE
13.	Utilization of chick stream tracking to ask visitors to websites to register online and provide information about them	1.16	.63	VLE
14.	Creation of unique personalized web pages that display contents or adds for products of services of special interest to prospective consumers	1.36	.96	VLE
15.	Utilization of web design features to collect data on customers activities at websites and store them in a blog	2.93	1.49	ME
*	<b>Overall Mean</b>	<b>1.59</b>	<b>.48</b>	<b>LE</b>

Key:  $\bar{X}$  = Mean, SD = Standard Deviation, N = Number of Respondents, VLE = Very Low Extent, LE = Low Extent, ME = Moderate Extent, HE = High Extent, VHE = Very High Extent

Table 2 presents the mean ratings of respondents on the extent of utilization of Web Server by Small and Medium Enterprises (SMEs) in Anambra State. The table has 15 items statements out of which two items (items 2 and 15) have mean score of 2.75 and 2.93 respectively indicating that they were utilized to a moderate extent. Items 1, 3, and 7 have mean scores of 1.69, 1.61 and 2.13 respectively implying that they were utilized to a low extent. However, items 4, 5, 6, 8, 9, 10, 11, 12, 13 and 14 have mean scores ranging from 1.06 to 1.39 indicating that they were utilized to a very low extent by Small and Medium Enterprises (SMEs) in Anambra State. Furthermore, the overall mean of 1.59 showed that all the items in the table were utilized to a low extent. The standard deviation of the items ranged from .36 to 1.49 indicating that the respondents were not too far apart in their opinions.

**Null Hypothesis 1**

*There is no significant difference in the mean ratings of Marketing Managers, Sales Managers, Computer Operators, Accounts Managers and Sales Representatives on the extent of utilization of database and database server by Small and Medium Enterprises in Anambra State.*

The data for testing this null hypothesis 1 are presented in Table 3.

**Table 3**

**Result of Analysis of Variance (ANOVA) on the mean ratings of the responses of Marketing Managers, Sales Managers, Computer Operators, Accounts Managers and Sales Representatives on their extent of utilizing database and database server by Small and Medium Enterprises (SMEs) in Anambra State.**

Sources of Variance	Sum of Squares	Df	Mean Squares	F	P-value	Remarks
Between groups	2.288	4	.572	3.583	.007	S
Within groups	43.902	275	.180			
Total	48.190	279				

Key: Level of Significance – 0.05, S - Significant

The Analysis of Variance (ANOVA) presented in Table 3 shows the F- value to be 3.583 with a significance of .007 which is less than 0.05. Hence, the null hypothesis was therefore rejected at 0.05 level of significance. With this result, there is significant difference between the mean ratings of Marketing Managers, Sales Managers, Computer Operators, Accounts Managers and Sales Representatives on the extent of utilization of database and database server by Small and Medium Enterprises (SMEs) in Anambra State.

**Null Hypothesis 2**

*There is no significant difference in the mean ratings of responds with respect to their years of experience (1-5, 6-10, and 11+years) on the extent of utilization of web server by Small and Medium Enterprises (SMEs) in Anambra State.*

The data for testing this null hypothesis 2 are presented in Table 4.

**Table 4**  
**Result of Analysis of Variance (ANOVA) on the mean ratings of the respondents with respect to their years of experience (1-5, 6-10 and 11+years) on the extent of utilization of web server by Small and Medium Enterprises (SMEs) in Anambra State.**

Sources of Variance	Sum of Squares	Df	Mean Squares	F	P-value	Remarks
Between groups	1.424	4	.356	1.317	.254	NS
Within groups	74.317	275	.270			
Total	75.741	279				

Key: Level of significance, NS – Not significant

The Analysis of Variance (ANOVA) presented in Table 4 shows the F-value to be 1.317 with P-value of .254 which is greater than 0.05. Hence, the null hypothesis was accepted at 0.05 level of significance. With this result, there is no significant difference between the mean ratings of Marketing Managers, Sales Managers, Computer Operators, Accounts Managers and Sales Representatives with respect to their years of experience on the extent of utilization of Web Server by Small and Medium Enterprises (SMEs) in Anambra State.

**DISCUSSION OF FINDINGS**

**The extent to which Small and Medium Enterprises (SMEs) utilize database and database server in their marketing operations in Anambra State.**

From the analysis of result presented in Table 1, it was found that database and database server were mostly utilized to a low and very low extent by Small and Medium Enterprises in Anambra State. Only five items were found to be utilized to a moderate extent while only one item was highly utilized. The items utilized to a low and very low extent include: utilization of database to draw inferences about customers needs and responses, utilization of database software for inventory control, utilization of database records for online ordering of products, preparations of tables to facilitate business operations, using table records to create queries in database, updating of customers queries using customers database, utilization of macros for operations such as opening a form or printing a report, utilization of customer database to record contact, credit and demographic information about customers, use of enterprise resource planning to record details about product components and parts inventory, utilization of database server for order and purchase confirmation, utilization of information resources to validate data in database, creation of

form using access tools for customers and identification of types of queries through customers' data while banking of data in database was utilized to a high extent. This implies that no item under this cluster of the study was utilized at very high extent. From its cluster Grand Mean of 2.19 over a range of 5.00, it is disturbing that database and database components of e-commerce were found to be utilized at low and very low extent considering the importance of database software in business. This finding is in line with the findings of Okoro (2014) who found out that transactional, database, webpage, and networking competencies were utilized to a low extent. Database is a collection of data that is organized so that its contents can easily and regularly be accessed, entered and updated in the course of business. Furthermore, the result of null hypothesis 1 ( $H_{01}$ ) presented on table 3 showed that there was significant difference between the mean ratings of Marketing Managers, Sales Managers, Computer operators, Accounts Managers and Sales Representatives on the extent of utilization of database and database server by Small and Medium Enterprises (SMEs) in Anambra State. Hypothesis 1 ( $H_{01}$ ) was therefore rejected.

Its absence jeopardizes business transactions. Okoli (2012) in a study of database management competencies in the electronic offices as perceived by Office Managers in public owned organizations and corporations, discovered that seven of the listed database competencies were not utilized by office managers and asserted that the absence of some of these database competencies among office managers means that data/information processing that need these competencies would not be done efficiently. This position is exactly the same with that of the Small and Medium Enterprises (SMEs) who need data and information efficiency for effective marketing of products. Agomuo (2005) had earlier noted that database have become so important due to the level of efficiency required in the production, storage and retrieval of information in the required format as necessitated by the information age. The inference made in this study is that database and database server components of e-commerce are under utilized for marketing of products and this implies that information dissemination in that market sector is fraught with problems.

### **The Extent to Which Small and Medium Enterprises (SMEs) Utilize Web Server in their Marketing Operations in Anambra State.**

The analysis of result presented in Table 2 showed that the Small and Medium Enterprises (SMEs) in Anambra State utilize ten items of Web Server component of e-commerce to a very low extent. These include the following items: use of web chatting to host various groups, use of web casting to broadcast audio and video communications, use of web crawler for web indexing, use of Hyperlinks (web links) to link other sites for business operations, use of web conference to communicate ideas to wider audience, utilization of interactive features of web pages to hold consumers' attention or to capture detailed information about consumer tastes and interests, utilizing web features to improve customers' experiences and creating additional value, utilization of click stream tracking to get detailed information about customer behaviour, preferences, needs and buying patterns, utilization of click stream tracking to ask visitors to websites to register online and provide information about them and creation of unique personalized web pages that display contents or adds for products or services of special interest to prospective consumers. This was closely followed by three items which were rated as utilized to a low extent. These items include use of web browser by company and customers to communicate ideas or obtain information, navigating for web sites using search engines and use of Bandwidth Throttling to limit the spread of responses. Only two items viz:

utilization of Server Side Sampling to generate dynamic webpage and utilization of web design features to collect data on consumers activities at websites and store them in a blog were utilized to a moderate extent. No item in this cluster was highly utilized. Furthermore, the result of null hypothesis 2 ( $H_{02}$ ) presented on table 4 showed that there was no significant difference in the mean ratings of respondents with respect to their years of experience on the extent of utilization of web server by Small and Medium Enterprises (SMEs) in Anambra State. Hypothesis 2 ( $H_{02}$ ) was therefore upheld.

The implication of this low utilization of web server component of e-commerce by Small and Medium Enterprises (SMEs) in Anambra State is that they are not engaging or experiencing marketing innovation. This agrees with The Economic Times (2014) which stated that the web became marketing innovation that drew the attention of business in the 1990's. However, Oborah (2011) and Kotler (2004) asserted that utilization of web server is very necessary for organizations including Small and Medium Enterprises (SMEs) since the race for survival in business in this digital age is defined by effective and efficient utilization of e-commerce components. It is therefore unthinkable that this e-commerce component is utilized at very low extent in an area of marketing that can rightly say is paramount to the survival of business organizations and the economy.

## **CONCLUSION**

The study examined the extent of utilization of database, database server and web server by Small and Medium Enterprises (SMEs) in Anambra State of Nigeria. The result of the study revealed that database, database server and web server were utilized to a low extent leaving a far reaching implication. The level of e-commerce activities undertaken determined the extent of utilization of its components by Small and Medium Enterprises (SMEs). There were four identified levels of e-commerce utilization. Since the study revealed that database, database server and web server were utilized to a low extent by Small and Medium Enterprises (SMEs), it implies that Small and Medium Enterprises (SMEs) are at the first level of e-commerce utilization.

## **RECOMMENDATIONS**

Based on the findings and conclusions drawn from the study, the following recommendations were made:

1. Business training institutions should ensure that the possession of laptops should be made compulsory for those intending to study business education in all tertiary institutions. This will enhance the practice of ICT, database server and web server skills, and thus buttress the efforts of the facilitators whose tutelage ends at school.
2. Educational institutions offering marketing education should as a matter of urgency, review their curriculum contents to fall in line with current development and best practices in e-commerce marketing. This will help the lecturers to teach properly and the graduates to acquire the right knowledge and skills for doing business online.
3. Tertiary institutions that offer marketing education courses should be provided with e-learning facilities and platforms by governments in order to ensure the facilitation of e-commerce competencies.
4. Federal, state and local governments should provide the necessary Information Technology (IT) infrastructure that will enhance the learning of e-commerce usage and other ICT-enabled applications for doing business globally.

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