



THE IMPACT OF TECHNOLOGY ON CUSTOMERS SERVICE: USING STATISTICAL

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Abstract

Technology is essential for a quality customer service. The study employed a descriptive design. Two research questions with corresponding hypotheses, tested at

Keywords

Technology, customer service, Automated Teller Machine (ATM), website, customer supplier relationship

INTRODUCTION

There is a planetary shift toward acknowledging and understanding technology as a vital and legitimate means of boosting customer service. Technology is replacing humans in the search of customer service efficiency worldwide. Whenever we turn around, there is a new, supposedly more convenient device, terminal, or system designed to perform tasks once performed by humans. Many companies are using technology to handle customer service in an efficient and cost-effective way. In this modern society, it is very difficult (almost impossible) for a nation to survive

.05. Researches - Data analysis yielded a and conclusion, the constructed significant impact of researchers questionnaire, Automated Teller recommended that validated with a Machine (ATM) on government should reliability index of 0.76 customer service and make it compulsory for was used for the study. no significant impact every organization to The obtained data of website on train and develop its were subjected to customer service. workers. percentages and t-test. Based on the findings

without a cling to technology (Cletus, 2015).

Technology is the practical application of scientific knowledge in creating devices or instruments for making man's environment more enjoyable or satisfactory (Onuoha, 2012). Technology means the purposeful application of information in the design, production and utilization of goods and services and in the organization of human activities according to Oliver (2015). Technology can be described in the following ways:

1. Tangible: Blueprints, models operating manuals, prototypes.
2. Intangible: Consultancy, problem-solving and training methods.
3. High: Entirely or almost entirely automated and intelligent technology that manipulates ever finer matter and ever powerful forces.
4. Intermediate: Semi-automated partially intelligent technology that manipulates refined matter and medium level forces.
5. Low: Labour-intensive technology that manipulates only coarse or gross matter and weaker forces.

Technology is presently the yearning of every company or establishment's confidence in satisfying the customer.

Customer Service- Customer care that is, being aware that the customer is an organization's first priority, has become one of the major issues for business throughout the world. It is the process of ensuring customer satisfaction with a product or service. Often, customer service takes place while performing a transaction for the customer, such as making a sale or returning an item. Customer service is an extremely important part of

maintaining ongoing client relationships that are keys to continuing revenue. This reason has made many companies to work hard in order to increase their customer satisfaction levels. In whatever industry we consider, the importance of customer service is critical (Paul, 2014). The quality of customer service can either enhance or degrade customer loyalty to your brand and your business. Customer service can take the form of (use of) Automated Teller Machine (ATM).

Automated Teller Machine (ATM) is an electronic-banking outlet which allows customers to complete basic transactions without the aid of a branch representative or teller. Bills (2013), opined that Automated Teller Machine (ATM) is a computerized machine that permits bank customers to gain access to their accounts with a magnetically encoded plastic card and a code number. It enables the customers to perform several banking operations without the help of a teller such as to withdraw cash, make deposits, pay bills, obtain bank statements, effect cash transfers.

Albert (2012), John (2014) and Reu (2013) said that Automated Teller Machine (ATM) is supportive to the growth of a company. Chris (2015) added that Automated Teller Machine (ATM) is the best among a people who neglects the customer's satisfaction by posing a question, "what should the customer do when the supplier makes every effort to avoid meeting his needs and increasingly distances himself from the relationship"? Contrarily, Berry (2015) contributed that automation reduces communication. According to him a customer supplier relationship should be a two-way, win-win relationship. Thomas (2013) opined that despite the advances in technology (ATM) today, quality communication with a machine is very low at best. Technology extends to providing website.

Providing website areas where a company's customers can answer their own questions or seek answers from others is one of the ways in which technology helps to give customers what they need (Richard, 204). Website according to Linus (2015) is a collection of HTML and subordinate document on the worldwide webs that are typically accessible from the same URL and residing on some server and from a coherent, usually interlinked whole website is synonymous to internet site, site and www site.

Website according to Zetlin (2011) is one of the means the goal of a business in terms of its customer interaction generates loyalty. Wessarman (2011) added that there is no better way to make customers serve themselves in a quicker way than website. Contrarily Segu (2014) explained that as new technologies have come to market to make it easier for businesses to provide customer service, they may also be increasing the number of channels through which you interact with customers and the complexity of those interactions. Oliver (2015) opined that while website can create innovations, understanding how, when and where to apply website for a better customer experience can be challenging. Ibekwe (2012) contributed that website does not necessarily serve customers' needs. Zach (2014) opined that website thrives where the masses are literates and not in Nigerian context. Ammed (2015) said that website leads to complexity-customers seek simplicity.

Statement of the Problem

Customer Service which naturally anchors on customer-supplier relationship is being distorted by technology such as automated teller machine and website thereby making the relationship adversarial. Therefore, this study sought to investigate if technology impacts on customer service in order to proffer solutions to improve customer service.

Purpose of the Study

The purpose of this study was to determine the impact of technology on customer service. Specifically, the objectives were:

1. To ascertain the impact of Automated Teller Machine (ATM) on customer service.
2. To assess the impact of website on customer service.

Research Question

The following research questions were answered in the study:

1. What is the impact of Automated Teller Machine (ATM) on customer service?
2. To what extent is the impact of website on customer service?

Research Hypotheses

The following null hypotheses were formulated and tested at .05 alpha level.

1. There is no significant impact of Automated Teller Machine (ATM) on customer service.
2. There is no significant impact of website on customer service.

Research Method

The study employed the descriptive study method.

Population of the Study

The target population for the study comprised 1,000 bank customers in two commercial banks in Obio/Akpor Local Government Area.

Sample and Sampling Technique

The sample consisted of 140 commercial banks customers. Multi stage sampling technique was adopted to choose the sample.

Validation of the Instrument

The Instrument, Customer Service Questionnaire (CSQ) was content and face validated by three experts in statistics department of Philips Consulting Firm, Lagos.

Reliability of the Study Instrument

The reliability index of the (CSQ) was 0.76 after it was pilot-tested.

Instrument/Data Collection

In order to gather data for this study, researchers-made instrument was used. The data were collected through (CSQ). The researchers and three research assistants accomplished the task.

Data Analysis

Research questions were answered using descriptive statistics of percentage while T-test was used to analyze the hypotheses at an alpha level of .05.

Interpretation of Analysis

If $P \leq .05$, significant (reject H_0)

If $P \geq .05$ significant (accept H_0)

Procedure

Stratified random sampling of two commercial banks with a total of 140 bank customers were chosen. The 140 questionnaire was divided into four. The researcher and the three research assistants were assigned letters A-D through the use of lucky deep. The questionnaire was administered on 140 bank customers. The questionnaire was collected after two weeks while only 120 questionnaires were returned.

Results

Research Question 1: What is the impact of Automated Teller Machine (ATM) on customer service?

Table 1: Summary of responses to research Question 1

Responses	ATM usage	Percentage %
Users	90	75
Non users	30	25
Total	120	100

Table 1 shows that in ATM usage, there are 90 users and 30 non users of ATM with percentage values of 75 and 25 respectively. The result therefore means that there is remarkable impact of ATM usage on customer service.

Research Question 2: To what extent is the impact of website on customer service?

Table 2: Summary of responses to research Question 2

Responses	ATM usage	Percentage %
Users	40	33
Non users	80	67
Total	120	100

Table 2 indicates that in website usage, there are 40 users and 80 non users of website with percentage values of 33 and 67 respectively. This therefore means that there is no remarkable impact of website on customer service.

Testing of Hypotheses

H₀₁: There is no significant impact of Automated Teller Machine (ATM) on customer service

Table 3: T-test result analysis showing impact of ATM on customer service T.

ATM	N	\bar{x}	SD	df	t	$P \leq .05$	Remark
Users	90	70.25	10.22	118	320	.02	Sig.
Non users	30	72.02	12.01				

Table 3 shows that $P < .05$ ($.02 < .05$). Therefore, the null hypothesis is rejected. This means there is significant impact of ATM on customer service.

H₀₂: There is no significant impact of website on customer service.

Table 4: T-test result analysis showing the impact of website on customer service.

ATM	N	\bar{x}	SD	df	t	$P \leq .05$	Remark
Users	40	64.13	60.12	118	711	32.6	Not sig.
Non users	80	66.01	62.41				

Table 4 indicated that $P > .05$ ($326 > .05$). Therefore, null hypothesis 2 was retained (accepted). It remained as “there is no significant impact of website on customer service.

Discussion

The study discovered that there is a significant impact of Automated Teller Machine (ATM) on customer service. The result of the study could be attributed to the fact that people are forced to use ATM because it makes transaction easier, more convenient, saves time and reduces crime rate.

The result agrees with the studies of John (2014) Albert (2012), Chris (2015) and Reu (2013). However, the result is not in consonant with the studies of Berry and Thomas (2015) which found no significant impact of Automated Teller Machine (ATM) on customer service. It implies that every company or establishment owe their customers or clients a duty to install ATM machines. The result also indicated that website has no significant impact on customer service. This could be due to the fact that website requires a more complex knowledge than ATM. Also it could be attributed to the fact that majority of the people are not educated.

The result is in consonant with the studies of Segu and Zach (204), Oliver and Ammed (2015), and Ibekwe (2012). On the other hand, the study does not agree with the studies of Zetlin and Wasserman (2011) which found a significant impact of website on customer service.

Summary of Major Findings

Major findings were made from the analyses of the data collated for the study as follows:

1. Automated Teller Machine (ATM) has a significant impact on customer service.
2. Website has no significant impact on customer service.

Conclusion/ Further Research

1. There exists a significant impact of Automated Teller Machine (ATM) on customer service.
2. There exists no significant impact of website on customer service while further research should be focused on:
3. Use of Automated Teller Machine (ATM) by every company or establishment.
4. Grass root awareness on the use of website by the government.

REFERENCES

Albert, R. (2012). Technology and communication. Lagos: Rossy Publishing company.

- Ammad, A.B. (2015). You and technology. Kaduna Abibakar Publishing company.
- Berry, B.A. (2015). The path of excellence: world class leadership. Retrieved on 2nd August, 2015 from <http://www.worldclassleadership.com>.
- Chris, K. (2015). When technology works. Journal of technology. 16(20):110.
- Cletus, N. (2015). Technology and human survival. Enugu: Fourth dimension company limited.
- Gerber, S. (2015). Technological impact on customer service. Retrieved on 1st February, 2015 from <http://www.technologicalimpactoncustomerservice.com>
- Ibekwe, L. (2012). Customer service delivery. Owerri: Onyi Press.
- John, A. (2014). Technology in the modern world. Journal of Technology. 40(16):92.
- Linus, Y. (2015). Website in the world of modern business. Journal of business education. 42(61): 161-164.
- Oliver, T. (2015). Technology: definition and application. Retrieved on 5th September, 2015 from <http://www.technologicaldefinition.org>.
- Onuoha, L. (2012). Customer service in the contemporary. Journal of technology. 22(12):142.
- Paul, V. (2014). The mind and technology. New Jersey: Pretence Hill Publishers.
- Reu, R.R. (2013). The mind and technology. Journal of Technology. 23(15): 24-26.
- Richard, B. (2014). Impact of Technology: communication. Asaba: Oji publishing company.
- Segu, P. (2014). 21st Century technology. Ondo: Lily Universal Press.
- Thomas, C. (2015). The negativity of technology. New Jersey: Thomton Hill Publishers.
- Wasserman, E. (2011). Improve your customer service through technology. Journal of technology. 20(18): 3-7.

Zach, M. (2014). When customer service suppliers fail. Onitsha: Lechi Publishing Company.

Zetlin, M. (2011). Helping customers overcome fears. Journal of Leadership. 10 (7): 21-25.