

E-Memo: A Panacea for Efficient and Cost Effective Administration

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Abstract: Communication in organizations has since the 21st century been taking advanced shape. It has over time, been moved from the use of paper to the use of electronic gadgets. E-memo is the use of electronic gadgets such as computer, network channels and word processors to send and receive memo (s) in an organization. The use of paper memos to communicate the members of the staff in an organization is tasking, slow, prone to errors and relatively expensive to manage hence the need for electronic memo to curb those challenges. The data for this paper was gathered through interviews, observations and structured questionnaire to get the direct responses from different cadres of staff of the three universities in Ebonyi state; including Alex Ekwueme Federal University Ndufu Alike Ikwo(AE-FUNAI), Ebonyi State University (EBSU) Abakaliki and Evangel University Akaeze (EUA). The data collected was analyzed using Special Package for Social Sciences (SPSS) version 23. And was analyzed using Chi-Sq test as the statistical tool for Testing the hypothesis. E-memo is therefore of great relevance to an organization as it brings about faster rate of sending and receiving information, reduces communication cost and in turn leads to administrative efficiency.

Key words: E-Memo • Internet • Administrative Cost • Administrative Efficiency • Communication • Electronic Signature

INTRODUCTION

The need for effective communication among the members of staff of an organization has increased in the recent years. This is because every organization wishes to prove formidable in the global market and thereby displace/sideline their rivals. For this to be achieved, there is need for proper timely communication, among the members of the organization across the entire work force. This follows Barrett's assertion as cited in Husain which asserts that meaningful communication informs and educates employees at all levels and motivates them to support the strategy [1].

According to Collins dictionary, memo is defined as a short official note that is sent by one person to another within the same company or organization. It is similar to memorandum, minute, note or message.

Meanwhile organizational staff can be communicated through the use of memo, cell phones, fax machines, e-mail, face to face conversation /group meeting,

WhatsApp, Facebook etc. Hence the most widely used medium for internal communication within an organization is the use of memo system.

According to Agarwal and Garg [2], communication within on organizations are two groups, formal and informal, the types of formal communication are "up-to-down", "down-to-up" and horizontal communication. It suffices to say that up to down or down to up communication (vertical communication) has to do with the higher cadre of authority in organization communicating information down to the entire workforce or the lower cadre responding to or communicating to the higher authority of the organization. The horizontal communication talks about the communication within the staff of same level in organization.

A memo which in most cases contains the notice of a meeting, proposal or it's reply, a change in business policy of the organization, call to action regarding a topic, project etc is prepared by the sender (a staff of an organization) and delivered to the receiver (another staff

of same organization) either by physical means (paper and memo dispatcher) or through the use of electronic medium (such as email etc). The common aim of memo is to establish a viable and reliable communication with good understanding of the terms by both parties.

Memos can be prepared either on paper or electronically. In case of paper memo (manual memo), the sender has to prepare the document in a computer, print the hard copy of the memo, then sign it and physically deliver the prepared memo to the receiver whereas electronic memo can be prepare and delivered using electronic devices without the physical contact of the sender with the receiver. The receiver reads the memo, takes action or minutes on the memo, and sends either directly back to the sender or to a higher authority. The progression continues until the highest authority is reached who now takes the ruling action on the memo and delivers the feedback to the lower authorities. In the recent years, exploring all possible development of e-memo systems has captivated the interest of young computer scientists and researchers. This is because of the assumption that e-memo leads to efficient administration and reduces administrative cost. This paper is poised at investigating whether the statement premised on “electronic memo, a panacea for efficient and cost-effective administration in the tertiary institutions in Ebonyi state” is true or the otherwise is the case.

Statement of the Problem: Based on the preliminary survey carried out on the present administrative cost and efficiency of the tertiary institutions in Ebonyi State, the researcher found that the system is facing the following problems:

- Slow internal communication among the workforce of the institutions under review
- High administrative cost is incurred by the institutions especially in area of administrative communication
- Low administrative efficiency in the institutions due to communication gap.

Objectives of the Study: The broad objective of this study is to examine the effects of effective communication on employee performance in objective includes;

- To investigate the effect of effective communication and employee performance in the Universities in Ebonyi State

- To examine the cost of internal administrative communication in the Universities in Ebonyi State
- To ascertain whether e-memo can lead to cost effective and efficient administration procedure in the Universities in Ebonyi State.

Research Questions:

- Does effective internal communication promote employees' performance
- Can development of e-memo system solve the problem of high administrative cost?
- Can e-memo system solve the problem of administrative inefficiency?.

Research Hypotheses:

- H_0 = Effective internal communication promotes employees' performance in tertiary institutions in Ebonyi State.
- H_0 = E-memo reduces administrative cost in terms of communication in tertiary institutions in Ebonyi State.
- H_0 = E-memo can lead to administrative efficiency in tertiary institutions in Ebonyi State.
- H_1 = E-memo does not reduce administrative cost, does not promote employees' performance and reduces administrative efficiency in tertiary institution in Ebonyi State.

Literature Review

Communication in Organization: Organizational communication as defined by Dhaval [3] is the process whereby members gather pertinent information about their organization and the changes occurring within it. Ideally, organizational communication has two objectives: The primary objective is to inform the workforce about their tasks and the policy issues of the organization [4,5]. Organizational communication is defined as “transmitting news about the work from organization to employees through employees [6,7]. The second goal of organizational communication is to construct a community within the organization [8-11].

Communication within an organization takes many forms: from oral communication and written communication to communication through email/intranet/IM/business networks and even body language, which can be so important in today's increasingly multi-cultural workplace. And so, the way in which an organization communicates needs to

be consistent and clear across multiple channels. Today, an important aspect of official organizational communication includes electronic memo system. Communication is an essential business skill that encompasses reading, listening, speaking and writing. Administrative communications involve writing business correspondence such as memos, notices, reports and letters, speaking in meetings and presentations and listening to all levels of employees, co-workers and superiors to be productive and effective in your position. The quality of communications influences business in many areas, including working relationships, sales effectiveness and perceptions of leadership, (Cardenas, n.d).

Administrative Efficiency: This is the capacity of an organization, institution, or business to produce desired results with a minimum expenditure of energy, time, money, personnel, materials, etc [12].

Constant delay in accessing information by staff seems to limit their performance, which could create maladministration in coordinating of organizational activities. Therefore, performance of employees in relation with their duties and responsibility seems to question their communication techniques in terms of performance in The University [10]. Administrative efficiency is not only how efficiently you manage or prepare the documents rather it also includes how well you are responsive to matters and things coming to you via emails and any other means. As an example, if you prepare a document for your company with the breathtaking efficiency but if you are not responding the same documents reverted to you by your possible allies with queries and change request in time, you are running on low administrative efficiency. Success or failures of any firm, or organization depends on how well you keep and manage your data. For researching, the data analysis and data mining become vitally important. So, if a company is not doing well or in bad conditions, one of the possible reasons must be its negligence towards the data maintenance which is the sign of low administrative efficiency [2]. Once members of the organization feel free to share feedback, ideas and even criticism at every level it increases performance [3].

For me, I can say that organizational efficiency is achieved when reception and responses to relevant information that are capable of causing positive change to the organization are delivered in a timely fashion.

Administrative Cost: Cost is defined as the amount that has to be paid or spent to buy or obtain something. Administrative cost is therefore the cost of operating an institution. According to the paper published by American Council of Trustees and Alumni, ACTA [1], Administrative cost is taken to mean the functional expense classification of institutional support. It also includes an institution's costs for operating its development office, which may be higher at institutions that rely more on private philanthropy.

Research Methodology: In this section, we presented the steps used in carrying out the study. It systematically covers the design of the study, area of the study, purpose of the study, sample and sampling techniques, instrument for data collection, validation of the instrument, reliability of the instrument, method of data collection and method of data analysis.

Data Collection and Analysis: This research work used survey method to collect data in the study area which includes the three Universities in Ebonyi State namely: Alex Ekwueme Federal university Ndufu Alike Ikwo (AE-FUNAI), Ebonyi State University Abakaliki (EBSU), and Evangel University Akaeze (EUA). The data was collected through the primary and secondary sources. A sample size of 120 was selected and questionnaire was distributed to respondents. 100 respondents returned their responses while 10 responses from the returned ones were invalid. Likewise a stratified random sampling was applied. They were 20 items in the questionnaire of which some were rated with the 5-point Likert scale. The data collected was analyzed using SPSS to obtain the simple percentage, the respondent's characteristics and also to calculate the chi-square which was used to test the hypotheses.

Validation of the Instrument: The total number of 18 questions were initially formulated by the researcher and submitted to experts for criticism and validation before administering to the respondents. The experts examined the appropriateness and relevance of the questions to the research being conducted. That was done and a 20 question instrument was returned to the researcher after proper validation which was administered to the respondents.

Reliability of the Instrument: The instrument was pre-tested on two small groups of departments at different

intervals. The result of the pilot tests showed a high level of consistency hereby proving reliability of the instrument.

RESULT

The results of the study is presented in Tables 1 to 13.

Tables 1-13 show the frequency, percentage, valid percentage and cumulative percentage of the staff responses in AE-FUNAI, EBSU, and EUA all in Ebonyi state (analyses using SPSS). From Table 1, it is shown that the majority of the staff is within the ages of 18-45. They are 65 in number (representing 72.2%) while the staff within the ages 46-65 are 25 (representing 27.8% of the population). It then follows that the higher percentage of the workforce is young which indicates that the staff has the potency to learn new skills and that if any new communication medium is invented into the organization, they can easily imbibe it for the growth and better throughput in terms of organizational efficiency.

Findings: It can be seen in Table 2, that 82 staff (representing 91.1% of the population) make use of paper memo for their internal communication. 7 (representing 7.8% of the population) use email while 1 (representing 1.1% of the population) use electronic memo dispatch system.

In Table 3, 61 persons (representing 67.8%) are of the opinion that the biggest challenge they get in sending memo through email is to append hand-signed signature directly to the generated memo. 7 persons (representing 7.8%) said that their biggest challenge in using email system to send memo is their inability to send the memo. While 12 staff (representing 13.3%). 10 staff were unable to respond to that particular item in the questionnaire.

In Table 4, 7 staff (representing 7.8% of the population) strongly agree that the response time of paper memo is satisfactory. 17 (representing 18.9%) agree 16 (representing 17.8%) were undecided. 41 (representing 45.6%) disagreed to the item that the response time of paper memo system is satisfactory. 9 (representing 10.0%) strongly disagreed. Hence we have 50 staff (representing

Table 1: Age_Distribution_of_respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-45	65	72.2	72.2	72.2
	46-65	25	27.8	27.8	100.0
	Total	90	100.0	100.0	

Table 2: Type_Of_Memo_Used

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Paper memo	82	91.1	91.1	91.1
	E-mail	7	7.8	7.8	98.9
	E-memo System	1	1.1	1.1	100.0
	Total	90	100.0	100.0	

Table 3: Biggest_email_Challenge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Append Signature	61	67.8	76.3	76.3
	sending the mail	7	7.8	8.8	85.0
	signing in to the email system	12	13.3	15.0	100.0
	Total	80	88.9	100.0	
Missing	System	10	11.1		
Total	90	100.0			

Table 4: Response_Time_Of_Paper_Memos

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	7	7.8	7.8	7.8
	Agree	17	18.9	18.9	26.7
	Undecided	16	17.8	17.8	44.4
	Disagree	41	45.6	45.6	90.0
	strongly disagree	9	10.0	10.0	100.0
	Total	90	100.0	100.0	

Table 5: Reaction_To_Delay_in_Paper_memo_system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Resend the memo	21	23.3	23.9	23.9
	send a reminder	60	66.7	68.2	92.0
	call the receiver	7	7.8	8.0	100.0
	Total	88	97.8	100.0	
Missing	System	2	2.2		
Total	90	100.0			

Table 6: E_Memo_requires_less_Storage_Space

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	51	56.7	56.7	56.7
	Agree	28	31.1	31.1	87.8
	Undecided	10	11.1	11.1	98.9
	Disagree	1	1.1	1.1	100.0
	Total	90	100.0	100.0	

Table 7: E_memo_Last Longer_than_Paper_Memo

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	30	33.3	33.7	33.7
	Agree	41	45.6	46.1	79.8
	Undecided	11	12.2	12.4	92.1
	Disagree	4	4.4	4.5	96.6
	Strongly Disagree	3	3.3	3.4	100.0
	Total	89	98.9	100.0	
Missing	System	1	1.1		
Total	90	100.0			

Table 8: Paper_Memo_Management_Is_Very_High

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	47	52.2	52.2	52.2
	Agree	36	40.0	40.0	92.2
	Undecided	2	2.2	2.2	94.4
	Disagree	5	5.6	5.6	100.0
	Total	90	100.0	100.0	

Table 9: Qty_Of_Paper_Used_Is_High_In_Paper_Memo_system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	39	43.3	43.3	43.3
	agree	32	35.6	35.6	78.9
	undecided	13	14.4	14.4	93.3
	disagree	6	6.7	6.7	100.0
	Total	90	100.0	100.0	

Table 10: E_Memo_Reduces_Cost

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	53	58.9	58.9	58.9
	Agree	27	30.0	30.0	88.9
	Undecided	6	6.7	6.7	95.6
	Disagree	1	1.1	1.1	96.7
	Strongly disagree	3	3.3	3.3	100.0
	Total	90	100.0	100.0	

Table 11: E_memo_Can_Improve_Communication_Response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	59	65.6	65.6	65.6
	Agree	28	31.1	31.1	96.7
	Disagree	2	2.2	2.2	98.9
	Strongly disagree	1	1.1	1.1	100.0
Total		90	100.0	100.0	

Table 12: Internal_Communication_Promotes_Staff_Performance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	58	64.4	64.4	64.4
	Agree	16	17.8	17.8	82.2
	Undecided	4	4.4	4.4	86.7
	Disagree	11	12.2	12.2	98.9
	Strongly Disagree	1	1.1	1.1	100.0
Total		90	100.0	100.0	

Table 13: E_memo_LeadsTo_Administative_Efficiency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	43	47.8	47.8	47.8
	Agree	29	32.2	32.2	80.0
	Undecided	8	8.9	8.9	88.9
	Disagree	7	7.8	7.8	96.7
	strongly disagree	3	3.3	3.3	100.0
Total		90	100.0	100.0	

Source: From Field Survey (August, 2019)- Analyzed in SPSS

55.6%) altogether that disagree(i.e both disagree and strongly disagree) meaning that the response time of paper memo is not satisfactory.

In Table 6, 51 staff (representing 56.7%) strongly agree that e-memo improves storage space. 28 (representing 31.1%) agree. 10 (representing 11.1%) were undecided, while 1(representing 1.1%) disagreed

In Table 7, 30 staff(representing 33.3%) strongly agree that e-memo lasts longer than paper memo. 41 (representing 45.6%) agree. 11 (representing 12.2%) were undecided, 4 (representing 4.4%) disagreed. 3 (representing 3.3%) disagreed.

In Table 8, 47 staff(representing 52.2%) strongly agreed that paper memo management is very high. 36 (representing 40.0%) agreed. 2 (representing 2.2%) were undecided while 5 (representing 5.6%) disagreed.

In Table 9, 39 staff (representing 43.3%) strongly agree that the quantity of paper used in paper memo system is high. 32 (representing 35.6%) agree, 13 (representing 14.4%) were undecided, while 6 (representing 6.7%) disagreed.

In Table 10, 53 (representing 58.9%) strongly agree that e-memo reduces communication cost in an

organization. 27 (representing 30.0%) agree. 6 (representing 6.7%) were undecided. 1 (representing 1.1%) disagree, while 3 (representing 3.3%) strongly disagree.

In Table 11, 59 (representing 65.6%) strongly agree that e-memo system can improve communication response, 28 (representing 31.1%) agree, 2 (representing 2.2%) disagree while 1(representing 1.1%) strongly disagree.

In Table 12, 58 staff (representing 64.4%) strongly agree that internal communication promotes staff performance. 16 (representing 17.8%) agree, 4 (representing 4.4%) were undecided, 11 (representing 12.2%) disagree while 1(representing 1.1%) strongly disagree.

In Table 13, 43 staff (representing 47.8% of the population) strongly agree that e-memo leads to administrative efficiency. 29 (representing 32.8%) agree 7 (representing 7.8%) disagreed. 3 (representing 3.3%) strongly disagreed. Hence we have 72 staff(representing 80.0%) altogether that agree(i.e both strongly agree and agree) meaning that e-memo leads to administrative efficiency.

DISCUSSIONS

Hypotheses Testing and Analysis

Crosstabs

14(a) Case Processing Summary

		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Age * Internal_Communication_Promotes_Staff_Performance		90	100.0%	0	0.0%	90	100.0%

14(b) Age * Internal_Communication_Promotes_Staff_Performance Crosstabulation

		Internal_Communication_Promotes_Staff_Performance					
		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
Age	18-45	Count	42	10	3	9	65
		Expected Count	41.9	11.6	2.9	7.9	65.0
46-65		Count	16	6	1	2	25
		Expected Count	16.1	4.4	1.1	3.1	25.0
Total		Count	58	16	4	11	90
		Expected Count	58.0	16.0	4.0	11.0	90.0

14(C) Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.660 ^a	4	.798
Likelihood Ratio	1.928	4	.749
N of Valid Cases	90		

a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is .28.

Source for tables 14a-14c:Field Survey; August 2019 analyzed in SPSS

Decision Rule: From the SPSS result obtained and shown in Table 14c, chi-sq calculated (1.660^a) is < chi-sq Tabulated (9.488), hence we accept H_0 hypothesis which states that Effective internal communication promotes employees' performance in tertiary institutions in Ebonyi State. And reject H_1 which states that Effective internal communication does not promote employees' performance in tertiary institutions in Ebonyi State.

Crosstabs

15(a) Case Processing Summary

		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Age * E_Memo_Reduces_Cost		90	100.0%	0	0.0%	90	100.0%

15(b) Age * E_Memo_Reduces_Cost Crosstabulation

		E_Memo_Reduces_Cost					
		Strongly agree	Agree	Undecided	Disagree	Strongly Disagree	Total
Age	18-45	Count	37	22	3	1	65
		Expected Count	38.3	19.5	4.3	.7	65.0
46-65		Count	16	5	3	0	25
		Expected Count	14.7	7.5	1.7	.3	25.0
Total	Count	53	27	6	1	3	90
	Expected Count	53.0	27.0	6.0	1.0	3.0	90.0

15(c) Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.215 ^a	4	.522
Likelihood Ratio	3.420	4	.490
N of Valid Cases	90		

a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is .28.

Decision Rule: From the SPSS result obtained in Table 15c above, since chi-sq calculated (3.215^a) is < chi-sq Tabulated (9.488), hence we accept H_0 hypothesis which states that e-memo reduces communication cost in terms of administration in tertiary institutions in Ebonyi State. And reject H_1 which states that E-memo does not reduce communication cost in terms of administration in tertiary institutions in Ebonyi State.

15(a) Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Age * E_memo_LeadsTo_Administrative_Efficiency	90	100.0%	0	0.0%	90	100.0%

15(b) Age * E_memo_LeadsTo_Administrative_Efficiency Crosstabulation

		E_memo_LeadsTo_Administrative_Efficiency						
		Strongly agree	Agree	Undecided	Disagree	Strongly Disagree	Total	
Age	18-45	Count	36	17	5	5	2	65
		Expected Count	31.1	20.9	5.8	5.1	2.2	65.0
	46-65	Count	7	12	3	2	1	25
		Expected Count	11.9	8.1	2.2	1.9	.8	25.0
Total		Count	43	29	8	7	3	90
		Expected Count	43.0	29.0	8.0	7.0	3.0	90.0

16(c) Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.934 ^a	4	.204
Likelihood Ratio	6.028	4	.197
N of Valid Cases	90		

a. 4 cells (40.0%) have expected count less than 5. The minimum expected count is .83.

Decision Rule: From the SPSS result obtained from Table 16c above, since chi-sq calculated (5.934^a) is < chi-sq Tabulated (9.488), hence we accept H_0 hypothesis which states that E-memo leads to administrative efficiency in tertiary institutions in Ebonyi State. And reject H_1 which states that E-memo cannot lead to administrative efficiency in tertiary institutions in Ebonyi State.

It therefore implies that for effective staff performance in any organization, there is serious need for all the staff of the organization to feel a sense of belonging through effective communication. The notice of meetings/urgent meetings, notice about change of organizational policy, events etc need to be effectively communicated to the entire workforce or HODs, Deans etc as the case may be. Electronic memo dispatch system is an excellent option for achieving this in this 21st century as it enhances quick delivery and response time as seen by the respondents summarized in Tables 11 and 12.

According to American Council of Trustees and Alumni, ACTA (2017), administrative cost is taken to mean the functional expense classification of institutional support. It also includes an institution's costs for operating its development office, which may be higher at institutions that rely more on private philanthropy. From the data gathered in this research, Table 6 and Table 10 prove that e-memo reduces administrative communication cost. From Table 2, it is clear that 82 staff (representing 91.1%) of the population use paper memo for internal communication. In table 9: 35.6% and 43.3% agree and strongly agree respectively that the quantity of paper used in running paper memo system is high therefore money spent in getting the paper is also high, and of course tens and hundreds of mail dispatchers in different departments and faculties need to get their salaries as well. Yet with e-memo dispatch system, one staff can manage the delivery and reception of memos in an organization thereby reducing the cost.

In order way round, Matt [9] argued that administrative efficiency is not only how efficiently you manage or prepare the documents rather it also includes how well you are responsive to matters and things coming to you via emails and any other means. Phattanacheewapul and Ussahawanitchakit [11] in his view has it that administrative efficiency is the capacity of an organization, institution, or business to produce desired results with a minimum expenditure of energy, time, money, personnel, materiel, etc. Hence for the responses analyzed and summarize in Tables 6,7,10,13, Table 13 has that, 32.2% and 47.8%(80% altogether) of the population agree and strongly agree respectively that e-memo dispatch system can lead to administrative efficiency. While 7.8% and 3.3%(11.1%) of the population disagree and strongly disagree respectively to that. Therefore, we can say that e-memo can lead to administrative efficiency. More so from test of hypothesis 2 we have proved that e-memo reduces administrative cost; as achieving your desired aim with minimal cost is efficiency. From Table 11, we saw that E_memo Can Improve Communication Response and this increases the efficiency of any administrative setting. And e-memo also improves storage space. Hence, small space can be used to store much information and this helps to boost the efficiency of an organization.

Again we know that signature is a proof of the authenticity and authority of a document. It is clear that a **signature** is a handwritten (and often stylized) depiction of someone's name, nickname, or any symbol that a person writes on documents as a proof of identity and intent. The writer of a signature is a **signatory** or **signer**. <https://en.wikipedia.org/wiki/Signature>. The purpose of a signature is to authenticate a writing, or provide notice of its source, and to bind the individual signing the writing by the provisions contained in the document.

What Is an Electronic Signature?: Various legal definitions exist for electronic signatures, but the term most generally refers to the acknowledgement or adoption of an electronic message, transaction or document [15]. Some examples include:

- A typed name at the end of an email
- A typed name on an electronic form or document
- An image of a handwritten signature on a transmitted fax
- A personal identification number (PIN) entered into a bank ATM
- Clicking “agree” or “disagree” on an electronic “terms and agreements” contract

- A handwritten but digitally captured signature made on a touch device, such as a tablet or smartphone (sometimes referred to as a “dynamic signature”)

However, phishing involves emails that appear to be from legitimate sender but are scams which ask for verification of personal information, such as an account number, a password, or a date of birth. If unsuspecting victims respond, the result may be stolen accounts, financial loss, or identity theft. In recent years:

- As part of the Sony Pictures hack, over one hundred and seventy thousand (170,000) pieces of email between top executives ended up on Wikileaks [3].
- US politician Sarah Palin email has been hacked on September 16, 2008 during the 2008 U.S presidential election campaign in order to find embarrassing or incriminating correspondence [4].
- Former United States president, George H.W. Bush had his email hacked in October, 2012. [9].

With the increase in the global technology, cyber criminal, keep reinforcing their sophistry in their cyber theft. Therefore, in a bid to curb phishing and checking of e-mail hacking, it's imperative to include digital hand-signed signature to messages that are sent online. This is because it is harder to manipulate patterns of one's hand-signed signature than the simple normal text placed in the mail *signature block* as mail signature.

Hence, in Table 3 of the responses analyzed in this research, 61 staff(representing 67.8%) said that the biggest e-mail challenge now is to append electronic hand-signed signature to the email document. 7 staff(representing 7.8%) said that sending the mail is their challenge while 12 staff(representing 13.3%) said that signing in to the mail is their challenge. 10 staff(representing 11.1%) did not respond to this item. Therefore, it is quiet imperative to incorporate hand-signed electronic signature to messages that are meant to be communicated across the workforce in an organization. This will help to secure the authority and authenticity of the information.

CONCLUSION

It is therefore evident from the findings in this research that effective communication is paramount for better staff performance. Positive change in any successful organization is brought about by effective communication among the members of the staff. Electronic

memo dispatch system proves to be the most effective among all the communication platforms for organizational internal and official communication. E-memo quick response to organizational messages/information, aptness in handling delay all make it an effective tool for internal communication in the tertiary institutions in Nigeria. Including electronically-signed signature will make it a reliable communication platform as it secures the identity, source and authority of the information communicated.

More so, we see that e-memo dispatch system drastically reduces communication cost across the departments and faculties in tertiary institutions in Nigeria. The cost of paper items, cost of salaries paid to memo dispatch personnel(*for paper memo system*)*etc* is cut off as one or two may now manage the system effectively for the entire organization.

In a nutshell, it is now clear that e-memo dispatch system is a panacea for cost effective administration in tertiary institution in Ebonyi State and in Nigeria.

Recommendation: All cadres of staff in tertiary institution should be carried along through effective communication in the institution. Hence in this 21st century, electronic memo dispatch system is a very good platform to achieve the desired effectiveness in communication. Therefore, e-memo system should be introduced in all tertiary institutions in Nigeria.

For sustainable reliability of the of the e-memo system, there should be more complex security measures implemented on the system much more than password security which can easily be hacked by cybercriminals. This will help to prevent the rate of phishing and other cyber attacks in the system. Based on the responses summarizes in Table 3 above, hand-signed digital signature should also be implemented in the system so as to enhance authentication of the communicated information. This is because it is harder to decode the pattern of Hand-signed digital signature than just plain text placed at the signature block (*in the case e-mail*.)

It is quite imperative to engage all the university staff(*both academic and non-academic*) in ICT training to enable them use the system effectively.

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