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PERCEIVED USEFULNESS AND SOCIAL INFLUENCE OF USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT), FOR STAFF PERFORMANCE, IN HIGHER INSTITUTIONS IN BAUCHI STATE, NIGERIA

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Abstract
This research is set to investigate the perceived usefulness and social influence of information and communication technology (ICT), for employees' effective performance in higher institutions in Bauchi state, Nigeria. The study adopted survey method, with 168 as the total population. Consequently, 168 participants were drawn from two relevant higher institutions, using stratified sampling method. Therefore, one hundred and sixty eight (140) questionnaires were used for data collection. Out of the (168) Questionnaires distributed, seventy one (71%) percent (120) was returned and used for data analysis, by means of Smart PLS-SEM 3.0. The results revealed positive significant effect of social influence on staff performance H^2 ($t = 5.449$, $p = 0.000$), while perceived usefulness showed positive influence but not significant, H^1 ($t = 1.181$, $p = 0.238$). One of the practical implications of this study is that its findings will inspire policymakers and stakeholders understand the major remedy to poor employee performance is ICT adoption and implementation. The paper recommends, among others, that for future research, the number of questionnaires should be increased, in order to obtain larger opinions and should also employ both qualitative and quantitative research approaches with additional variables in the objectives.

Keywords: Perceived Usefulness, Social Influence, Staff Performance, Information and Communication Technology (ICT), Higher Educational Institutions.

1.0 Introduction

In the new global setting and the increased clamour for efficiency, it becomes imperative for organizations to use modern technological tools. The utilization of such tools became vital for both public and private sector operation. It equally satisfies societal requirement for effective service delivery and also provides the essential tools to support employees' performance (Jasen, 2012). One of these modern technological tools is Information and Communication Technology (ICT). ICT is an indispensable portion of the policy of the global development goal (Adeoye, Oluwale, & Blessing, 2013). As Obiri-Yeboah, Kwarteng, and Djan (2013) opined, in the 21st-century ICT plays an active role in the development of education and contributed immensely to the improvement of institutions of higher learning across the globe. Today, technological gadgets have become prerequisite to effective service delivery in both the public and private sectors. Invariably, information and communication technology possess all the capacities and societal flexibility required in running an organization, as well as provide solutions to monotonous paperwork, ineffectiveness, inefficiency, incompetency, misappropriation and administrative disorder, in various levels of authority including higher institutions of learning (Jasen, 2012).
The efficient performance of staff in the public sector enhances stable principles, togetherness, standard, and worthy practices that translates into the overall performance of the establishment. However, educational institutions are seeking for ways of improving their non-teaching employees' performance in different spheres, even though, confronting the current technological challenges is becoming cumbersome.

This suggests that, one of the roles a public manager is expected to perform today is to help restructure public self-reliance and governmental backing. Numerous institutions of higher learning within the globe have incorporated internet-based systems of learning in the accomplishment of their extreme performance in a broader understanding of the end user acceptance procedure (Aswan, Ahmad, and Smedley, 2013). In the same direction, the speedy step of globalization linked with the revolution in ICT has stimulated even governments within the globe to increase the implementation of e-services in the delivery of public responsibilities (Asogwa, 2013). It has therefore become imperative to an employee, in his/her aspiration for higher job performance, and considering the

value of technological tools, to have positive perception and prior information of the available tools at his/her disposal. Although, some individuals recognize their evaluations of usefulness subject to the corresponding tasks (Sohn, 2017).

In line with the foregoing, the main objective of this study is to examine the key technological tools that affect individual performance of non-teaching staff in the tertiary institutions of higher learning in Bauchi state, Nigeria. Specifically, the study aimed to;

(i) Determine the perceived usefulness (PU) of the utilization of office technology by non-teaching staff,
(ii) Examine how social influence affects the use of ICT facilities by non-teaching staff.

2.0 Literature Review

This section discusses some relevant findings from studies conducted on information and communication technology (ICT) and other related literature, with focus on variables such as staff performance, perceived usefulness, and social influence.

2.1 Staff performance (SP)

According to Foah (2014) Staff performance refers to the work related accomplishments expected of an employee and how perfect those tasks were anticipated to be accomplished. Consequently, this research conceptualized employee job performance as the level to which the efficient use of a computer increases effective staff performance. Individual performance is the kind of contribution that an employee gives to his/her establishment just to support productivity. However, Performance is a strong forecast of an employees' improvement in his/her profession (Carmell, Shalorn, & Weisberg, 2007). In the other way round, performance of an employee is essential if he/she is to increase the level of his/her contribution in a specific organization, and which at the end bring about general efficiency (Chong, 2013). The underline argument of these scholars derives from the Signalling Theory which presume that the amount of participation of individual employee influence the organizational promotional decision on employee that will upgrade him in his/her career and yet increase the amount of attainment of the overall objective of the organization. Signalling theory suggests that an individual employee's previous record of excessive job performance signals an organization regarding his/her effective job performance and anticipated to achieve efficiency in the future in his/her career (Harris, Pattie, & McMahan, 2015). Hence, higher performance shows that an individual employee has the human capacity needed in his/her career for the advancement of the general organizational objective. Therefore, an employee should have an extra-value to improvement within his profession (Harris et al. 2015).

Nkereuwen, (1996) opined that an employee's performance in an organization significantly influences his/her opportunity of promotion which will henceforth lead to adjustment of status, notional promotion, salary increment, etc. He further observed that, although employee job performance is credited to the individual actor, it invariably raises the productivity of an organization. He therefore concludes that attribution of individual job performance relates to the advancement of status.

Individual performance is therefore opened to guarantee upgrade since the employee capability accomplishes and enables accomplishment of objective. Thus, according to Kirchmeyer (2005) the degree to which an employee demonstrates higher job performance enhances his/her attainment of promotion and salary increment which indicates advancement in working performance. For example, a lecturer in a higher educational institution stands more chances of status upgrade, in recognition of his/her publications especially in reputable journals as well as participation in conferences (Beinomugisha, Kamya, & Said, 2014). Consequently, high job motivation inspires greater productivity leading to individual job satisfaction.

2.2 Perceived Usefulness (PU)

Perceived usefulness is one of the main constructs of technology operation behaviour as far as information and communication technology is concerned. However, computer adoption theories have been used globally to discover the behaviour of the individual on technology acceptance in all kinds of technological attributes, most prominent, the Technology Adoption Model (TAM) propounded by Davis (1989). Davis attempted to explain

how certain influences affect behaviour of individual on acceptance of technology related devices. The model has over the years been largely utilized to explore the individual behaviour on technology acceptance in various forms of information systems. TAM suggests that two factors influence the decision of individuals about how and when they will use technology-related devices;

a- Perceived Usefulness - this touches employee's behaviour in accepting technology. In other words, it refers to the degree to which a person believes that using a particular system would increase his or her job performance within an organizational context,
b- Perceived Ease of Use – refers to the degree to which the prospective user expects the target system to be free of effort (Davis, 1989).

Furthermore, perceived usefulness suggests the probability that efficient utilization of technological gadgets could ensure a greater job performance in a particular administrative surrounding (Davis et al., 1989). Correspondingly, Surendran (2012) in line with technology acceptance model (TAM) opined that the element of perceived usefulness and perceived ease of use are the foremost computer usage behaviour factors that enhance performance. Perceived usefulness has been discovered to be an inspiration toward the attainment of behavioural target (Davis 1989; Taylor & Todd, 1995). Thus, Davis (1989) recommended certain dimension tools that motivates greater efficiency. These include four generally utilized dimensions commonly accepted:

(a) System adoption and utilization, ensures more efforts in my job performance,
(b) Making use of technology enhances my efficiency,
(c) Believing that system use is valuable in performing a task and
(d) My job performance becomes more effective by using the application.

Several studies were conducted on perceived usefulness such as the ones by Law, Grundy, Vasa, & Cain (2016); Pumawirawa, Pelsmarkesr, & Dens (2012); Antonio, Ana, & Aurora (2013). For example, Antonio, Ana, and Aurora (2013) conducted a research on PU, concerning gender differences in Spain. The research employed quantitative method which revealed that no significance difference existed in the two major variables of Technology acceptance in relation to gender. Consequently, they suggested self-efficacy or social norms, more especially in the females' cases, where the power of the clarifying was very lower. Similarly, Antonia et al (2013) conducted yet another research on perceived usefulness and gender difference equally in Spain and employed quantitative research approach and data analysis using regression. The research suggested that data obtained from other institutions, nations or regions would contribute further to the results generalization.

Conversely, another quantitative research was conducted by Pumawirawa, Pelsmarkesr and Dens (2012) in Belgium and focussed on equilibrium and categorization inside an internet in online assessments, and used the variables of usefulness effect approaches and intention. The results of the findings revealed that perceived usefulness of the evaluation of internet recognized involved the situation equilibrium and classification. They however suggested that, there is need for further studies to explore more on the phenomenon and extend the findings.

2.3 Social Influence (SI)

Social influence as described by Venkatesh et al. (2003) is a situation whereby the user perceives the influences of important persons and individuals of significance in the society in his or her use of a particular technology while the facilitating conditions (organizational and technical infrastructure) remain available. Venkatesh et al further measured social influence with a four element degree built on the acceptance of six models. The six models comprised (a) the theory of reasoned action (TRA), (b) the TAM-two, (c) the Theory of planned behaviour (TPB), (d) the Consumer technology acceptance model, (e) the Ideal of individual computer utilization, and (f) Innovation diffusion theory. However, Venkatesh et al measured the dimension of social influence with the complete subscale centred on the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975).

Social influence entails the amount to which an individual believes persons who are significant to him or her, needs her/him to do a certain behaviour (Lee, 2010; Liao, Chen, & Yen, 2007; Venkatesh et al., 2003). One of the constructs of the Theory of Planned Behaviour, subjective norm, talks about this factor as a personal norm and offers theoretical grounds for its association with individual conduct (Ajzen, 1991; Ajzen, 1985; Ajzen & Fishbein 1980; Ajzen & Fishbein 1973). This construct is similar to a number of models of user acceptance of ICT (Hsu & Lu, 2004; Taylor & Todd, 1995), and which according to Lee (2010) has empirically acknowledged strong backing as a driver of user behaviour. However, all the underlying theoretical arguments depend on a person's volition to identify with the others' beliefs and his/her degree of attachment to group norms (Goodwin, 1987). Such social influences and interactive outcomes are neither different in an e-learning setting and in the utilization of technology communicating instruments (Hung & Chang, 2005; Lai & Chen, 2010).

In today's environment which is dominated by technology, the effect of information gadgets in promoting individual's awareness is apparent. Hence information received and disseminated to others all over the place through the ICT has improved individual's worldview. Normative influence greatly enhances user's engagement to practice a particular technology which could otherwise be different.

This research attempted to highlight the significance of the informational influence in e-learning and make available a rigorous basis for understanding its role in shaping individuals' behavioural attitude and intention. Consequently, social influence could therefore be seen as a situation in which a user perceives that others have accepted the system hence stimulate his/her interest and subsequent participation. Hence, users may employ ICT because their colleagues and friends are using it and clearly encourage its use (Lee, 2010). Similarly, when an individual discovers that people around him/her use an ICT tool in an e-learning setting and perceive the profits of its employment, that an individual will be extra willing to use it. Accordingly, Aiken and West (1996) and Allison's (1999) opined that such a user may request for a non-stop exploration of the technology and its continuous usage.

2.4 Study Hypotheses

In line with the above, this study formulated two hypotheses to guide the data collection and analysis. The first hypothesis H^1 aimed to investigate the relationship between social influence and staff performance in tertiary institutions in Bauchi state, Nigeria. While the second hypothesis H^2 set up to discover the relationship between perceived usefulness (PU) and employee job performance (EJP) in tertiary institutions in Bauchi state, Nigeria.

H^1 There is a positive relationship between Social Influence (SI) and Staff performance (EJP).

H^2 There is a positive relationship between the perceived usefulness (PU) and staff performance (SP).

2.5 Theoretical Framework

The Technology Adoption Model (TAM) provided the theoretical basis for this study. Having relied on the Theory of Reasoned Action (Fishbein & Ajzen, 1975) TAM was initially developed by Davis (1989). The theory holds that user's motivation can be explained by three factors; *Perceived ease of use*, *Perceived usefulness* and *Attitude toward using the system*. According to this model, the attitude of the user is the major determinant of whether he/she would use the system, and which in turn, is influenced by two major beliefs; perceived influence and perceived ease of use. Subsequently, TAM evolved into a leading model in explaining and predicting system use (Chuttur, 2009).

3.0 Methodology

This study adopted a quantitative research approach of data collection and analysis. Accordingly, the study used stratified sampling method in the selection and Smart PLS 3.0 for the analysis. The study was conducted on two tertiary institutions in the state which are; College for legal and Islamic studies, Misau and School of Health Technology, Ningi. The population of this study included all the non-teaching staff of these two institutions totalling one hundred and sixty-eight (168). Hence a total of 168 Questionnaires was distributed amongst the non-teaching staff. However, out of the total questionnaire distributed, 120 comprising seventy one percent (71%) were returned useful upon which the analysis was based. Accordingly 71% level of response could be termed sufficient (Creswell, 2012). The study adopted the five (5) points Likert scale that displays 'strongly disagree-1',

'disagree -2', 'neutral- 3', 'agree- 4', 'strongly agree- 5' in line with its standard principle (Sekaran & Bougie, 2009).

Table 3.1, How Questionnaires were Distributed and Retrieved.

Institutions	**Questionnaires Distributed**	**Questionnaire sReturned**	**Percent (%)**
CLIS Misau	154	108	70%
SOHTECH Ningi	14	12	85%
Total	**168**	**120**	**71%**

4.0 Results and Findings

This study was set to explore the effect of Perceived Usefulness (PU) and social influence in the use of ICT on performance among non-teaching staff in Bauchi state tertiary education institutions. Table 4.1 below displays the results of the finding of the two independent constructs, perceived usefulness (PU) and social influence (SI) on the dependent variable, staff performance (SP), in the same vain with the objectives and the statement of the hypotheses of this study. Discussion of the two constructs' direct effect, in specific, the contributions of each independent variable, was categorized by the values of the standard beta in the structural model tests in PLS (Chin, 1998). Moreover, according to Hair et al. (2010), in the structural model testing, the relationship of the independent constructs on the dependent construct, the significant level accepted was set at $p < 0.5$ and $p < 0.01$..

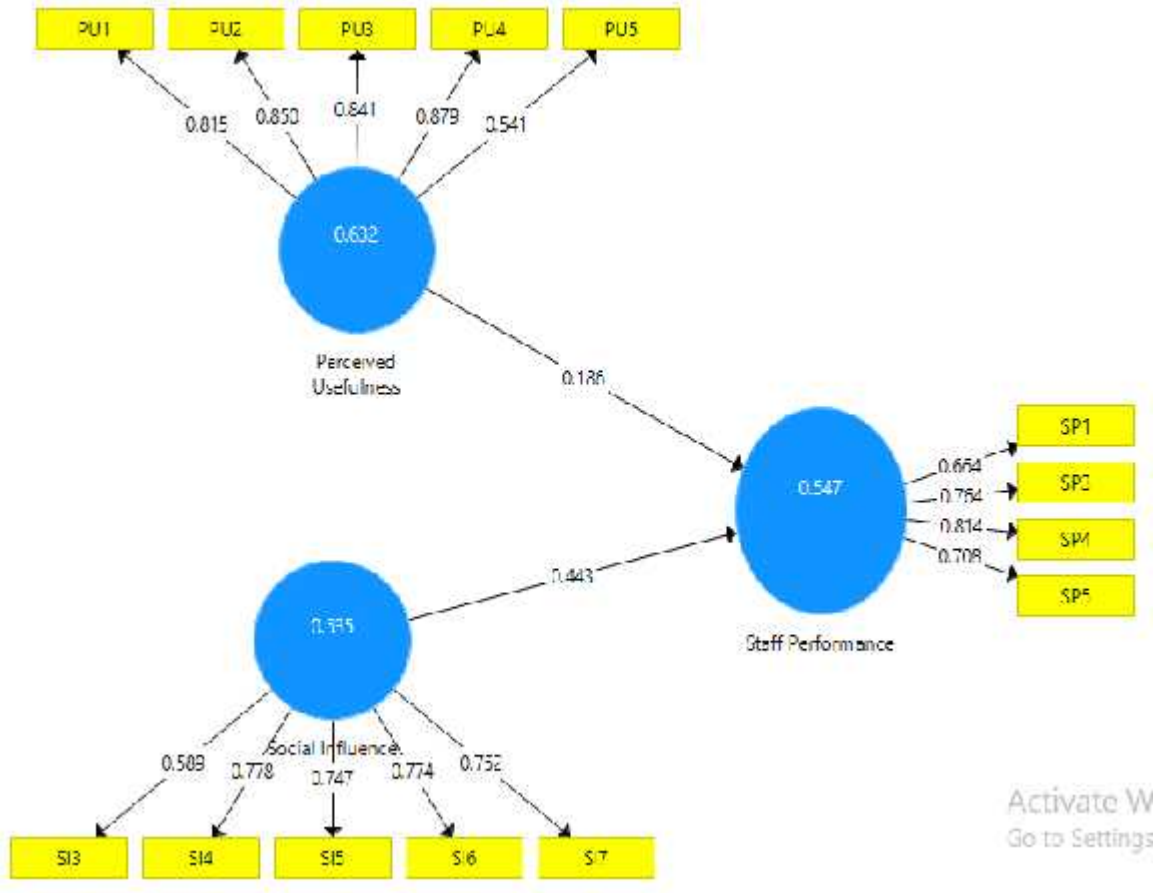

Figure 4.1 Showing the validity and Reliability of the study constructs.

Table 4.1, Results of Construct Reliability and Validity

Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
SP	**0.722**	**0.828**	**0.547**
PU	**0.901**	**0.851**	**0.632**
SI	**0.780**	**0.812**	**0.535**

Source: For the purpose of this study

Table 4.1 above portrays the scores of the two study constructs obtained in the AVE. It has been observed that all the AVE(s) acquired by the variables have the required value of (> 0.5) and above, this corresponded with a particular judgment that has the viewed of ≥ 0.50, AVE's scores reflect suitable for analysis (Anderson &Gerbing 1988; Shook, Ketchen, Hult & Kacmar, 2004; Vazquez-Cano, 2017; BarretoCarvalho, et al., 2017).

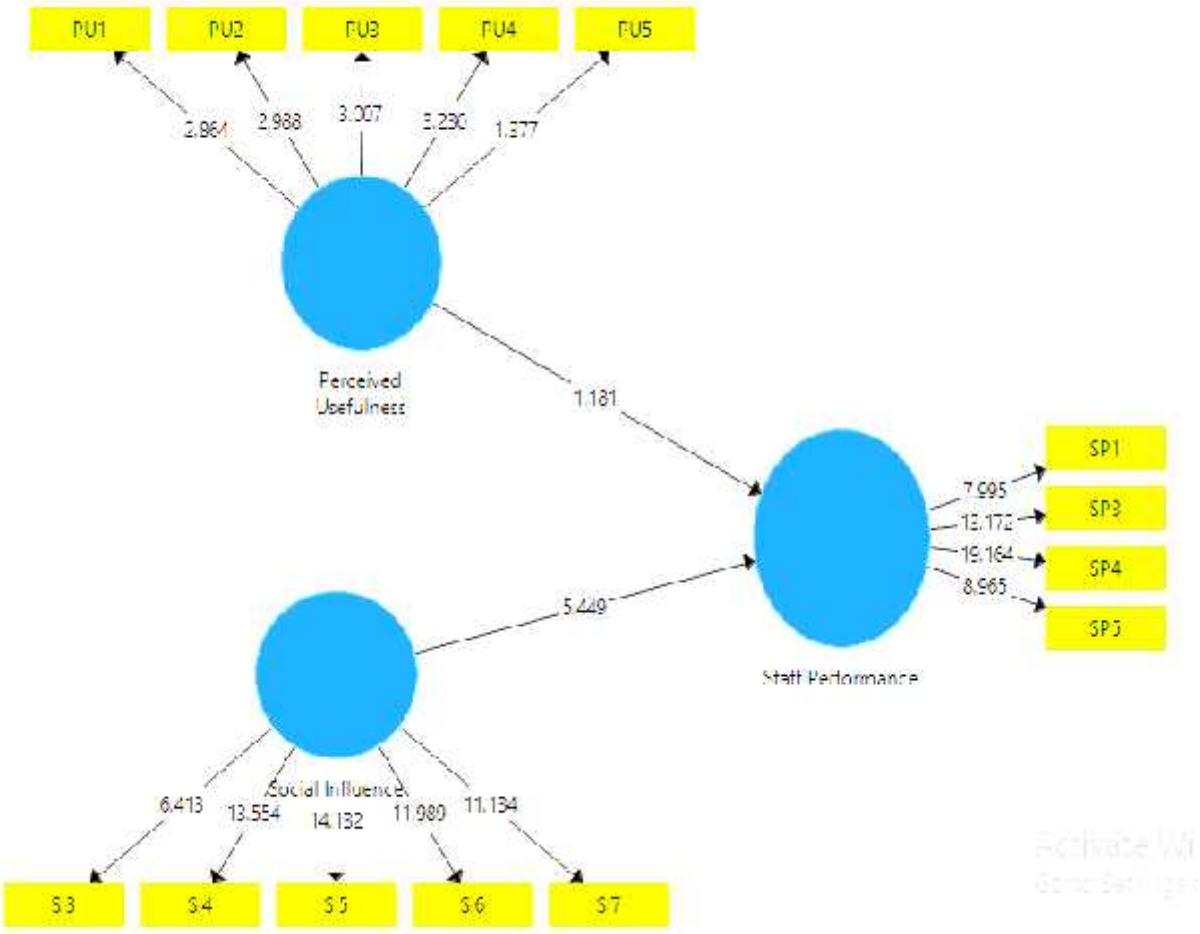

Figure 4.2: Showing the Direct Effect

Table 4:2,Results of Main effect between Dependent and Independents Variables

H^0	Relationship	(Original)	Standard Deviation	T-Values	P-Values	Decision
H^1	PU->EJP (SP)	0.186	0.158	1.181	0.238	Not-Supported
H^2	SI->EJP (SP) (SP)	0.443	0.081	5.449	0.000	Supported

Source: For the purpose of this study

Table 4.2 above show the relationships between the dependent and the independent variables, by expressing the statistical outcomes of the standardized beta, T-values and P-value. According to the views of some scholars, (Chin, 2003; Thelwal, Haustein, Lariviere, and Sugimoto, 2013), in social science correlated research, it has been recommended that level of significance of ($p < 0.01$) or ($p < 0.05$) are frequently very essential for the direct effect, and the statistical investigation for reliable results in statistical measurement. In line with this research in particular, one of the path (H^2) established positive and strong significance effect, H^2 (P =0.00), while the other path (H^1) has positive but not significant, H^1 (P =0.238). Therefore, this result displays that one of the two independent constructs have positive support to dependent variable, while the other construct was not supported. The results revealed that the greater the non-academic staff social influence of use of ICT facilities, the higher the efficiency of their performance ($t = 5.449$, $p = 0.00$), while, perceived usefulness of use of ICT facilities showed positive but not significant in increasing staff performance, ($t = 1.181$, $p = 0.238$). This signifies that the non-teaching staff performance is positively and strongly affected by their social influence of the use of ICT facilities. Therefore, their performance has positive effect by the social cognitive influence of the use of information and communication technology tools.

4.1 Conclusion

The hypothetical evidence on the direct effect of ICT on non-teaching staff job performance has been delivered by this paper. Nonetheless, literature review revealed that, if information and communication technology attributes can be utilized appropriately, it will boost the morale and general performance of the non-teaching staff. This became evident in this research through an assessment of the relationships between the dependent and the independent variables and their precise effect on an employee social influence of use of technological elements. Hence, the predicted and tested hypotheses of this study could help researchers to understand the complicated issues better. Some recognized empirical studies established the positive effect of ICT on boosting non-teaching staff job performance in relation to productivity and value. Other findings as well disclosed that to attain the best staff performance, it is significant to support technological facilities within institutional processes. The foremost conclusion here is that the social influence of use of ICT tools among non-teaching staff contributes positively to the psychological intention to use the technology. The results discovered that, the independent variable, social influence of use of technology, has strong positive and significant support to the dependent variable, while perceived usefulness resulted positive but not supported. The research therefore concludes that the availability of Information and Communication Technology (ICT) gadgets and the essential of participation of users are very vital in influencing the individual behaviour intention to use the ICT attributes.

Recommendations

The study hereby submits the following recommendations;

1. Forthcoming researches should measure information and communication technology adoption in both public and private educational institutions for broader coverage
2. In order to obtain greater views, the number of questionnaires should be increased and both quantitative and qualitative approaches to research should be employed in measuring ICT use and non-teaching staff performance.

3. Finally, the findings of this study will contribute toward modification of concept associated with technology adoption, and increase the understanding of the influence of technology adoption on non-teaching staff performance.

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