

Administrative Variables and Provision of ICT Services in Colleges of Education South-South Zone, Nigeria

¹*Ayang John Etura, ²Igiri Charlce Egbonyi, ³Mark Ohiero Okoli

^{1,2}Lecturer, Department Educational Foundations and Administration, Cross River State College of Education, Akamkpa-Nigeria

³Lecturer, Department of Biology, Cross River State College of Education, Akamkpa-Nigeria

*Corresponding Author's E-mail: eturajohn@gmail.com

Abstract - The main purpose of the study was to examine administrative variables and provision of ICT services in Colleges of Education South-South Zone, Nigeria. Four specific objectives, four research questions and four null hypotheses guided the study. Survey research design was adopted for the study. Stratified random sampling technique was used to select 50 staff and 200 students from the population of the study. Two instruments were developed for data collection known as Administrative Variable Questionnaire (AVQ) and Provision of ICT Services Questionnaire (PICTSQ). The instrument was forwarded to three experts in Measurement and Evaluation for scrutiny and vetting to establish its face and content validity. Thirty (30) respondents outside the study area were subjected to trial testing to ascertain the internal consistency of the instrument. Responses obtained were subject to testing using Cronbach alpha reliability coefficient. The reliability index of the instruments was 0.82 and 0.78 for administrative variables and provision of ICT services respectively. Simple linear regression analysis was used to test all the four null hypotheses. The findings revealed that there is no significant relationship between funding and provision of ICT, there is significant relationship between staffing and provision of ICT, there is no statistically significant relationship between coordination and provision of ICT and there is no significant relationship between monitoring and provision of ICT services. It was recommended that multiple factors should be used to predict the provision of ICT services in Colleges of Education, South-South, Nigeria. Based on the findings of the study, it was concluded that stakeholders in education industries should shift focus from one single factor to multivariate factors in determining the provision of ICT in Colleges of Education South-South Nigeria.

Keywords: Administrative variables, funding, staffing, coordination, monitoring, ICT.

I. INTRODUCTION

Information and communication technology in today's world refer to those technologies that determine the efficiency and effectiveness with which we communicate and the devices

that allow people to handle information (Uno, 2003). Information and communication technology is only considered as application and system, but as a life skill, ICT in classroom should not only be seen as a process where teachers teach students computer literacy.

Information and Communication Technology (ICT) encompasses the effective use of equipment and programmes to access, recover, convert, store, organize, manipulate, present data and information through a medium such as computers, laptops, Personal Device Assistance (PDA) as well as other mobile and electronic devices. (Ghavifekr, Afshari, Siraj and Seger, 2013), reiterated this position that ICT is not only for the purpose of teaching and learning process, but also for administrative use. ICT as a change agent for education described how ICT application plays a significant role in modern information management, other technologies and systems also comprise of the phenomenon that is commonly regarded as ICTs.

Information Communication Technology (ICT) have the potential to innovate, accelerate, enrich and deepen skills, to motivate and engage students also (Yusuf, 2013), suggested that ICT help relate school experience to work practices, create economic viability for tomorrow's workers; as well as strengthening teaching and helping schools change.

In connection to the foregoing, Haag, Cummings, and (McCubbery, 2005), simply defined information communication technology as a set of tools that helps you work with and process data or information. Furthermore, ICT are greatly facilitating acquisition and absorption of knowledge, offering developing countries unprecedented opportunities to enhance educational systems. ICT therefore, refers to the computer and internet connection used to handle and communicate information for learning and teaching purposes.

(Wagner, Day, James, Rozma, Miller and Unwin, 2005), ICT consist of hardware, software, networks, and media for collection, storage, processing, transmission and presentation of information (voice, data, text and images).

The use of ICT in Educational Management makes major differences in effective and efficient administrative process. The potential benefits of ICT facilities in national building using UNESCO benchmark of 26% funding of education in developing countries, the World Bank and regional development bank also suggested computer systems to developing countries for linking local, regional, and central administrative offices, and for collecting and analyzing information systems as well as system performance of educational sector.

(Mikre, 2011), averred that the benefit of ICT in education to administrators using IC facilities mostly shows higher learning gains than those who do not use ICT. Thus, various educational managers can utilize ICT facilities or components to add value to their organizational systems. Educational managers can benefit immensely from the implementation of ICT in educational management if properly deployed or implemented. (Akpan, 2008), maintains that ICT could be used in the management of students' admission, screening, registration, record's keeping, instructional delivery and assessment of performance as well as recruitment of staff in higher institutions.

Information and Communication Technology play an important role in population and in education sector, it has also made impact on the quality and quantity of teaching, learning and research purpose in higher education system. With information and communication technology, learning can take place any time and any place, mostly online courses with ICT there is transformation of teaching environment into a learning-centered. Information and communication technology help students and teachers to discover learning topics, provide problem solving and help knowledge acquisition more accessible in highly concepts learning areas be understand easily, students' creativity can be optimized and new multimedia tools. Information and communication technology offer students more time to explore beyond the mechanics of course content allowing them to better understanding of concept (Reld, 2002). Information and communication technology changes the traditional teacher-centered approach and requires teachers to be more creative in customizing and adapting their own material.

Information and communication technology helps to provide good communication system in educational system, while communication can be internal and external information acquisition and dissemination. According to (Ayoade, 2015), the installation of computers and internet communication made it easier for the institutional administrator to use telephone, fax and other communication facilities for transformation of thoughts, sharing and imparting of information, growly receiving and understanding a message

anytime there is a network of independent relationship across international frontiers. Teachers can communicate with parents and their teaching service using data base.

Information and communication technology limit the role of teachers to support, advice and coaching students rather than merely transmitting knowledge. Information and communication technology helps the teachers and administrators know student attendance and performance including classroom management. Downloading of mechanical teachers and students of different scholars can be made easier through ICT. Teachers globally should give attention to this selection and use of ICT to stimulate students' interest in the teaching and learning process. However, most of our teachers have no knowledge of the use of ICT, this call for at least in-service training materials in the area of information and communication technology. With ICT, students can be moved to use information and data from any source and assess the quality of the learning materials. Information and communication technology in the school system promote active, creative, collaborative and evaluative learning.

(Kennah, 2016), believed that ICT capacity requires an established ICT infrastructure and with basic ICT resources, users who are equipped with the skills, knowledge and confidence to creatively insert ICTs into schools processes in an environment that appreciates and support ICT usage.

(Tondeur, Martin and Christopher, 2010), in their work, the role of curriculum coordination in the integration of ICT into primary school's finding revealed that coordinator's role and school leadership in general, play critical but varying roles in the complex process of ICT integration into schools.

(Isaac, 2019), in his study, the role of ICT in effective teaching and learning activities in tertiary educational institutions across the globe is sine qua none. The findings revealed significant difference between the ICT competence levels of academic and non-teaching (administrative staff) members have high level of ICT competence level in word/data processing, sending/receiving e-messages sourcing research materials and disseminating information.

(Nwachukwu, 2001), study investigated the relationship between finding, ICT, selection processes, administration and planning and the standard of science education in Nigeria. It was suggested that both the academic staff were disgruntled with the sluggish integration of the investigated variables in both state and federal owned institutions of higher education in general and teacher education programmes in particular.

Information communication technology may improve the effectiveness of the educational sector by reducing time

needed for teaching and effective administration procedure. Colleges of education are institutions of higher learning and knowledge base. Their contribution to national development cannot be over emphasized. The main aim/objective of colleges of education is the generation, dissemination, advancement and application of knowledge in the society at all levels. The authors of this study consider funding, staffing, coordinating and monitoring as variables for administration of colleges of education that should be considered foremost in the provision of ICT services.

1.1 Objective of the study

The main objective of the study was to examine administrative variables and provision of ICT services for students in colleges of education south-south zone, Nigeria. The specific objectives of the study include:

1. Access the extent to which funding is suitable for the provision of ICT services in Colleges of Education.
2. Access the extent to which staffing is suitable for the provision of ICT services in Colleges of Education.
3. Determine the extent to which coordination is appropriate for the provision of ICT services in Colleges of Education, and
4. Examine the extent to which monitoring is appropriate for the provision of ICT services in Colleges of Education in Nigeria.

1.2 Research questions

The following research questions were posed to guide the study.

1. To what extent does funding relate with the provision of ICT services?
2. How does staffing relate with the provision of ICT services?
3. In what way does coordination relate with the provision of ICT services?
4. To what extend does monitoring relate with the provision of ICT services?

1.3 Research hypotheses

The following null hypotheses were formulated to guide the study.

1. Funding does not significantly relate with the provision of ICT services.
2. Staffing does not significantly relate with the provision of ICT services.
3. Coordination does not significantly relate with the provision of ICT services.

4. Monitoring does not significantly relate with the provision of ICT services.

1.4 Statement of the problem

Information and Communication Technology (ICT) in Colleges of Education is concerned with sharing, creating, acquisition and discriminating of information. Information and communication technology helps management of colleges of education in planning of college activities, students records and examination records, students admission, curriculum development, financial management, information disseminating, promotes communication between school unit, parents and administration officers (Oboegbulem & Ugwu, 2013). Application of ICT is expected to improve the standards of the field of ITC in order to improve their academic and administrative work, mostly in teaching, learning and effective management of the college. Many Colleges of Education, have embraced the use of ICT in teaching/learning and administration, but still it cannot improve the standards of their academic and financial control. This is due to poor academic performance, poor school administrators and financial management. Some opinions are in conformity with the use of ICT in the college and that ineffective services rendered an inappropriate supervision or the use of ICT hampered the effective use of information communication technology.

It is based on this gap that the study is conducted to examine administrative variables and provision of ICT for students in Colleges of Education, South-South Zone, Nigeria.

1.5 Significance/justification of the study

The findings of this study may be of benefit to college administrators, head of units, teachers, students and researchers in related fields. This study may assist administrators of colleges of education to plan, organize both human and material resources, employ qualified staff, supervise the staff and assist in financial management and create a conducive environment for effective work flow.

The study may be of immense benefit to Head of Units in the Colleges of Education to identify problems and their subsequent solutions because the findings will become additional information on ICT services in Colleges of Education, South-South Zone, Nigeria.

The findings of this study may be of great help to teachers or lecturers to improve upon their teaching/lecturing work which would increase efficiency in services.

To the students, this finding may be of help in the area of appreciating learning with the application of ICT services in

the college, and to the researchers, this finding will act as a reference material for those that wish to work on related field.

II. METHODOLOGY

The study was carried out within six (6) months. The study population consists of 450 college staff and 5,450 students of colleges of education in South-South Zone, Nigeria; stratified random sampling technique was adopted to select 50 staff and 200 students. The states are Cross River, Akwa Ibom, Rivers, Bayelsa, Delta and Edo States. A simple random sampling was to select three states and the 250 subjects for the study. Two instruments were developed for data collection known as “Administrative Variable Questionnaire” (AVQ) and “Provision of ICT Services Questionnaire” (PICTSQ) each of the instruments was divided into two sections A and B. Section A consist of items that solicit information on the bio-data of the respondents and section B consist of items on the administrative variables for the college staff, while section C consist of items on the provision of ICT services for the college students in South-South Zone of Nigeria.

The instrument was structured base on a four points rating scale responses of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) and Always Provided (AP), Provided (P), Rarely Provided (RP) and Not Provided (NP) of 4, 3,2, and 1 respectively for all the positively worded statements and the reverse was case for the negatively worded statements.

2.1 Population of the study

The population of the study consists of all the Colleges of Education staff and students in South-South Zone, Nigeria. The same size of the study consists of 450 college staff and 5,450 students.

2.2 Method of data analysis

R and R² of simple linear regression analysis was used to answer all the research questions while simple linear regression analysis was used to test all the null hypotheses.

III. RESULTS AND DISCUSSION

The result of the findings is presented below:

H01: Funding does not significantly relate with the provision of ICT services.

Funding is the independent variable while provision of ICT is the dependent variable, both are continuous variables. Simple linear regression analysis was used to test the null hypothesis as shown in table 1.

Table 1: Result of simple linear regression analysis of finding and provision of ICT for students in Colleges of Education South-south Zone, Nigeria

| Model | Sum of square | df | Mean square | f | Sign |
|------------|---------------|-----|-------------|-----|------|
| Regression | 1.79 | 1 | 1.79 | | |
| Residual | 40001.16 | 248 | 16.13 | .11 | .74 |
| Total | 40002.94 | 249 | | | |

P < .05 level of significance (F1 and 248) = 3.86

The result in Table 1 above revealed that the calculated F-value of .11 is less than the critical F-value of 3.86 at .05 level of significance for 1 and 248 degree of freedom for the two tailed test. This implies that the null hypothesis of no significant relationship was retained while the alternative hypothesis was rejected. It therefore means that funding does not significantly relate with the provision of ICT in Colleges of Education, South-South, Nigeria.

H02: Staffing does not significantly relate with the provision of ICT for students in Colleges of Education, South-South Zone, Nigeria. Independent variable is staffing, while provision of ICT is the dependent variable. Simple linear regression analysis was used to test the null hypothesis as shown in table II below.

Table 2: Summary data of simple regression analysis for staffing and provision of ICT for students in colleges of education South-South Zone, Nigeria

| Model | Sum of square | df | Mean square | f | Sign |
|------------|---------------|-----|-------------|------|------|
| Regression | 0.40 | 1 | 0.4 | | |
| Residual | 4002.90 | 248 | 16.14 | 0.00 | 0.96 |
| Total | 4002.94 | 249 | | | |

P < .05 level of significance (F1 and 248) = 3.89

The result in Table 2 revealed that the calculated F-value of .00 has no correlation as compared to the critical F-value of 3.89 at .05 level of significance with 1 and 248 degree of freedom for the two tailed test. With this result, the null hypothesis that say staffing does not significantly related with provision of ICT was retained while the alternative hypothesis was rejected.

H03: Coordination does not significantly relate with the provision of ICT for students in Colleges of Education South-South Zone Nigeria.

Coordination is the independent variable, while provision of ICT is the dependent variable, both are continuous

variables. Simple linear regression analysis was used to test the null hypothesis as shown in table 3.

Table 3: Showing result of simple linear regression analysis for the relationship between coordination and provision of ICT

| Model | Sum of square | df | Mean square | f | Sign |
|------------|---------------|-----|-------------|------|------|
| Regression | 1.02 | 1 | 1.02 | | |
| Residual | 4001.92 | 248 | 16.13 | 0.06 | 0.90 |
| Total | 4002.94 | 249 | | | |

P < .05 level of significance F (1 and 248) = 3.89

Since table 3 shows the calculated F-value of .06n is less than the critical F-value of 3.89 at .05 level of significant with 1 and 248 degree of freedom for the two tailed test, the null hypothesis of no significant relationship between coordination and provision of ICT was retained while the alternative hypothesis was rejected. It therefore means that coordination does not significantly relate with the provision of ICT in Colleges of Education, South-South Zone.

H04: Monitoring does not significantly relate with the provision of ICT for students in Colleges of Education, South-South Zone, Nigeria.

Monitoring is the independent variable, while provision of ICT is the dependent variable. Simple linear regression analysis was used to test the null hypothesis as shown in table 4.

Table 3: Showing result of simple linear regression analysis for the relationship between monitoring and provision of ICT

| Model | Sum of square | df | Mean square | f | Sign |
|------------|---------------|-----|-------------|------|------|
| Regression | 24.64 | 1 | 24.64 | | |
| Residual | 3978.30 | 248 | 16.04 | 1.54 | 0.22 |
| Total | 4002.94 | 249 | | | |

P < .05 level of significance. Critical F (1 and 248) = 3.89

The result in Table 4 revealed that the calculated F-value of 1.54 is less than the critical F-value of 3.89 at .05 level of significant with 1 and 248 degree of freedom for the two tailed test. This implies that the null hypothesis of no significant relationship between monitoring and provision of ICT was retained, while the alternative hypothesis was rejected.

IV. DISCUSSION OF RESULT

The results of the regression analysis suggest that various administrative variables—funding, staffing, coordination, and monitoring—do not significantly impact the provision of ICT services in Colleges of Education in the South-South Zone of

Nigeria. This is evidenced by all the F-values obtained being less than the critical value of 3.89.

1. Funding: The F-value of 0.11 indicates that funding does not significantly affect the provision of ICT services. This result suggests that despite the amount of financial resources allocated, it might not be translating into better ICT infrastructure or services. This finding aligns with studies such as those by (Alabi, 2015), which show that merely increasing funding does not always improve ICT outcomes if other factors are not adequately addressed.

2. Staffing: The F-value of 0.00 implies no significant relationship between staffing and ICT provision. This suggests that the number or quality of staff may not be a critical factor in improving ICT services. This is supported by research like that of (Afolabi, 2016), which found that staffing levels alone do not guarantee better ICT outcomes without proper training and support systems.

3. Coordination: With an F-value of 0.6, the study shows that coordination efforts do not significantly impact ICT provision. This could reflect challenges in how coordination is executed or a lack of effective strategies. This is consistent with findings by (Eze, 2017), which indicated that poor coordination and management practices often fail to improve ICT integration.

4. Monitoring: The F-value of 1.54 indicates that monitoring does not have a significant impact on ICT provision. This result might suggest that monitoring practices are not sufficiently robust or effective. Similarly, studies like those of (Ogbonna, 2018) highlight that without effective monitoring mechanisms; improvements in ICT services may not be realized.

From the result of null hypotheses one, two, three and four that revealed no significant relationship of the predictors on the provision of ICT in Colleges of Education, the finding is not in agreement with authors like (Tondeur, Martin and Christopher, 2018) whose findings revealed that coordinating roles and school leadership in general play critical but varying roles in the complex process of ICT integration into schools. (Isaac, 2019) posits that there is significant difference between the ICT competence levels of academic and non-teaching (administrative staff). The major difference between the present study and the past works may be as a result of geographical location and sample size of the study.

V. CONCLUSION

The research findings reveal that administrative variables—funding, staffing, coordination, and monitoring—do not significantly affect the provision of ICT services in

Colleges of Education in the South-South Zone of Nigeria. Despite the critical importance of these factors, their current influence on ICT services appears to be minimal based on the data analyzed. It was concluded that funding, staffing, coordinating and monitoring may not be the predictors for the provision of ICT in College of Education, but to use multivariate factors (variables) to predict the provision of Information, Communication Technology (ICT) services in Colleges of Education, South-South Zone, Nigeria.

5.1 Recommendations

1. Integrated Approach: Colleges should adopt a more integrated approach to improving ICT services. This includes not only increasing funding but also ensuring that staffs are adequately trained and that effective coordination and monitoring systems are put in place.
2. Capacity Building: Focus should be placed on capacity building for both staff and administrative structures to better manage and utilize ICT resources.
3. Effective Monitoring: Implement more robust monitoring mechanisms that can track the impact of administrative decisions on ICT services and ensure they are effective and aligned with institutional goals.
4. Policy Review: Review and revise administrative policies related to ICT provision to address gaps identified in the study and ensure that they support better outcomes for ICT services.

REFERENCES

[1] Afolabi, M. (2016). Staffing and ICT resources in higher education: A case study. *African Journal of Educational Studies*, 14(2), 201-212.

[2] Akpan, C. P. (2008). Lecturers' perception of the role of ICT in the management of University Education for sustainable development in Nigeria. *Journal of Educational Administration and Planning*, 8(1), 113-134.

[3] Alabi, A. (2015). Impact of funding on ICT infrastructure in Nigerian educational Institutions. *International Journal of Educational Management*, 29(4), 477-491.

[4] Ayoade, O. B. (2015). Access and use of ICT for Administrative purposes by Institutional Administration in Colleges of Education in Nigeria: An Example of Emmanuel Allayande College of Education, Oyo.

[5] Eze, E. (2017). Coordination and management of ICT resources in Nigerian colleges. *Nigerian Journal of Educational Management*, 16(1), 45-59.

[6] Ghavifekr, S. Afshari, M. Siraj, S. & Seger, K. (2013). ICT application for administration and management: A

conceptual review. *13th International Educational Technologies Conference; Procedia Social and Behavioural Science*, 103, 1344-1351.

[7] Hagg, Cummings & McCubbery (2005). Management information systems for the information age. *New York: The McGraw Hill Companies*.

[8] Isaac, Olugbemiga, O. (2019). The ICT competence level of staff members in Colleges of education in Kano State Nigeria. *Information and Knowledge Management* ISSN 2224-5758. Doi: 10, 717611km vol. 9, no. 2.

[9] Mikre, Fisseha (2011). The roles of information communication technologies in education review article with emphasis to the computer and inter. *Ethiop J. Educ and Science*, 6(2).

[10] Nwachukwu, P. O. (2007). The relationship between funding ICT, selection processes, administration and planning and the standard of science teachers education in Nigeria. *Asia-Pacric Forum on Science Learning and Teaching*.

[11] Ogbonna, C. (2018). Monitoring and its impact on ICT service delivery in Nigerian Colleges. *Journal of Information Technology in Education*, 22(3), 211-225.

[12] Oboegbulem, A. & Ugwu, R. N. (2013). The place of ICT (Information and Communication Technology) in the Administration of Secondary Schools in South Eastern States of Nigeria (3) (4) 231-238. Retrieved from <http://www.eric.ed.gov/>

[13] Reid, S. (2002). The integration of ICT into classroom teaching. *Alberta Journal of Educational Research*, 48, pp. 30-46.

[14] Rosemary, N. & Ribert, O. (2013). A monitoring and evaluation framework for the integration of ICTs in teaching and learning in primary schools in Kenya. *Journal of Education and Practice*, 4 (12).

[15] Tinio, V. L. (2003). ICT in education, presented by UNDP for the benefit of participants to the world summit on the information society. *Asia-Pacific Region* www.eprimers.org. Retrieved May 31, 2012.

[16] Tondeur, J. O., Martin, C. & Christopher, P. N. (2010). Integration of ICT into Primary Schools. *Journal of Computer Assisted Learners* 26 (a), 296-30.

[17] Wagner, D. A., Day, B., James, T., Kozma, R. B., Miller, J. & Unwin, T. (2005). Monitoring and evaluation of ICT in education projects, a handbook for developing countries. Washington DC: InfoDev/worldbank. Available at <http://www.infodev.org/publication.9.html>.

[18] Yusuf, M. A. (2013). Appraising the role of Information and Communication Technology (ICT) as a change agent for Higher Educational Administration and Policy Studies, 5(8), 177-183.

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