

Principals' Use of Teleconferencing and Administrative Effectiveness in Secondary Schools in Akwa Ibom State - Nigeria

Ekaette Emenike Iroegbu^{1,*}, Paulinus J. Etim²

¹Department of Curriculum Studies, Educational Management and Planning, University of Uyo, Uyo, Akwa Ibom State

²Department of Educational Technology and Library Science, University of Uyo, Uyo, Akwa Ibom State

*Corresponding author: ekaetteiroegbu@yahoo.com

Abstract The study examined principals' use of teleconferencing and administrative effectiveness in secondary schools in Akwa Ibom State. It investigated the availability level of teleconferencing facilities in schools, the perceived benefits of principals' use of teleconferencing and the constraints facing principals' use of teleconferencing for administrative effectiveness. The descriptive survey design was used for the study. Three research questions and one hypothesis were postulated to guide the study. The population consist all the secondary school principals in Akwa Ibom State. Two hundred and four (204) principals were randomly selected for the study. A researcher developed instrument titled "Principals' Use of Teleconferencing and Administrative Effectiveness Questionnaire (PUTAEQ)" was used for data collection. Using Cronbach's Alpha statistical tool, the test of internal consistency of the instrument yielded a reliability coefficient of 0.83. Data collected were analyzed using frequency counts, percentage scores and t-test analysis. The study revealed that teleconferencing facilities were lacking in schools and that principal's gender has no significant influence on their attitude towards the use of teleconferencing. The study went further to reveal the perceived benefits and constraints that may be encountered by principals through the use of teleconferencing. It is therefore recommended amongst others that school administrators should increase their personal competency with teleconferencing and other digital technologies by exploiting professional development opportunities and self-study provided by the technologies themselves in order to enhance personal productivity in performing instructional, professional and administrative task.

Keywords: *principal, teleconferencing, administrative, effectiveness, schools*

Cite This Article: Iroegbu, Ekaette Emenike, and Etim, Paulinus J. "Principals' Use of Teleconferencing and Administrative Effectiveness in Secondary Schools in Akwa Ibom State - Nigeria." *American Journal of Educational Research*, vol. 5, no. 12 (2017): 1177-1181. doi: 10.12691/education-5-12-1.

1. Introduction

The advent of technology has made educational institutions to rely on the use of effective and collaborative technology tools to ensure the smooth running of the institution. The need, function, key initiatives and requirements of the academic institution environment has evolved beyond the traditional setting. The education sector being one of the cornerstones of societal development uses technological tools to enhance the process of administration, teaching and learning. There is a need to build the school environment on an information technical foundation that takes into consideration the current economic environment as well as other business ventures impacting the education market as a whole. Different types of educational technologies have evolved from time to time and each technology addresses the questions of improving administration, instructional reach, and delivery, as well as the teaching and learning quality. Audio-visual aids, print, mass media, computer mediated learning and teleconferencing are technologies

that are available in education and training. These technologies co-exist with the old technologies and often converge within combinations to achieve better results. Teleconferencing is a good example of convergence of technologies.

Teleconferencing is a form of computer mediated communication which allows information to be sent from one individual to another or a group, and vice versa without the constraints of time and location. Teleconferencing is one of the main advanced Information and Communication Technologies used by principals for communicating and coordinating administrative process. Negash, Whitman, Woszczynski, Hoganson, and Mattord [1] defined teleconferencing as a meeting among two or more participants which allows them to interact by means of a two-way video and audio transmission simultaneously, as well as to exchange data in real time through the internet. Teleconferencing has become an indispensable tool in academic institutions seeing that it offers the opportunity for several persons and machines to collaborate and participate in live exchange and mass articulation of knowledge or information while remaining in divergent regions but linked by a telecommunication

system. The recent pervasive penetration of digital technology has significantly elevated the importance of a platform of digital capabilities [2].

The goal of today's principal is to be more efficient, up-to-date, and prompt in delivering qualitative objectives created by fully integrated communication technology and collaborative teams. The leadership and administrative bar of principals will have to be raised high in order to meet up with present and future global challenges. This will not be about what the principals need to learn, but about how it is learned. In that regard, the optimal and efficient use of technology will play a major role in framing the future of administrative effectiveness in schools. By this, many administrative solutions will be based on outcomes relating to the use of technology and in this case, teleconferencing.

Learning new technologies should be paramount in every principal's job description as this will help to change the entire school's perspective about the use of technology thereby making it a priority. This will spur the principal to make positive and drastic changes on how technology is used in schools and to also ensure that the staff are provided with the requisite knowledge and skills needed for administrative effectiveness. In turn, teachers will need to learn how to use technology in classrooms without walls. For traditional principals, this will be mind boggling, and for future oriented principals, it will be exhilarating [3].

There is little doubt that new technology-savvy principals will be taking the lead. Students of the future will be taking virtual field trips to other countries. They will be video conferencing digitally with foreign experts who can help them develop understanding and skills. Distance will no longer be an issue. Principals, wanting students to compete globally will no longer be able to ignore the importance of digital competencies. These principals, with a new vision, will be taking steps to change mindsets, policies and practices [4].

Administration, as defined by Eden [5] involves planning activities which aim at the fulfillment of the goals of a particular organization or institution. It calls for the ability of the administrators to make the right decisions to fulfill the required goals. Liverpool and Jacinta [6] opined that in an institutional setting, administration has been extended as a service activity or tool through which the fundamental objectives of the institutional process may be more optimized efficiently when allocating human and material resources as well as to make the best use of existing resources.

Administrative effectiveness as stated by Adeniyi [7] refers to the ability of school principals to carry out administrative task related to instructional management, internal relations, institution management, administration, students, performance and school community relations towards achieving the school goals and objectives. Sheppard and Dibbion [8] observed that the effectiveness of a school administrator is a function of his/her ability to identify certain basic components of his/her assignment. Administrative effectiveness of an educational institution must meet the following key factors; professional development and quality of school; administrative employment satisfaction; acquisition, availability and efficient utilization of resources; community relations; career and personal development. The ability of a school to achieve the set goals and

objectives can be reflected by the level of administrative efficiency. An institution is said to have attained effectiveness if it is able to make good use of personnel, money, time, energy and materials to produce desired and expected quality outcomes. It has been shown in most cases that administrative effectiveness is a critical success factor that determines the overall performance of post-primary institutions.

Principals are expected to adapt to network technical innovations that allow for better implementation and resiliency of new network services. These innovative network services should be able to operate seamlessly and efficiently within the school, and should also support different voice, video and data services. This should enhance communication process and should also heighten the collaboration with other professional colleagues. One of the most reliable ways of holding meetings is through teleconferencing and this reliability has increased tremendously over the years due to globalization and rapid advancement in technology.

Principals are known to feel isolated in their work despite the fact that they are being surrounded by so many administrative issues, teachers, students, parents and the community clamoring for their attention. Borema [9] in an interview of school principals to discover the challenges faced by principals and the support they needed to be successful uncovered that loneliness almost seems to be an epidemic to the office of school administrator, especially in small schools. Hobson et al as cited in Garcia-Garduno, Slater and Lopez-Gorosave [10] identified challenges faced by principals especially in their early years of principalship to be feelings of professional isolation and loneliness. Principals were found to experience limited interactions with other principals and administrators about complex, multifaceted, and important issues, such as student achievement, social climate, safety, and school improvement [11].

Administration of secondary education has become more complex as a result of the increasing number of students' enrolment, staff strength and multifaceted administrative needs of the schools. There has been an increasing public fear and complaints that the administrative effectiveness of principals has dwindled. This could be attributed to the fact that most principals are usually not on ground to oversee the effective smooth running of the schools due to incessant travels out of the school location for administrative meetings. This dampens the commitment level of the teachers and other staff in general. There are no immediate opportunities to get public reaction to issues as they arose and to interact with other principals and administrators about important administrative issues. Furthermore, a high accountability demand is placed on secondary school principals with little or no support for computer mediated interactions which leaves the principals feeling isolated and ineffective in the discharge of their administrative duties. Hence, this paper looks at principals' use of teleconferencing and administrative effectiveness in secondary schools.

Adaptive Structuration Theory by DeSanctis and Poole [12] is based on Anthony Giddens' structuration theory. The theory was formulated as the production and reproduction of the social systems through members' use of rules and resources in interaction. DeSanctis and Poole

adapted Giddens’ theory to study the interaction of groups and organizations with information technology and called it Adaptive Structuration Theory (AST). AST criticizes the technocentric view of technology use and emphasizes the social aspects. Groups and organizations using information technology for their work dynamically create perceptions about the role and utility of the technology, and how it can be applied to their activities. These perceptions can vary widely across groups, influence how the technology is used and hence mediate its impact on group outcomes. This theory is relevant to this paper in the sense that it gives opportunity for change, focuses on social evolution, interaction and historical processes, interpretive flexibility, and interplay between technology and power.

2. Research Methods

This study adopts a descriptive survey design and is built on the Adaptive Structuration Theory by DeSanctis and Poole [12], formulated as the production and reproduction of the social systems through members’ use of rules and resources in interaction. Three research questions and one hypothesis were postulated to guide the study. The population of this study comprised all the 234 principals in Akwa Ibom State public secondary schools [13]. A sample size of 204 principals was used for the study while the remaining 30 principals from the population were used for the reliability test.

A researcher developed instrument titled “Principals’ Use of Teleconferencing and Administrative Effectiveness Questionnaire (PUTAEQ)” was used for data collection. The instrument had 28 items which were divided into three sections. Section A with 10 items focused on demographic data and level of availability of teleconferencing facilities in schools. Section B focused on the perceived benefits of principals’ use of teleconferencing, while the C section elicited information on the constraints facing principals’ use of teleconferencing and administrative effectiveness. The response category for the three sections were ‘Agree’ and ‘Disagree.’

The face validity of the instrument was established by three validates, one in Educational Technology Department, one in Measurement and Evaluation unit of Educational Foundations Department and one in Educational Management and Planning Department, all in the Faculty of Education, University of Uyo, Uyo-Nigeria. Corrections were effected as suggested in the final form of the instrument used for the study. A sample size of 30 respondents were selected from the 234 principals for the reliability test and was left with 204 respondents. The reliability coefficient was calculated to be 0.83 using the Cronbach Alpha statistics. The research instrument was administered to 204 respondents with the assistance of two trained research assistants. Research questions were answered using frequency counts and percentages, while t-test analysis was used in testing the hypothesis at .05 significant level.

3. Results and Discussion of Findings

Research Question 1: What is the level of availability of teleconferencing facilities for administrative effectiveness?

The analysis is as seen on [Table 1](#).

Table 1. Level of availability of teleconferencing facilities for administrative effectiveness

S/N	Response Items	Agree	%	Disagree	%
1	Do you have a computer in your office?	81	40.5	119	59.5
2	Do you have an email address?	130	65	70	45
3	Do you have internet connection in your school?	10	5	190	95
4	Do you have a printer in your office?	50	25	150	75
5	Do you have a fax machine in your office?	0	0	200	100
6	Do you have a scanner in your office?	36	18	164	82
7	Is there a slide projector in your office?	29.4	14.7	170	85.3
8	Is there an interactive white board in your office?	4	2	196	98
9	Do you have a microphone in your school?	20	10	180	90
10	Is a technician available in your school?	42	21	158	79

[Table 1](#) shows that teleconferencing facilities like computer, email, printer, and technician were available in some schools while some facilities like scanner, slide projector, microphone, internet connection and interactive whiteboard were scantily available in schools. Fax machine was not available in any of the schools visited.

Research Question 2: What are the perceived benefits of principals’ use of teleconferencing for administrative effectiveness?

The analysis is as seen on [Table 2](#).

Table 2. Perceived benefits of principals’ use of teleconferencing

S/N	Response Items	Agree	%	Disagree	%
11	Teleconferencing helps principals to reach out to colleagues in other parts of the country thereby eliminating professional isolation and loneliness	176	88.1	24	11.9
12	It makes principals to be up-to-date on new directions and thinking without having to wait for infrequent meetings and conferences	170	85	30	15
13	Teleconferencing saves time and expense involved in traveling to participate in face-to-face meetings	178	89.2	22	10.8
14	It offers opportunity to get public reaction to issues as they arose	164	82.2	36	17.8
15	Teleconferencing is as effective as sitting around a table for exchange of information	142	71.1	58	28.9
16	It enables principals to learn new technologies	166	83	34	17
17	It spurs the principal to make the use of technology a priority in the school	172	86.1	28	13.9
18	It creates time for the principal to administer the school more effectively	163	81.4	37	18.6

The result of data analysis in Table 2 shows the perceived benefits of principals' use of teleconferencing for administrative effectiveness. These include saving time and expense involved in travel (89.2%); helping principals to reach out to colleagues in other parts of the country (88.1%); spurring the principal to make the use of technology a priority (86.1%) and makes principals to be up-to-date on new directions and thinking (85%). Other perceived benefits include enabling principals to learn new technologies (83%); offers opportunity to get public reaction to issues as they arose (82.2%); creates time for the principal to administer the school more effectively (81.4%) and teleconferencing being as effective as sitting around a table for exchange of information (71.1%).

Research Question 3: What are the constraints facing principals' use of teleconferencing for administrative effectiveness?

The analysis is as seen on Table 3.

Table 3. Constraints facing principals' use of teleconferencing for administrative effectiveness

S/N	Response Items	Agree	%	Disagree	%
19	Most secondary schools lack computer literate principals	159	79.4	41	20.6
20	Principals have inadequate power supply for utilization of teleconferencing in schools	156	78.1	44	21.9
21	Lack of teleconferencing skills amongst principals are a constraint to the utilization of teleconferencing in schools	196	98.1	4	1.9
22	Poor internet service in school will hinder the effective use of teleconferencing in the school	200	100	0	0
23	Cost of teleconferencing facilities is a constraint to principals' use of teleconferencing	133	66.7	67	33.3
24	Lack of technical support from government or other agencies for teleconferencing installation is a constraint to principals' use	189	94.5	11	5.5
25	Poor government policies in the implementation of teleconferencing in schools will hinder principals' use of teleconferencing	192	96	8	4
26	Principals have poor security for safe keeping of teleconferencing facilities in school	162	81	38	19
27	Will the lack of regular maintenance and repair of teleconferencing facilities be a constraint?	194	97	6	3
28	Lack of alternative source of power supply will pose a hindrance to principals' use of teleconferencing	169	84.7	31	15.3

From Table 3, it shows that some of the major constraints facing principals' use of teleconferencing are poor internet service (100%); lack of teleconferencing skills amongst principals (98.1%); lack of regular maintenance and repair of teleconferencing facilities (97%); and poor government policies in implementing teleconferencing in schools (96%). Other challenges include the lack of technical support from government (94.5%); lack of alternative source of power supply (84.7%); poor security for safe keeping of teleconferencing facilities (81%); lack of computer literate principals (79.4%); inadequate power

supply (78.1%) and cost of teleconferencing facilities (66.7%).

Hypothesis 1: Principals' gender difference does not significantly influence their attitude towards the use of teleconferencing and administrative effectiveness in secondary schools.

Table 4 shows the influence of principals' gender on their attitude towards the use of teleconferencing and administrative effectiveness. The value of t-calculated (-1.149) is less than p (.252) at 0.05 level of significance. While $p > 0.05$ thereby making it insignificant. The null hypothesis is hereby accepted. Therefore, the findings showed that the principals' attitude towards the use of teleconferencing and administrative effectiveness in secondary school is not as a result of their gender difference.

Table 4. T-test analysis showing influence of principals' gender difference on their attitude towards teleconferencing usage an administrative effectiveness in secondary schools

Variable	N	Mean	Std. Dev.	Std. Err. Mean	df	t-cal	p	Remarks
Male	120	2.2083	1.44882	.13226	202	-1.149	.252	NS
Female	84	2.4524	1.55544	.16971				

*Significant ($p < 0.05$) NS= Not significant ($p > 0.05$).

4. Discussion of Findings

The finding of this study corroborates the findings of Asogwa [14] who posited that there are few available Information and communication technology (in this case teleconferencing) facilities for secondary school administrators. The finding of this study is also supported by Aduwa-Ogiegbenam and Iyamu [15] who stated that limited internet access is a factor hindering Information and Communication Technology (ICT) application in Nigeria and that lack of relevant software, appropriate and suitable for Nigeria is one of the major setbacks to the adoption of ICT in secondary schools in Nigeria. This finding is also in line with Olibie and Akudolu [16] who discovered that stakeholders have roles to play in providing ICT (teleconferencing) infrastructure.

The study found that so much time and resources were wasted on frequent travel for meetings, and this is in agreement with the findings of Alberta Education [17] that "the business case is strong for school jurisdictions to increase the use of video-conferencing technology for administration and professional development. Lower costs related to travel expenses, and saving time associated with extensive and sometimes dangerous travel are compelling reasons to expand the use of this application" (p. 89).

The finding of this study is also in tandem with the finding of Alberta [17] who agreed that the greatest barrier to extensive use of video-conferencing for administration and professional development is the availability and the cost of equipment and rooms. For this reason, researchers recommended that schools should consider purchasing a mix of video-conferencing equipment including smaller, less expensive and more flexible desktop units for individual and small group meetings.

Finally, the findings of this study indicated that principals' gender difference had no significant influence on their

attitude towards teleconferencing usage and administrative effectiveness in secondary school administration. This finding is also in consonance with Olayemi and Omotayo [18] who stated that administrators' gender differences have no influence on their attitude towards ICT (teleconferencing) and effective secondary school administration.

5. Conclusion

This study concludes that use of teleconferencing influences administrative effectiveness of principals. The administrative activity where this technology is needed includes regular principal meetings, consultations with education specialists, board, and professional association meetings. Lower costs related to travel expenses, and saving time associated with extensive and sometimes dangerous travel are compelling reasons to expand the use of this application. The greatest barrier to extensive use of teleconferencing for administration is the availability and cost of equipment and rooms which has been recommended for provision.

6. Recommendations

- It is very challenging to develop and maintain a teleconferencing facility. Principals need motivation and encouragement to participate in and facilitate its use so as to impact positively on their administrative effectiveness. It is therefore important that the federal and state ministry of education helps to facilitate its deployment in secondary schools.
- School administrators should increase their personal competency with teleconferencing and other digital technologies by exploiting professional development opportunities and self-study provided by the technologies themselves to enhance personal productivity in performing instructional, professional and administrative task.
- Ministry of education should ensure that schools are adequately funded to aid internet connectivity maintenance, provision of alternative source of power supply and to ensure that the teleconferencing facility is periodically maintained so as to increase its life span.
- Government should create teleconferencing awareness and effective training of school principals. Emphasis should be made on policies that will promote the use of teleconferencing by principals for administrative effectiveness.

References

- [1] Negash, S., Whitman, M.E., Woszczynski, A.B., Hoganson, K., & Mattord, H. (2008). *Hand book of distance learning for real-time and asynchronous information technology. Information science reference*. Hersey: PA.
- [2] Yoo, Y., Boland, R.J., Lyytinen, K., & Majchrzak, A. (2012). Organizing for innovation in a digital world. *Organization Science*, 23(5), 1398-1408.
- [3] Whitehead, B.M., Boschee, F., & Decker, R.H (2012). *The principal: Leadership for a global society*. Missoula: Sage Publications.
- [4] Zhao, Y. (2010). Technology and the virtual world are a new reality. *Principal*, 89(5), 14-17.
- [5] Eden, D.A. (2006). *Introduction to educational administration in Nigeria*. Ibadan: A. Spectrum Book Ltd.
- [6] Liverpool, E. O. & Jacinta, A.O. (2013). Information and Communication Technologies (ICT): A panacea to achieving effective goals in institutional administration. *Middle-East Journal of Scientific Research*, 15(2), 200-207.
- [7] Adeniyi, W.O. (2012). Personality traits, emotional intelligence and administrative effectiveness of principals of secondary schools in South Western Nigeria. Unpublished Ph.D. (Ed.) thesis, Obafemi Awolowo University, Ile-Ife Nigeria.
- [8] Sheppard, S., & Dibbin, D. (2010). *School culture and climate*. Canada Memorial University.
- [9] Borema, A. J. (2011). Challenging and supporting new leader development. *Educational Management Administration and Leadership*, 39(5), 554-567.
- [10] Garcia-Garduno, J. M., Slater, C. L., & Lopez-Gorosave, G. (2011). Beginning elementary principles around the world. *Management in Education*, 25(3), 100-105.
- [11] Spillane, J. P., & Lee, L. C. (2014). Novice school principals' sense of ultimate responsibility: Problems of practice in transitioning to the principal's office. *Educational Administration Quarterly*, 50, 431-465.
- [12] DeSanctis, G., & Poole, M.S. (1994). Capturing the complexity in advanced technology use: Adaptive Structuration Theory. *Organization Science*, 5(2), 121-147.
- [13] Akwa Ibom State Secondary Education Board (2016). Research and Statistics Division. Uyo: State Secondary Education Board.
- [14] Asogwa, P.N. (2013). Utilization of Information and Communication Technology (ICT) in secondary school administration in Obollo-Afor education zone of Enugu state. An unpublished M.Ed. thesis, Department of Educational Foundations, University of Nigeria, Nsukka.
- [15] Aduwa-Ogiegbenam, S.E. & Iyamu, E.O. (2005). Using information and communication technology in secondary school Nigeria: Problem and Prospects. *Education Technology and Society*, 8(1), 104-112.
- [16] Olibie, E.I. & Akudolu, L.R. (2009). The roles of stakeholders in enhancing Information and Communication Technologies (ICT) use in secondary schools in Anambra State. *Nigerian Journal of Curriculum Studies*, 16(3), 244-252.
- [17] Alberta Education (2006). Video-conferencing research community of practice: Research report. Available at: <http://www.vcalberta.ca/research>. Retrieved: October 5, 2017.
- [18] Olayemi, A.O., & Omotayo, K. (2012). Information Communication Technology adoption an effective secondary school administration in Ekiti State. *European Journal of Educational Studies*, 4 (1), 59-64.