

REVITALIZING COLLEGES OF EDUCATION FOR SUSTAINABLE ECONOMIC DEVELOPMENT IN DELTA STATE THROUGH PROVISION AND APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGY TOOLS

Theodorah Chinelo Ezugoh; Carol Ifesiokwu and Lynd Aukamaka Umakor

Abstract

This study examined the importance of revitalizing colleges of education for sustainable economic development in Delta State through the provision and application of information and communication technology tools. Two research questions guided the study. The study employed a descriptive survey research design. Population for the study constituted all the 1,051 academic staff from the four colleges of education (COE) in Delta State. The sample size for the study comprised a total of 526 academic staff from the COEs; that is: COE Agbor - 142 academic staff, Asaba FCE (T) – 194 academic staff, Mosorga COE – 65 and COE Warri – 125, selected at 50% from the entire population using the stratified random sampling technique. A research instrument constructed by the researchers and titled: “Revitalizing Colleges of Education for Sustainable Economic Development through the Provision and Application of Information and Communication Technology Tools Questionnaire (RCOESDPAICTTQ)” which contained 26 items was used for data collection. The instrument was validated by three experts, of which two of the experts came from the Department of Educational Management and Policy, and one measurement and evaluation expert from the Department of Educational Foundations, Faculty of Education, Nnamdi Azikiwe University, Awka, Anambra State. Reliability of the research instrument was established through a pilot-test sampling 22 academic staff from one of the COEs in Edo State. Data gathered from the pilot-test conducted were analyzed using Cronbach Alpha method. This yielded coefficient reliability values of 0.81 and 0.87 for the two clusters which was added up to give an overall coefficient of internal consistency of 0.84, showing that the questionnaire was reliable and trustworthy. Data collated were analyzed using mean statistics rated at 2.50 and standard deviation for answering the two research questions. Findings of the study determined among others that majority of the ICT tools were not provided and applied for revitalizing the COEs for sustainable economic development in Delta State. From the findings of the study, recommendations were made, among them include that adequate funding and financial contributions and donations should be appropriately made by the Government and private sector, which will aid the provision and application of ICT tools for revitalizing the COEs for sustainable economic development in Delta State.

Keywords: Revitalizing, Colleges of Education, Sustainable, Economic Development, Provision, Information and Communication Technology Tools

Introduction

The Nigerian Colleges of Education (COEs) are among the important teacher education institutions that offer educational training programmes in preparation for the Nigeria Certificate in Education (NCE) teachers. According to Enueme (2014), the colleges of education (COEs) are part of educational institutions that are saddled with the responsibilities of producing in-service teachers. They offer training programmes such as NCE courses to pre-service teachers and also certificate courses in Professional Diploma in Education (PDE) to serving teachers in order to upgrade and update their knowledge, improve their skills and competences in the field of education for sustainable economic development. The COEs are quite known for producing sound individuals who would

effectively make their contributions towards sustainable economic development in the Nigerian society. Besides, sustainable development according to Emas(2015) refers to the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development is the idea that human societies must live and meet their needs without compromising the ability of future generations to meet their own needs. The “official” definition of sustainable development was developed for the first time in the [Brundtland Report](#) in 1987 (You Matter World, 2020). This type of development aims to maintain economic advancement and progress while protecting the long-term value of the environment; and it equally provides a framework for the integration of environment policies and development strategies (United Nations General Assembly, 1987 cited in Emas, 2015).

The key principle of sustainable development underlying all others is the integration of educational, environmental, social and economic concerns into all aspects of decision making. Sustainable economic development according to the University of Mary Washington (2021) entails those practices that support long-term economic growth without negatively impacting social, environmental, and cultural aspects of the community. Ordinarily speaking, it is a situation in which economic development does not decrease over time, and sustainable economic development is the development that is everlasting (Mehta, 2019). Education provided in the COEs, therefore, is important for sustainable economic development. According to the Center for Neighbourhood Technology (CNT, 2019), education is central to the quality of life and well-being, linking people to employment, goods and services, health care, social activities, recreation and socio-cultural activities. However, access to quality education options through incorporation of ICT tools especially in the COEs is not always equitable, leaving many institutions of colour, especially those of limited means, struggling to meet up with their everyday needs and demands. In contributing towards sustainable economic development, the COEs trains and develops vibrant manpower that will contribute towards the growth of the Nigerian economy and Delta State inclusive. Such individuals having acquired education would effectively participate in economic activities for sustainable economic development in the society. Sustainable economic development can equally be actualized through revitalizing the educational goals and objectives. The goals and objectives of the colleges of education (COEs) as an important teacher education institution and higher academic citadel of learning useful for sustainable economic development in the society as enunciated in the National Policy on Education (NPE) by the Federal Republic of Nigeria (FRN, 2013) are to produce highly motivated, conscious and efficient classroom teachers for the basic education programme (that is; pre-primary, primary & junior secondary school levels) of the Nigerian educational system; further encourage the spirit of enquiry and creativity in teachers; help teachers fit into the social life of the community and the society at large and enhance their commitment to national goals; provide teachers with the intellectual and professional background adequate for their assignment and to make them adaptable to changing situations; and enhance teachers’ commitment to the teaching profession (FRN, 2013, P.43). Attaining the above goals will involve revitalizing all instructional practices including teaching and learning to become more functional, experiential, practical and activity-based using the Information and Communication Technology (ICT) tools support. According to the FRN (2013), the information and communication technology (ICT) is one of

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the educational support services and tools for revitalizing and promoting quality teaching and learning at all levels of the Nigerian education system for sustainable economic development, including Delta State. In recognition of the prominent role of information technology in revitalizing and advancing knowledge driven society for effective functioning in economic development, all educational institutions and government should provide infrastructure and develop capacity for effective utilization and application of ICT to enhance effective service delivery in the education system (FRN, 2013). This statement shows government approval and support for the use of ICT in revitalizing the education system including the COEs in Delta State for sustainable economic development.

The Information and Communication Technology (ICT) therefore, can be defined as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information (Antwi-Boasiakoh, 2015). It includes all the internet service provision, telecommunication equipment and services, information technology equipment and services and broadcasting, commercial information and communication activities, international networking, among many others (Chukwuma & Aniekwe, 2011). Thus, ICT is a system that gathers different information or data to communicate over some distance with the help of modern technology. The integration of ICT into education has been assumed as the potential of the new technological system. ICT is not only the backbone of the Information Age, but also an important catalyst and tool for inducing educational reforms that change and transform students into productive knowledge workers for sustainable economic development in the society (Paul & Mondal, 2012).

Examples of ICT tools that can make significant impact in revitalizing the COEs for effective instructional delivery for sustainable economic development includes; the use of networking, internet, the World Wide Web, yahoo and others, and other rapid deployment of wireless networks (Olosunde & Akinpelu, 2010). These technologies as observed by Antwi-Boasiakoh (2015) include computers, the Internet, e-mail, web-based PC, Mobile phone, wireless sets, projectors, interactive boards, broadcasting technologies (radio and television) and different interactive boards, among others. Islam and Islam (2007) opined that ICT has introduced quite a number of new technological-based resources which includes the computers connected to Internet, CD-ROM, audio cassettes, video-cassettes, photocopiers, printers, software used by educators, etc; ICT-based activities, including data processing, circulation, cataloguing, bibliography, serial control, in-house database; and ICT-based library services, including CD-ROM searching, online information service, news clipping, scanning service, online reservation services, and among others. All the above information and communication technologies play important roles in revitalizing the COEs for sustainable economic development in the Delta State; but institutions must ensure that these ICT tools are integrated into teaching and learning through adequate provision and application. Provision and application of the ICT in education as described within the context of this study entails the way ICT facilities are available, accessed and used in teaching and learning processes in the COEs. According to Mandefro (2013) the provision of ICT tools refers to the availability of different ICT facilities and the degree to which individual have access to most of the important ICT facilities. While ICT application for Mandefro (2013) refers to using different types of ICT facilities or tools in classroom and in different educational settings for the purpose of teaching and learning process. ICT tools therefore, are those gadgets, resources

and equipment which includes any communication device or application, encompassing: computers, LCD projectors, printers, photocopy machines, duplication, fax, and scanning machines, radio, television, cellular phones, hardware and software, satellite systems, as well as video conferencing internet access and other facilities that ensures student's learning. They are technological devices used to processing, analyzing, synthesizing, sharing different kinds of information and information processing activities and tools that are necessary to improve teaching and learning process. For Singh and Chan (2014), the provision and application of information and communication technology (ICT) brings about a powerful learning environment and it transforms the learning and teaching process in which students deal with knowledge in an active, self-directed and constructive way.

The adequate provision and effective application of modern ICT tools will definitely ensure revitalization and transformation of teaching and learning situations in the COEs for sustainable economic development in Delta State; but evidences from the deplorable situations and poor state of many COEs showcases that this course is yet to be accomplished and actualized. Given the importance of different ICT tools in revitalizing the COEs for sustainable economic development, yet not much has been done to ensure effective provision and application of several ICT tools in the entire education system as discovered by most studies like those of Antwi-Boasiakoh (2015) and Jensen and Sarroco (2002). Jensen and Sarroco (2002) observed that many of those schools that do have computers still do not have access to the internet, which is an important requirement for supporting networking for learners and teachers, as well as for collaborative learning. Teaching and learning activities are still highly dependent on the old traditional and conventional method of 'talk, chalk and board'. Antwi-Boasiakoh (2015) opined that looking at the developing countries, there seems to be generally limited access time per month using ICTs by both the teachers and students, and even less time spent with reliable Internet access. It should be noted that availability of ICTs vis-à-vis access in term of ratio of teachers and students differs significantly. Despite this, the new and emerging technologies, the traditional process of teaching and learning, is still been managed. Eddie (2000) supported the idea that curriculum is a way in which learning can be assessed. The focus on strictly followed paper-based examinations and prescribed learning outcomes are not appropriate to facilitating ICT to learners and so the provision and application ICT has been reduced in many schools. Several studies have been conducted in ICT by different researchers and scholars such as Adeyemi and Olaleye (2010), Fakeye (2010), Mandefro (2013), Pelgrum (2001), Rodden (2010), among others. All these studies have their different mix and findings which has necessitated the present study. It however in bid of discussion in this background that the present study sought to examine the importance of revitalizing colleges of education for sustainable economic development in Delta State through the provision and application of information and communication technology tools.

Statement of the Problem

The Information and Communication Technology (ICT) tools are very essential and useful for revitalizing the COEs in Delta State. Likewise, the ICT are effective devices for sustainable economic development in the society. The recent development of modern technology in the 21st century has brought out the whole world outside the classroom. ICT

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therefore, plays a crucial role in this respect. It is treated as the integral part for educational reforms and innovations at higher education level which includes the COEs. Notwithstanding the economic potential benefits which can be derived through appropriate provision and application of ICT tools in the teaching and learning in the COEs, yet many COEs are still dependent on the traditional and conventional method of teaching. The present COVID-19 pandemic has demanded and warranted that educational institutions make appropriate use of the ICT to support physical teaching and learning, yet many institutions still rely much on the physical face to face contact in the teaching and learning situations. The inadequacies of many COEs in effectively applying and utilizing different ICT tools in teaching and learning has become worrisome and make of discourse for many education stakeholders, including the researchers in this present study. The inadequacies and poor ICT situations of many COEs in Delta State have equally created a gap which needs to be filled in this present study. Therefore, the need for revitalizing colleges of education for sustainable economic development in Delta State through the provision and application of information and communication technology tools has become the problem of this present study.

Purpose of the Study

The purpose of this study was to examine the importance of revitalizing colleges of education for sustainable economic development in Delta State through the provision and application of information and communication technology tools. Specifically, the study aimed at ascertaining:

1. ICT tools provided for revitalizing the colleges of education for sustainable economic development in Delta State.
2. How the ICT tools are applied for revitalizing the colleges of education for sustainable economic development in Delta State.

Research Questions

The following research questions guided the study:

1. What are the ICT tools provided for revitalizing the colleges of education for sustainable economic development in Delta State?
2. How are the ICT tools applied to teaching and learning for revitalizing the colleges of education for sustainable economic development in Delta State?

Methods

The study employed a descriptive survey research design. This design involved using a research instrument, that is, a questionnaire, to collect data from a sample of academic staff within a large population of academic staff in the colleges of education in Delta State. Information retrieved from the sample of academic staff was thereafter analyzed using a statistical tool in order to generate data and draw generalization based on the findings. Population for the study constituted all the 1,051 academic staff from the four colleges of education (COE) in Delta State. The sample size for the study comprised a total of 526 academic staff from the COEs; that is: COE Agbor - 142 academic staff, Asaba FCE (T) - 194 academic staff, Mosorga COE - 65 and COE Warri - 125, selected at 50% from the entire population using the stratified random sampling technique. The stratified random

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sampling technique was used in order to enable the researchers stratify and draw samples of the academic from their geographical locations. Nworgu (2015) opined that sample which ranged from 10% to 80% is representable and enough in situations where there is a large population in a study. As regards the sample used in the present study is sizeable enough to conduct the study. A research instrument constructed by the researchers and titled: “Revitalizing Colleges of Education for Sustainable Economic Development through the Provision and Application of Information and Communication Technology Tools Questionnaire (RCOESDPAICTTQ)” which contained 26 items was used for data collection. The response items on the questionnaire were structured on a 4-point scale of Strongly Agree (SA) – 4 points, Agree (A) – 3 points, Disagree (D) – 2 points and Strongly Disagree (SD) – 1 point.

The research instrument was validated by three experts, of which two of the experts came from the Department of Educational Management and Policy, and one measurement and evaluation expert from the Department of Educational Foundations, Faculty of Education, Nnamdi Azikiwe University, Awka, Anambra State. These experts validated questionnaire to determine its face and content validity. Few corrections were made on the questionnaire by the experts based on double-barrel items, content coverage and sentence/language construction. The instrument was corrected before its final administration. Reliability of the research instrument was established through a pilot-test sampling 22 academic staff from one of the COEs in Edo State. Data gathered from the pilot-test conducted were analyzed using Cronbach Alpha method. This yielded coefficient reliability values of 0.81 and 0.87 for the two clusters which was added up to give an overall coefficient of internal consistency of 0.84, showing that the questionnaire was reliable and trustworthy. Information was gathered from the respondents through direct and face to face contact, with the help of four research assistants. An on-the-spot method was employed as well, which enabled the researchers and the four research assistants to meet the respondents, that is academic staff, in their respective institutions to wait and collect the necessary information from them. The four research assistants were instructed on how to collect the necessary information from the academic staff using the questionnaire. At first, the research assistants took permission from the heads of departments before administering the questionnaire to the lecturers. Distribution of the questionnaire to the respondents took a period of three weeks. A total of 526 copies of the questionnaire were distributed to the academic staff and all of them were retrieved at a 100% rate of return. Data collated were analyzed using mean statistics rated at 2.50 and standard deviation for answering the two research questions. The decision rule for taking decisions on the items on the questionnaire which was rated at 2.50 was that any mean score which rated at 2.50 and above was regarded to be in support of the statement and therefore termed as agree. Any mean score that rated below 2.50 was regarded as not in support of the statement and therefore termed disagree.

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Results

Research Question 1: What are the ICT tools provided for revitalizing the colleges of education for sustainable economic development in Delta State?

Table 1: Mean Scores and Standard Deviation (SD) of Academic Staff on the ICT Tools Provided for Revitalizing the Colleges of Education for Sustainable Economic Development in Delta State

N = 526 academic staff

S/N	Please indicate whether the following ICT tools are provided in your institution:	SA	A	D	SD	X	SD	Decision
1.	A standard ICT laboratory	109	102	147	168	2.29	1.12	Disagree
2.	Desktop computers in the ICT laboratory	98	117	188	123	2.36	1.03	Disagree
3.	Academic staff personal laptops, ipads and palmtops	220	133	103	70	2.96	1.07	Agree
4.	Different software applications such as the Microsoft office like the word processor, spreadsheet/excel, PowerPoint, data base management system, etc	152	196	72	106	2.75	1.08	Agree
5.	Internet connectivity and networking through LAN (Local Area Network)	208	199	54	65	3.05	1.00	Agree
6.	On-line collaboration tools such as the google classrooms, Dropbox, zoom, google meet, WhatsApp, emails, etc	85	102	165	174	2.19	1.07	Disagree
7.	Smart/mobile phones	187	200	55	84	2.93	1.05	Agree
8.	Smart multimedia television sets	88	103	155	180	2.19	1.08	Disagree
9.	Electronic radio including tape recorders	73	114	187	152	2.21	1.01	Disagree
10.	DVD/VCD players	100	121	141	164	2.30	1.10	Disagree
11.	CD-ROMs	113	118	159	136	2.40	1.09	Disagree
12.	Projectors of all sorts such as film strips, slides, etc	101	103	184	138	2.32	1.06	Disagree
13.	Electronic calculators	98	101	179	148	2.28	1.07	Disagree
Overall Mean Score =						2.48	1.11	Disagree

Analysis of data from the above Table 1 shows that only items 3, 4, 5 and 7 were rated above the acceptable mean scores of 2.50 by the academic staff in order to show that they agree with these statements. All the other items from 1, 2, 6 and 8 to 13 were rated below the acceptable mean scores of 2.50 by the academic staff in order to show that they disagree with these statements. The grand mean of 2.48 and standard deviation (SD) of 1.11 indicates closeness in the responses of the academic staff. The result indicated that majority of the ICT tools were not provided for revitalizing the colleges of education for sustainable economic development in Delta State.

Research Question 2: How are these ICT tools applied to teaching and learning for revitalizing the colleges of education for sustainable economic development in Delta State?

Table 2: Mean Scores and Standard Deviation (SD) of Academic Staff on the How these ICT Tools Provided are Applied in Teaching and Learning for Revitalizing the Colleges of Education for Sustainable Economic Development in Delta State

N = 526 academic staff

S/N	Please indicated how these ICT tools are applied in teaching and learning in your institution for:	SA	A	D	SD	X	SD	Decision
14	Surfing and sourcing information online	84	106	213	123	2.29	1.00	Disagree
15.	Recording important events and information both within and outside the college which will make positive impact in teaching and learning	99	103	184	140	2.31	1.06	Disagree
16.	Conducting students' assessment and evaluation in the college	81	110	158	177	2.18	1.06	Disagree
17.	Supervising students' projects in the college	78	101	211	136	2.23	1.00	Disagree
18.	Effective instructional delivery including supporting presentations in the classroom	100	96	118	212	2.16	1.15	Disagree
19.	Communicating with students after lecture hours on matters concerning their academics like the social media	101	94	176	155	2.27	1.08	Disagree
20.	Promoting online collaborations and presenting lessons from elsewhere apart from the classroom	109	102	144	171	2.28	1.13	Disagree
21.	Promoting/conducting research in the college	93	112	137	184	2.22	1.11	Disagree
22.	Promoting virtual library in the college	88	117	128	193	2.19	1.11	Disagree
23.	Storage of information which acts as information bank	62	105	178	181	2.09	1.00	Disagree
24.	Financial management coupled with administrative works in the college	179	183	72	92	2.85	1.07	Agree
25.	Maintaining students' records/data base management	186	201	60	79	2.94	1.03	Agree
26.	Mathematical calculations and analysis of data	100	103	167	156	2.28	1.08	Disagree
Overall Mean Score =						2.33	1.10	Disagree

Analysis of data from the above Table 2 shows that only items 24 and 25 were rated above the acceptable mean scores of 2.50 by the academic staff in order to show that they agree with these statements. All the other items from 14 to 23 and 26 were rated below the acceptable mean scores of 2.50 by the academic staff in order to show that they disagree with these statements. The grand mean of 2.33 and standard deviation (SD) of 1.10 indicates closeness in the responses of the academic staff. The result indicated that majority of the ICT tools were not applied for revitalizing the colleges of education for sustainable economic development in Delta State.

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Discussions

Findings of the study indicated that majority of the ICT tools were not provided and applied for revitalizing the COEs for sustainable economic development in Delta State. It was found out that majority of the ICT tools such as a standard ICT laboratory, desktop computers in the ICT laboratory, on-line collaboration tools such as the Google classrooms, Dropbox, zoom, Google meet, WhatsApp, emails, etc, multimedia television sets, electronic radio including tape recorders, DVD/VCD players, CD-ROMs, projectors of all sorts such as film strips, slides, etc and electronic calculators, were not provided for revitalizing the colleges of education for sustainable economic development in Delta State. It was further discovered that the only ICT tools provided in the COEs were the academic staff personal laptops, ipads and palmtops, different software applications such as the Microsoft office like the word processor, spreadsheet/excel, PowerPoint, data base management system, etc, Internet connectivity and networking through LAN (Local Area Network), and the academic staff smart/mobile phones. A situation where majority of the ICT tools are not provided in the COEs, especially, in this 21st century technological age, this will negatively affect the development of the COEs. Therefore, creating difficulties in revitalizing the COEs for sustainable economic development in Delta State. This finding agrees and corroborates with Mandefro (2013) study which found out that the level of availability of different ICT facilities such as desktop computers, laptops and internet access like access of dialup, broad band, and wireless internet connection, among others, for teaching purpose in secondary schools of the zone was very low. There were no differences in perception among teachers with different background, subject and grade levels to use ICT facilities for teaching purpose. Antwi-Boasiakoh (2015) assessing the situation of ICT in senior high schools, found out that on the availability and accessibility of ICT facilities, majority of the teachers and students indicated that the schools had between 41-60 computers and 21-40 respectively, but all on an average level. The computers were installed in the computer laboratory but not sufficient. This was confirmed by 59 (98.3%) and 190 (95%) of the teachers and students respectively. Most of the computer laboratories in the schools were connected to the internet. This was confirmed by more than 80% of the respondents. Rodden (2010) confirmed in a study that there were limited provisions, access and application of ICT tools in teaching and learning in many schools. Fakeye (2010) found out in a study that, in most of schools covered by his study do not have computers, hence are not connected to the internet and those who have computers do not use them for teaching purposes. In the Second Information Technology in Education Study (SITES), conducted by involving 26 countries, it was found that an insufficient number of computers in schools were the main reason for not realizing a school's computer-related goals (Pelgrum, 2001). Other research finding stresses that; it is very difficult to focus on implementation of technology to support learning unless schools and other educational establishments are provided with basic technological infrastructure and facilities (Mandefro, 2013). Research findings by Adeyemi and Olaleye (2010) study showed that many schools covered by their study was deficient in the availability of information communication and technology (ICT) equipment. Almost all the schools did not have projectors, projectors screen, scanning machines and fax machines. This is an indication that ICT materials are not vigorously provided for the schools (Adeyemi & Olaleye 2010).

On the application of ICT tools in teaching and learning, the present study finding indicated that majority of the ICT tools were not applied for revitalizing the colleges of education for sustainable economic development in Delta State. This includes that the ICT tools were not applied and used for surfing and sourcing information online, for recording important events and information both within and outside the college which will make positive impact in teaching and learning, for conducting students' assessment and evaluation in the college, for supervising students' projects in the college, for effective instructional delivery including supporting presentations in the classroom, for communicating with students after lecture hours on matters concerning their academics like the social media, for promoting online collaborations and for presenting lessons from elsewhere apart from the classroom, for promoting/conducting research in the college, for promoting virtual library in the college and storage of information which acts as information bank, and for mathematical calculations and analysis of data. The finding showcased that ICT tools were only used for financial management coupled with administrative works in the colleges, and for maintain students' records/data base management. These devices were not used and applied in promoting teaching and learning. The COEs on focus on using the ICT tools for administrative activities neglecting teaching and learning activities. Whereby the ICT are not applied in teaching and learning in the COEs, it will be difficult to revitalize these teacher education institutions (that is, COEs) for sustainable economic development in Delta State. This finding agrees and concurs with Antwi-Boasiakoh (2015) study which confirmed that most teachers and students although said they had access to ICT facilities but on the average, the computers were not always been used often within a week by most of the respondents. But on an hourly basis most of the respondent indicated that they used the computer between 30 minutes and an hour. This was agreed to by 42 (70.0%) of the teachers and 141 (70.55) of the students.

Mandefro (2013) found out in a study that the extent of utilization of computers for processing all data about their students and their work, using laptops for teaching in classroom, developing handout to the student and using power point to present the lesson in class of the schools covered by this study in Sidama zone were found at very lower level. Furthermore, the findings from school leaders, and IT teachers indicated that, five schools covered by this study did not have good habits and norms to utilizes computer for those activities in teaching and learning process in the schools. Mandefro (2013) study also found out that the extent of utilization of different ICT facilities such as desktop computers, laptops and internet access such as access of dialup, broad band, and wireless internet connection, among others, for teaching purpose in secondary schools of the zone was very low. There were no differences in perception among teachers with different background, subject and grade levels to use ICT facilities for teaching purpose. The findings of Mandefro (2013) further revealed that the extent of teachers' utilization of internet to update their subject, to teach, to get information, and to communicate with others of respondents in the schools covered by this study in Sidama zone were found at very lower level. Furthermore, the finding also indicated that, out of five schools covered by this study only one school had internet access but many teachers in the school did not have good habits and norms to utilizes internet for teaching and learning purpose. This result indicates that, the utilization of those materials by respondents for teaching purpose in the schools covered by this study were

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found at medium level for teaching broadcast lesson through TV, and low in printing and copying the teaching materials. The finding of Mandefro study showed that, almost all teachers who participated in the study did not support their work by using different ICT facilities. Failure to make adequate provision and likewise apply the ICT tools unanimously in teaching and learning in the COEs will not only create difficulties in goal attainment but also in revitalizing the COEs for sustainable economic development in Delta State.

Conclusion

The colleges of education (COEs) are one of the important teacher education institutions mandated to train pre-service for the nation. For the COEs in Delta State to become one of the world class institutions that provide quality education, this requires that teaching and learning should be exercised using different ICT tools. But it was found out that majority of the ICT tools were not provided and applied for revitalizing the COEs for sustainable economic development in Delta State. Failure to effectively provide, incorporate and apply the ICTs tools in teaching and learning would have been responsible for the inappropriate teaching methodologies utilized in the COEs which continues to affect students' academic performances and achievements. Now is the right time to set things right in the COEs so that quality learning may triumph in these institutions, which is necessary for revitalizing the COEs for sustainable economic development in Delta State. Hence, the recommendations proffered below.

Recommendations

From the findings of this study, the following recommendations have been made:

1. Adequate funding and financial contributions and donations should be appropriately made by the Government and private sector, which will aid the provision and application of ICT tools for revitalizing the COEs for sustainable economic development in Delta State.
2. The college management with the support of the National Commission for Colleges of Education (NCCE) and private sector should organize constant ICT/computer-based training and retraining programmes in order to equip academic staff with the necessary skills and competences that will help them to effectively apply the ICT tools in their teaching and learning for revitalizing the COEs for sustainable economic development in Delta State.

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