

CHALLENGES IN THE INTEGRATION OF ONLINE MODE OF INSTRUCTION IN THE IMPLEMENTATION OF OFFICE TECHNOLOGY AND MANAGEMENT CURRICULUM IN POLYTECHNICS IN THE NIGER DELTA REGION OF NIGERIA

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ABSTRACT

The purpose of the study is to identify the challenges facing the integration of online mode of instruction in the implementation of OTM Curriculum in polytechnics in Niger Delta Region of Nigeria. Three research questions and 3 hypotheses were used in this study. Survey research design was used in this study. The population of the study was 16 Heads of Department of OTM from Federal and States Polytechnics in Niger Delta Region. The instrument for data collection was a 4-point scale questionnaire, the questionnaire was content and face validated by the researcher and one lecturer from Delta State University, Abraka. To ascertain the reliability of the questionnaire, the questionnaires were administered to twenty (20) OTM Heads of Department from Federal and State Polytechnics in South-West Nigeria. Data collected were analyzed using Cronbach Alpha Correlation Coefficient which yielded reliability coefficient of 0.77. The questionnaires were administered on all the 16 Heads of Department of OTM in all the polytechnics in Niger Delta Region of Nigeria through 4 trained research assistants. Mean was used to analyze the research questions, while, the hypotheses were tested using the t-test at 0.05 level of significance. The study revealed that the challenges in the integration of online mode of instruction in the implementation of OTM curriculum in Polytechnics in Niger Delta Region of Nigeria are as a result of institutional factors, OTM lecturers factors, and OTM students factors. Some of the challenges amongst others are lack of trained and qualified ICT experts in OTM department; lack of required ICT facilities for online instruction in OTM department; Poor electric power supply; and lack of conducive environment for online instruction. Based on the findings, it was concluded that government, parents and industries should collectively work together to improve ICT facilities in Nigerian polytechnics for effective implementation of E-learning.

Keywords: *Challenges, Integration, Online, Mode of Instruction, OTM Curriculum, Polytechnics, & South-South Nigeria.*

INTRODUCTION

Office Technology and Management (OTM) programme in Nigeria was designed by the National Board for Technical Education (NBTE) to replace the Secretarial Studies programme offered in Nigerian polytechnics (FRN, 2004). OTM is now the new name for the former Secretarial Studies. It was approved in 2004 by NBTE, the supervising body for Polytechnics in Nigeria (Amaiya, 2013). OTM is an academic programme designed at National Diploma (ND) and Higher National Diploma (HND) levels in Nigeria's polytechnics. The knowledge, attitudes and skills expected of the ND graduates, according to the curriculum objective is to enable the graduates to fit in properly into the office of any organization and perform professionally, the functions of the modern secretary. The aim of the OTM programme, according to Dolor (2002), is to impart skills, knowledge and competencies, which makes the beneficiaries self-reliant. According to NBTE (2006), the objectives OTM include the following;

- i. Equipping the students with the knowledge, competencies and specific skills that will enable them to successfully hold position as secretaries, managers and administrative assistants in both public and private sectors of the economy.
- ii. Exposing students to industrial experience thereby affording them the opportunity to practicalise their skills.
- iii. Developing the students' potentials for further academic and professional pursuit.
- iv. Developing in the students an occupational intelligence that will make them versatile and adaptable to the changing situation in the world of works.

In achieving the objectives of OTM, there is need to bring technology in the implementation of OTM curriculum. At every level of education, educational technology is perceived as a vehicle for curriculum enhancement. Studies including those of Hadley and Sheingold (1992); McDaniel, Melnerney and Armstrong (1993); Hannafin and Saverye (1993) have indicated that educational technology has the potential for enhancing student learning. Educational technology in this context refers to technology that is employed in the classroom for the purpose of student instruction (Buck, 1994). It is all about computer-based technology including computer hardware, software, CD-ROM, videodisc player and the Internet. These forms of technology provide teachers and students with vast quantities of information in an easily accessible, non-sequential format that can be used as teaching tool. There is no doubt that computer can aid the instructional process and facilitate students' learning. Today, nearly everyone in the industrialized nations such as China, United States of America, United Kingdom, and Malta have access to education at all levels through online mode of instruction using laptops, smartphones, ipads, radio, television, and internet for learning.

However, in Africa and Nigeria in particular, we are faced with the challenges of integrating online mode of instruction in our educational system which is the sure way to go in this present COVID-19 crisis that made our schools to be shot down for a long period of time, thereby affecting our academic calendar in our educational institutions (polytechnics inclusive). According to Thomas (1987) and Shavinina (1997), the use of computer as educational technology provides productive teaching and learning in order to increase people's creative and intellectual resources especially in today's information society. Online Mode of Instruction also known as E-Learning is the use of electronic technology to deliver

education and training, monitor learner's performance and report learner's progress (Sale, 2002).

Hedge and Hayward (2004), opined that Online Mode of Instruction is an innovative approach for delivering electronically mediated, well-designed, learner-centered and interactive learning environments to anyone, anyplace, anytime by utilizing the internet and digital technologies that concern the instructional design principles. When compared with the developed countries, the educational uses of Online Mode of Instruction in polytechnics in Nigeria are still in the infancy stage because, most students are taught by the traditional approach and often times with the resultant effect of poor performance. Similarly, Okebukola (1997) reported that educational technology is not part of classroom technology in more than 90 percent of Nigerian public schools. The none integration of Online Mode of Instruction in our educational institutions in Nigeria is a big setback in educational development in Nigeria which could be as a result of some challenges from our educational institutions, teachers, students, and parents.

According to Aduwa-Ogiegbaen and Iyamu (2005), there are several impediments to the successful integration of online mode of instruction in educational institutions in Nigeria. These are: high cost of ICT facilities, weak infrastructure, lack of skills, lack of relevant software and limited access to the Internet. In Nigeria also, most teachers lack the skills to fully utilize technology in curriculum implementation hence the traditional chalkboard approach still dominates our classrooms. Ndiku (2003) cited by Wima and Lawler (2007) discovered that insufficient numbers of computers and peripheral devices inhibit the use of ICT by teachers. As well, Okwudishu (2005) reported that the unavailability of some ICT components in educational institutions hampers teachers' use of ICTs. Similarly, Adomi, Okiy and Ruteyan (2003), reported that the absence of ICT equipment in most Nigerian schools leads students to resort to cybercafés for Internet access. Kaku (2005) posited that the lack of adequate search skills and of access points in the educational institutions inhibit the use of the Internet by teachers. Furthermore, Southwood (2004) reported that more than 40 percent of the population of Africa is in areas not covered by telecom services. This implies that schools located in such areas will experience ICT connectivity problems, even when the schools are opportune to have ICT resources.

According to Enakrire and Onyenenia (2007), underfunding is a challenge on ICT utilization in Nigerian schools. Electricity failure has been a persistent problem militating against ICT application and use in Nigeria (Adomi, 2005; Adomi, Omodeko, and Otole, 2004; Adomi, Okiy, and Ruteyan, 2003). Also, Dabesaki (2005) stated that many of the factors militating against the integration of ICT include: Poor power supply; High poverty level; High illiteracy level; Inconsistent political landscape; and Inadequate broadband among other things. Similarly, Adeyemi (2004), the major challenges in the integration of online mode of instruction for teaching and learning in educational institutions in Nigeria include: poor power supply, poor infrastructure, lack of adequate skill, high cost, and unavailability. Although, currently due to the recent COVID-19 pandemic, educational stakeholders in Nigeria are now aware of the importance of the integration of online mode of instruction in the curriculum implementation in our educational institutions.

Purpose of the Study

The purpose of this study is to identify the challenges in the integration of online mode of instruction for teaching and learning of OTM in polytechnics in Niger Delta Region of Nigeria. Specifically, the study identified the:

1. Institutions Administration related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.
2. OTM Lecturers related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.
3. OTM Students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Statement of the Problem

The implementation of OTM curriculum in our Nigerian Polytechnics needs attention, this can be noticed in the quality of OTM graduates produced by our polytechnics in every academic session. As well, the employers of labour have stated it that Nigerian graduates (OTM graduates inclusive) from higher education institutions are unemployable with the reason that they do not possess employable skills. Some scholars believed that the inability of the graduates not possessing employable skills could be traced to the mode of teaching and learning in our educational institutions where students and teachers find it difficult to teach and learn using latest electronic technology devices which promote student's interest in learning in their own pace and time. The implementation of OTM curriculum in polytechnics in the Niger Delta Region of Nigeria might not be different; hence the need to conduct this study to ascertain the challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Research Questions

The following research questions were raised for this study:

1. What are the institutional administration related challenges in the integration of online mode of instruction for the teaching and learning of OTM in polytechnics in Niger Delta Region of Nigeria?
2. What are the OTM lecturers related challenges in the integration of online mode of instruction for teaching and learning of OTM in polytechnics in Niger Delta Region of Nigeria?
3. What are the OTM students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria?

Hypotheses

The following research hypotheses were stated for this study:

1. There is no significant difference between the mean response of Heads of Department of OTM from State and Federal Polytechnics on the institution administration related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.
2. There is no significant difference between the mean response of Heads of Department of OTM from State and Federal Polytechnics on the OTM Lecturers

- related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.
3. There is no significant difference between the mean response of Heads of Department of OTM from State and Federal Polytechnics on the OTM Students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Significance of the Study

The findings of this study will be significant to The Federal Ministry of Education, State Ministry of Higher Education, School administrators, lecturers, students, and future researchers. Therefore, the findings of the study will expose the institutions, lecturers, and students related challenges in the integration of online mode of instruction in the implementation of OTM curriculum in polytechnics in Nigeria. As well, the findings from the study will give educational stakeholders insights on how to successfully integrate online mode of instruction in the implementation of OTM curriculum in polytechnics in Nigeria.

Scope of the Study

The study was limited in scope to identification of the Challenges in the Integration of Online Mode of Instruction in the Teaching and Learning of Office Technology and Management in Polytechnics in Niger Delta Region of Nigeria. Heads of OTM Department from polytechnics in Niger Delta Region of Nigeria were used as respondents for the study.

Methods and Procedure

This study adopted the survey research design since no variable will be manipulated in the study. The area of the study is federal and state polytechnics in Niger Delta Region of Nigeria. The population of this study was made up of 16 Heads of Department of OTM in the 16 federal and state polytechnics in Niger Delta Region of Nigeria. For purposes of the study, no sampling technique was used, rather all the 16 Heads of Department of OTM in all the polytechnics in the Niger Delta Region of Nigeria was used as sample for the study. This consisted of 6 and 10 Heads of Department of OTM from Federal and States polytechnics respectively. The instrument for data collection was a 4-point scale questionnaire titled "Assessment of the Challenges in the Integration of Online Mode of Instruction in the Implementation of OTM curriculum in Nigerian Polytechnics" with 2 parts. Part 1 is on personal data of the respondents, while Part 2 has 3 sections (A-C) based on the three research questions. Section A is on institution related challenges, Section B is on OTM lecturers related challenges, and Section C is on OTM students related challenges. Section A, B, and C has 7, 6, and 6 items respectively making up a total of 19 items in the questionnaire. The questionnaire was content and face validated by the researcher and one lecturer from Department of Business Education Delta State University, Abraka and corrections were made as suggested. To ascertain the reliability of the questionnaire, the questionnaires were administered to twenty (20) OTM Heads of Department from Federal and States Polytechnics in South-West Nigeria who are not part of the sample under study. Data collected were analysed using Cronbach Alpha Correlation Coefficient which yielded reliability coefficient of 0.77. The questionnaires were administered on all the 16 Heads of Department of OTM in all the polytechnics in the Niger Delta Region of Nigeria through 4 trained research assistants. Mean was used to analyze the research questions, while, the hypotheses were tested using the t-test at 0.05 level of significance. In analyzing data for the research questions, the decision point was 2.60 and above because the midpoint was 2.50 which is the

criterion mean. This implies that any response with mean rating of 2.60 and above were regarded as 'agree' and mean rating less than 2.60 were regarded as 'disagree'.

Results and Discussion

Research Question 1: What are the institutional administration related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria?

Table 1 Shows the institutions administration related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria

S/N	The Following are the institutional ministration related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria	Heads of Department of OTM (Federal Polytechnics) N=6		Heads of Department of OTM (States Polytechnics) N=10	
		Mean	Remark	Mean	Remark
1.	Lack of trained and qualified ICT experts in OTM department	3.50	Agreed	3.23	Agreed
2.	Lack of required ICT facilities for online instruction in OTM department	3.20	Agreed	3.15	Agreed
3.	Poor training and retraining schemes for OTM lecturers on the use of ICT for online instruction	3.72	Agreed	3.52	Agreed
4.	Poor funding of OTM department	3.00	Agreed	3.20	Agreed
5.	No internet access in OTM department	3.30	Agreed	3.15	Agreed
6.	Poor electric power supply in OTM department	3.12	Agreed	3.32	Agreed
7.	Lack of conducive environment (online teaching lab) for online teaching and learning of OTM	3.60	Agreed	3.45	Agreed
	Grand Mean	3.35		2.29	

Table 1 revealed the following as institutional administration related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria. These include: Lack of trained and qualified ICT experts in OTM department; Lack of required ICT facilities for online instruction in OTM department; Poor training and retraining schemes for OTM lecturers on the use of ICT for online instruction; Poor funding of OTM department; No internet access in OTM department; Poor electric power supply in OTM department; and Lack of conducive environment (online teaching lab) for online teaching and learning of OTM. Okwudishu (2005) reported that there are several impediments to the successful integration of online mode of instruction in educational institutions in Nigeria. These are: high cost of ICT facilities, weak infrastructure, lack of relevant software and limited access to the internet. As well, Ndiku (2003) cited by Wima and Lawler (2007) discovered that insufficient numbers of computers and peripheral

devices inhibit the use of ICT by teachers. Okwudishu (2005) further reported that the unavailability of some ICT components in educational institutions hampers teachers' use of ICTs. Similarly, Adomi, Okiy and Ruteyan (2003), reported the absence of ICT equipment in most Nigerian schools. According to, Adeyemi (2004), the major challenges in the integration of online mode of instruction for teaching and learning in educational institutions in Nigeria include: poor power supply, poor infrastructure, lack of adequate skill, high cost, of computer gadgets and unavailability of peripherals.

Research Question 2: What are the OTM Lecturers related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria?

Table 2 Shows the OTM Lecturers related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria

S/N	The Following are the OTM Lecturers related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria	Heads of Department of OTM (Federal Polytechnics) N=6		Heads of Department of OTM (States Polytechnics) N=10	
		Mean	Remark	Mean	Remark
1.	OTM lecturers' poor ICT knowledge and skills for online instruction.	3.00	Agreed	3.12	Agreed
2.	OTM lecturers' inability to produce instructional materials for online teaching and learning	3.25	Agreed	3.29	Agreed
3.	OTM lecturers' inability to use ICT facilities for online teaching and learning	2.80	Agreed	3.00	Agreed
4.	OTM lecturers' lack of personal ICT gadgets for online instruction	3.15	Agreed	2.98	Agreed
5.	OTM lecturers have no access to internet at home	3.00	Agreed	3.10	Agreed
6.	Poor electric power supply at home	3.50	Agreed	3.32	Agreed
	Grand Mean		3.12		3.31

Table 2 revealed the following as OTM lecturers related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in the Niger Delta Region of Nigeria. These include: OTM lecturers' poor ICT knowledge and skills for online instruction; OTM lecturers' inability to produce instructional materials for online teaching and learning; OTM lecturers' inability to use ICT facilities for online teaching and learning; OTM lecturers' lack of personal ICT gadgets for online instruction; OTM lecturers have no access to internet at home; and Poor electric power supply at home. These findings are in agreement with other research findings, Aduwa-Ogiegbaen and Iyamu (2005), reported that there are several impediments to the successful integration of online mode of instruction in educational institutions in Nigeria. These are: lack of skills, lack of relevant software and limited access to the internet. Kaku (2005) posited that the lack of adequate search skills and of access points in the educational Institutions inhibit the use of the Internet by teachers.

Similarly, Okwudishu (2005) reported that the unavailability of some ICT components in educational institutions hampers teachers' use of ICTs. According to Adeyemi (2004), the major challenges in the integration of online mode of instruction for teaching and learning in educational institutions in Nigeria include: poor power supply, poor infrastructure, lack of adequate skill, high cost, and unavailability of peripherals and gadgets. Also, Adomi (2005), Adomi, Omodeko, and Otole (2004), Adomi, Okiy, and Ruteyan (2003) reported that electricity failure has been a persistent problem militating against ICT application and use in educational institution in Nigeria. As well, Dabesaki (2005) stated that many of the factors militating against the integration of ICT include: Poor power supply; and Inadequate broadband.

Research Question 3: What are the OTM Students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria?

Table 3 Shows the OTM Students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria

S/N	The Following are the OTM Students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria	Heads of Department of OTM (Federal Polytechnics) N=6		Heads of Department of OTM (States Polytechnics) N=10	
		Mean	Remark	Mean	Remark
1.	OTM students' lack of ICT facilities for online teaching and learning at home	3.23	Agreed	3.41	Agreed
2.	OTM students' lack of access to internet services at home	3.25	Agreed	3.00	Agreed
3.	OTM students' poor ability to learn without teachers guidance	3.45	Agreed	3.28	Agreed
4.	OTM students' lack of ability to use ICT facilities for online teaching and learning	3.00	Agreed	3.12	Agreed
5.	OTM students' poor electricity power supply at home	3.52	Agreed	3.37	Agreed
6.	OTM students' unconducive environment for online teaching and learning at home	3.76	Agreed	3.42	Agreed
	Grand Mean	3.37		3.27	

Table 3 revealed the following as the OTM students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria. These include: OTM students lack of ICT facilities for online teaching

and learning at home; OTM students lack of access to internet services at home; OTM students' poor ability to learn without teachers guidance; OTM students' lack of ability to use ICT facilities for online teaching and learning; OTM students' poor electricity power supply at home; and OTM students' unconducive environment for online teaching and learning at home. These findings are in agreement with other research findings, Aduwa-Ogiegbaen and Iyamu (2005) reported that there are several impediments to the successful integration of online mode of instruction in educational institutions in Nigeria. These are: lack of skills, lack of relevant software and limited access to the internet. According to Adeyemi (2004), the major challenges in the integration of online mode of instruction for teaching and learning in educational institutions in Nigeria include: poor power supply, poor infrastructure, lack of adequate skill, high cost, and unavailability of the aforementioned conditions.

Hypothesis 1: There is no significant difference between the mean response of Heads of Department of OTM from State and Federal Polytechnics on the institutions administration related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Table 4: Analysis of t-test from Mean Response of Heads of Department of OTM from State and Federal Polytechnics on the institutions administration related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria

Group	N	Mean	SD	Df	tcal	tcrit	Decision
Heads of Department of OTM (Federal Polytechnics)	6	3.35	0.265	15	0.523	1.753	Accepted
Heads of Department of OTM (States Polytechnics)	10	3.29	0.147				

Table 4 revealed that t-cal (0.523) is less than t-crit (1.753), therefore hypothesis 1 was accepted, this implies that there is no significant difference between the mean response of Heads of Department of OTM from State and Federal Polytechnics on the institutions administration related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Hypothesis 2: There is no significant difference between the mean response of Heads of Department of OTM from State and Federal Polytechnics on the OTM Lecturers related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Table 5: Analysis of t-test from Mean Response of Heads of Department of OTM from State and Federal Polytechnics on the OTM Lecturers related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Group	N	Mean	SD	Df	Tcal	tcrit	Decision
Heads of Department of OTM (Federal Polytechnics)	6	3.12	0.24	15	0.159	1.753	Accepted
Heads of Department of OTM (States Polytechnics)	10	3.14	0.14				

Table 5 revealed that t-cal (0.159) is less than t-crit (1.753), therefore hypothesis 2 was accepted, this implies that there is no significant difference between the mean response of Heads of Department of OTM from State and Federal Polytechnics on the OTM Lecturers related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Hypothesis 3: There is no significant difference between the mean response of Heads of Department of OTM from State and Federal Polytechnics on the OTM Students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Table 6: Analysis of t-test from Mean Response of Heads of Department of OTM from State and Federal Polytechnics on the OTM Students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Group	N	Mean	SD	Df	Tcal	tcrit	Decision
Heads of Department of OTM (Federal Polytechnics)	6	3.37	0.27	15	0.788	1.753	Accepted
Heads of Department of OTM (States Polytechnics)	10	3.27	0.17				

Table 6 revealed that t-cal (0.788) is less than t-crit (1.753), therefore hypothesis 3 was accepted, this implies that there is no significant difference between the mean response of Heads of Department of OTM from State and Federal Polytechnics on the OTM Students related challenges in the integration of online mode of instruction for teaching and learning OTM in polytechnics in Niger Delta Region of Nigeria.

Conclusion

Based on the findings of this study, it was concluded that government, parents and industries should collectively work together to improve ICT facilities in Nigerian polytechnics for effective implementation of E-learning. This could be achieved by providing the necessary ICT infrastructure needed for effective implementation of OTM curriculum through online mode of instruction.

Recommendations

The following recommendations were made based on the findings of the study:

- i. Rectors of polytechnics should adequately fund E-Learning projects for the implementation of OTM curriculum in Nigeria.
- ii. Rectors and school's management team should organize training and retraining programmes for OTM lecturers on the use and production of instructional materials for online instruction.
- iii. OTM lecturers should dedicate their time and interest to learn and improve on their skills in the use of latest ICT devices, software, and learning apps for online instruction.
- iv. OTM departments should organize awareness programmes for OTM students on the need and utilization of latest ICT devices, software, and learning apps for online teaching and learning.
- v. Government should adequately provide steady electric power and internet in Nigerian polytechnics.
- vi. Industries and telecommunication service providers should support the implementation of E-learning in Nigerian polytechnics through grants, donation of ICT facilities, and expertise to help improve the status of E-learning in our polytechnics.
- vii. Parents should provide ICT devices, internet, and conducive environment for students to learn at home.

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