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THE LEVEL OF UNIVERSITIES ACADEMIC STAFF ENGAGEMENT IN COMPUTER-BASED TRAINING PROGRAMMES FOR EMPOWERMENT TOWARDS USING EMERGING TECHNOLOGIES IN ERA OF COVID-19 PANDEMIC IN ANAMBRA STATE

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Abstract

The ineffectiveness of many academic staff towards using most emerging computer technologies to promote quality instructional delivery in the universities, prompted the present study. It has been observed from literature that many factors inhibit academic staff proficiency in promoting quality teaching and learning delivery in the Nigerian universities, including those in Anambra State. Not[1]ably, if academic staff of the universities can effectively engage in computer-based training programmes, such will empower them towards using emerging technologies in this era of Covid-19 pandemic in order to support teaching and learning in the classrooms, likewise quality services and teaching delivery will be guaranteed. The present study therefore was designated to investigate the extent of universities academic staff engagement in computer-based training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State. Adopting the descriptive survey research design, three research questions guided the study. Total population of the study comprised 2,397 academic staff from two universities in Anambra State. The sample size was 719 academic staff of the two universities in Anambra State selected at 30% using the simple random sampling technique. A 29-item questionnaire personally developed by the researcher and titled "Extent of Universities Academic Staff Engagement in Computer Training Programmes for Empowerment Towards using Emerging Technologies (EUASECTPETET) was the main instrument for data collection. It was structured on a 4-point scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE). The questionnaire was validated by three experts from the Department of Educational Management and Policy including a Measurement and Evaluation expert, from the Faculty of Education, in Nnamdi Azikiwe University, Awka, Anambra State. A pilot test was conducted on a sample of 25 academic staff from one university in Delta State in order to establish reliability of the instrument. Using Cronbach Alpha statistics to measure the scores collated after the pilot test, this gave coefficient reliability value of 0.91, 0.95 and 0.93 for the three clusters respectively, which also yielded an overall internal consistency reliability value of 0.93 when the three scores were added up, showing that the instrument was reliable. Data were analyzed using mean scores rated at 2.50 and standard deviation statistics. Findings of the study revealed among others that the extent of universities academic staff engagement in computer-based training programmes for their empowerment towards using various emerging technologies in era of Covid-19 pandemic in Anambra State was to a low extent. Based on the findings of this study, recommendations were proffered and among them include that universities academic staff constant engagement in basic fundamental computer-based training programmes for their empowerment towards using emerging technologies in the era of Covid-19 should be supported through the Federal and State governments adequate financing, scholarships and incentives by concerned officials such as the university management, private sector and other agencies, among others.

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Keywords: Extent, Universities, Academic Staff, Engagement, Computer-based, Training, Programmes, Empowerment, Emerging, Technologies, Era, Covid-19, Pandemic

Introduction

The Nigerian universities are institution of higher education learning popularly known for manpower training and development in the country. The universities are well-known for offering both undergraduate and postgraduate courses and professional training programmes in different faculties, fields of studies and departments, for verities of interests, dispositions and individuals. Therefore, the goals of the Nigerian universities as enunciated by the Federal Republic of Nigeria (FRN, 2013, p.39) in the National Policy on Education are to; contribute to national development through high level manpower training together with the intensification and diversification of its programmes within the context of the needs of the nation; provide accessible and affordable quality learning opportunities in formal and informal education in response to the needs and interests of all Nigerians; provide high quality career counselling and lifelong learning programmes that prepare students with the knowledge and skills for self-reliance and the world of work; reduce skill shortages through the production of skilled manpower relevant to the needs of the labour market; promote and encourage scholarship, entrepreneurship and community service by making professional course contents to reflect national requirements likewise making entrepreneurial skills acquisition a requirement for all Nigerian universities; forge and cement national unity; and promote national and international understanding and interaction. To pursue and achieve the above goals in the Nigerian universities can be made possible to include among others, through the promotion of quality teaching and learning, effective research and development, and the access to continuous staff development programmes. Hence, the Federal Republic of Nigeria (FRN, 2013) emphasized on staff constant and continuous training and retraining programmes in methods and techniques of teaching which is very crucial for academic staff development and effectiveness in the universities. However, training funds shall be provided by such government institution as TETFund to support academic staff continuous training and development (FRN, 2013, p.40).

Academic staff therefore, are among the important human resources that facilitate quality teaching and learning [23]delivery, research development and educational consultancy in the Nigerian universities. They assist in the promotion of high standards and academic excellence for the achievement of educational policy goals and instructional objectives in the universities. The academic staff are indispensable in the entire educational system of any nation and are pivots on which the university education wheels revolve. Ashimole (2011) underscored that teaching and learning in the university is hinged largely on teachers, that is 'academic staff' and that it is on teachers' number, quality and devotion that reels the effectiveness of all educational arrangements, development and growth. In the same vein, Akinsolu (2010) posited that teachers are fundamental prerequisites for students' attainment of educational goals and objectives. The Federal Republic of Nigeria (FRN, 2013) in the National Policy on Education recognized the relevance of teachers/academic staff by stating that no nation's university education system can be greater than the standard of their teachers (academic staff). The academic staff is ultimately accountable for translating educational policies and principles into actions based on practice during interaction with the students. Notwithstanding, Falemara (2013) opined that there has been this societal outcry that the standards of university education in Nigeria is falling especially in the period of COVID-19 pandemic

era. This apparent decline in the quality of university education and moral values recently is argued to be caused by indifferent attitude of the undergraduates' towards acquiring quality university education, while majority faults the academic staff for the miseries in the university systems. They proclaim that the academic staff of the universities comprising of the graduate assistants, lecturer II and I, senior lecturers, associate professors and professors are not dedicated, discipline and devoted to the cause of university education unlike in the past. But conversely, people generally have failed to also beam the search-light on the government for unattractive condition of service, poor staff development, poor remuneration of academic staff to impact positively on their professional development, and inadequate or inconsistency of in-service training and retraining programmes for academic staff improvement. Education however, is a collation and product of diverse resources and academic staff (teachers) stand out in variety of resources as a pivotal key to achieving the high standards that are progressively emphasized in education systems across the country. The prominence of a teacher or academic staff in the society at large cannot but be over-emphasized. The prospects of every individual and the nation as a whole lie in the hands of the teacher. If a doctor makes a mistake, perhaps one person might die, if a lawyer makes a mistake, perhaps, one person might go to jail, if an engineer makes a mistake, may be a bridge might collapse, but if a teacher makes a mistake, generations yet unborn will come to suffer the effect of that mistake (Falemara, 2013). Given this modern technological era coupled with the era of COVID-19 pandemic, academic staff are expected to be proficient in the use of emerging computer technologies. It is expected that academic staff promote effective teaching and learning during this COVID-19 pandemic era using emerging technologies. Besides, the COVID-19 pandemic era can be described as a period of outbreak of a deadly virus which has spread throughout many countries. Onyema, Nwafor, Obafemi, Sen, Sharma, Atonye, and Alsayed (2020) citing the World Health Organization (WHO) stated that the Coronavirus Disease is a contagious disease that first emerged in Wuhan, China in 2019. It was later coded "COVID-19" by the W.H.O which stands for Coronavirus Disease of 2019. The Coronavirus outbreak which has caused serious pandemic remains one of the worst global pandemics for decades which affected all aspects of human activities globally ranging from education, research, sports, entertainment, transportation, worship, social gathering/interactions, economy, businesses, and politics. Indeed, the entire world was in distress as a result of COVID-19 threats, the reality of the situation was challenging to bear, and the education sector remains one of the worst-hit by Coronavirus outbreak.

COVID-19 as further noted by Onyema, Nwafor, Obafemi, Sen, Sharma, Atonye and Alsayed (2020) has adverse effects on education including, learning disruptions, and decreased access to education and research f[4]acilities, Job losses and increased student debts. With the COVID-19 pandemic, there has been restrictions on physical human contact, series of lockdowns and restrictions in social or public gathering so as to curtail the wide spread of the virus. According to EdTech Hub (2020), efforts to contain COVID-19 prompted unscheduled closure of schools in more than 100 countries worldwide. COVID-19 school closures left over one billion learners out of school. However, the use of emerging computer technologies was purported by the federal government in order to encourage the continuation of educational activities and to run academic programmes in the country even when all educational institutions were locked downed. This directive showcased the digital divide existing in the country whereby many educational institutions including private and public universities failed to initiate actions upon supporting and continuing their educational or academic activities through the use of emerging technologies. Onyema, Nwafor, Obafemi, Sen, Sharma, Atonye and Alsayed (2020) opined that the spread and damaging effects of COVID-19 on the education sector necessitated the need for all educational institutions, educators, and learners

to adopt technology into teaching and learning. Many educators and students relied on technology to ensure continued learning online during the Coronavirus pandemic. Educational institutions that have inculcated the use of emerging technologies in their systems before the outbreak of COVID-19 had a comparative advantage over those who were yet to embrace technology in their operation[5]s. Teachers were required to teach remotely and students needed adjustments to the new teaching and learning techniques. The transition to online education posed a challenge to learners in countries (including Nigeria) where there were no relevant infrastructures and facilities that facilitate online education. The problem of the digital divide was also a big issue particularly for learners in rural areas. This is because students and teachers in rural areas often lack the needed facilities and expertise to implement remote teaching and learning. While many lacks the required digital skills to implement online education. However, online education coupled with the use of emerging technologies was hindered by poor infrastructures including, network, power, inaccessibility and unavailability issues and poor digital skills from many educators, calling for the need to emphasize more on computer education training and retraining programmes that will boost educators' skills on the use of emerging technologies. The EdTech Hub (2020) asserted that for teachers, the main impediment to the use of technologies in education was the lack of appropriate computer training programmes to design and manage distance learning programmes. This situation however, requires placing more emphasis and importance on teachers' use of emerging technology capabilities through constant training, retraining and development programmes.

Emerging technologies therefore, has been defined by Halaweh (2013) as science-based innovations with the potential to create a new industry or transform an existing one. For example, record label companies and the DVD market were destroyed because of the emerging Apple store and the iPod. Halaweh (2013) concluded that technology is defined as emerging when it causes a radical change to business, industry, or society. To sum up, ETs are not necessarily new. Technology is labeled as emerging in a particular context (domain, place, or application) but can be established elsewhere. Technology is also considered emerging when it is not widespread in a particular context (Rotolo, Hicks & Martin, 2015). Examples of these emerging technologies as indicated by Fulton (2019), Goodman (2019), Halaweh (2013), Onyema, Nwafor, Obafemi, Sen, Sharma, Atonye and Alsayed (2020), Rotolo, Hicks and Martin (2015), Stahl (2011) include the use of NFC (near field communications), cloud computing, ambient intelligence, digital readers and tablets, 3D printing, photocopiers and scanners, mouse, USB flash drive, desktops, monitor, laptops, virtual reality, robotics and artificial intelligence, Gamification, mobile technology, Learning Management System (LMS), social network websites which includes zoom, WhatsApp, Skype, YouTube, google classroom, google meet, google hangouts, Edmodo, schoology, twitter, Facebook, Instagram, among many others. All these emerging technologies are very useful and play significant roles in promoting effective teaching and learning in the universities especially in this COVID-19 pandemic era. According to Goodman (2019), Nkamnebe, Okeke, Udem and Nkamnebe (2015), Onyema et al (2020) and among other scholars emerging technologies are beneficial in the educational process in the following ways; they facilitate online education, student-teacher interactions, connection and relationships. They enhance teaching and learning experiences, content creation, course sharing, assessments, and feedback. Educators can reach and interact with their students on the go from any location, and lectures can be fixed at any time of convenience. Educators and students can optimize these emerging technologies to supplement classroom teachings, and to improve their digital skills in line with emerging trends in education. More so, knowledge of emerging technology increases educators' and students' interest, competence, confidence, creativity, employability and output, and also

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prepares them for the future. The use of emerging technology as observed by Onyema and Deborah (2019) and Onyema et al (2020) facilitates Remote learning, Distance learning, Virtual learning, Blended learning, Mobile learning, Distributed learning, Machine learning, Ubiquitous learning, Deep learning, Cooperative and Collaborative learning. Most aspect of education is going digital, and education stakeholders including students are confronted with the challenge of transition to online education. The use of appropriate emerging educational technologies increases accessibility to learning resources such as Massive Open Online Courses (MOOCs), and multiple learning approaches to meet the need of diverse learners (Onyema et al, 2020). Emerging technologies enhances learning online with the aid of technology tools and platforms. The increasing use of emerging technology in education has modified teachers' methods from the traditional approach that often place them as dispensers of knowledge to a more flexible approach where they act more as facilitators, mentors and motivators to inspire students to participate and learn (Onyema & Deborah, 2019).

Emerging technologies encourage online education platforms which are vital tools that support inclusive education and online learning. Emerging technologies provide online education which has its roots in distance education and the emergence of digital technologies that facilitate the efficient and reliable delivery of lectures, virtual classroom sessions and other instructional materials and activities via the internet. With the high penetration of the internet and mobile technologies across the globe, online education platforms can be maximized to bridge the gaps in education, thereby reducing the rate of global illiteracy. Also, both learners and educators can be productively and educationally engaged to reduce the boredoms (Onlineeducation.com, 2020 cited in Onyema et al, 2020). Notwithstanding the benefits of these emerging technologies, yet many academic staff including those in the universities are not familiar with the use of many of these emerging technologies. This situation seems to raise a lot questions about university academic staff consistency and constant engagement in computer-based training programmes (which includes basic fundamental and e-learning training programmes) for their empowerment towards using emerging technologies in era of Covid-19 pandemic. The success in application of emerging technologies as indicated by Onyema et al (2020) will not only depend largely on such factors including, good internet connections, learning software, availability and access to technology but also digital skills, which has been reported that many teachers do not have requisite technological or digital skills to utilize many of these emerging technologies during instructional delivery. Therefore, university academic staff digital skills and empowerment in utilization of the emerging technologies depends mostly on their engagement in computer-based training programmes. Computer-based training programme or CBT as described by the CommonLab India (2017) is in simple terms the use of computers to impart training. The ubiquity of computers and the need to train employees in quick time has led to the increased adoption of CBT in organizations including educational institutions like the universities world-wide. Abbakin (2020) and Beal (2021) opined that computer-based training refers to resources, companies and services dedicated to helping educate users on computer-related topics. Computer training professionals instruct and help users acquire proficiency in a wide array of areas, including software, hardware, database management, programming, networking and more. Computer based training programmes as further observed by the CommonLab India (2017) can be successful than traditional forms of learning because it offers more variety of instructional methods such as text, videos, audio and graphics, which can be tailored according to the needs of the trainee. CBT therefore, offers training programmes in various areas such as basic fundamental training and e-learning training programmes. The basic fundamental training programmes according to Abbakin (2020) enables participants acquire rudimentary

skills in ord[6]er to gain an understanding of the most essential computer technologies which an individual need in today's environment and office space. This basic computer training programme covers everything like the Micros[7]oft office, spreadsheets, PowerPoint, Microsoft access, small business accounting (Quickbooks), basic writing skills and emails, basic web and social skills, job employability skills, Photoshop and graphics such as Corel draw and Adobe, among others.

E-learning on the other hand covers training programmes in connection to the Internet or web. It is education that is primarily administered using computers rather than an in-person instructor. Computer-based e-learning training is typically delivered over the web using a training platform such as a learning management system (LMS), cloud computing, among others (Abbakin, 2020). According to Gabadeen, Alabi and Akinnubi (2015), the term 'e-learning' broadly refers to the use of computer technologies in education, whether in face to-face classrooms, in blended and hybrid courses, in mediated distance education contexts or in online learning environments. In other words, e-learning can be seen as the use of electronic information communication technologies (ICTs) in formal learning contexts. E-learning can transcend the limits of geography to provide access to quality education, regardless of a place of residence. E-learning often involves both out-of-classroom and in-classroom educational experiences via technology applications and processes such as Web-based learning, computer-based learning, virtual education opportunities and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM. It can be self-paced or instructor-led and includes media in the form of text, image, animation, streaming video and audio. Thus, e-learning is broader than just online learning because it covers classroom activities that use digital technology, as well as online learning (Gabadeen, Alabi & Akinnubi, 2015; Keane, 2010). E-learning CBT is also to communication technologies that are generally categorized as synchronous or asynchronous such as Skype, YouTube, BlogSpot, Microsoft Office Suite, Web Browsers, Digital imaging hardware, Discussion Forums, emails and Wiki (Gabadeen, Alabi & Akinnubi, 2015). From all the foregoing discussions, CBT programme helps academic staff and learners to develop critical thinking skills. While developing their problem solving skills, both academic staff and learners practice and develop their skills for instructions and solving issues in a logical manner (CommonLab India, 2017). Bose (2016) observed that academic staff engagement in computer-based training and retraining programmes of course empowers them in their daily life activities and teaching task, such as rendering consultancy services, conducting research, writing reports and letters, supervising students' projects, maintaining budgets, sending emails, using and surfing the Internet, organizing public lectures, among others. Thus, computer-based training programmes empowers teachers in their research, teaching/learning purposes, document preparation and record keeping, to have access to teaching aids, among others. When a teacher or academic staff of the university uses computers for teaching/learning purposes, develops teaching aids, prepares documents for classroom usage, maintains classroom records for the attendance register, fees register, marks register, etc., does research by acquiring new information and knowledge, then they could be considered computer literate. Teacher can make the teaching/learning process more efficient by using computers as they can provide better learning results, and help the teacher to adapt to the individual learner and his/her needs (Bose, 2016). Bose (2016) further opined that in order to achieve the educational goals, a strong foundation in computer skills is essential at all levels. Consequently, empowerment of school teachers with computer-based skills is one of the most important preparations to be made whilst introducing computers and computer-based communications in schools. Teachers

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have a key role in making information and communication technology (ICT) accessible to people of varying backgrounds and ages (Sinko & Lehtinen cited in Bose, 2016). This is absolutely necessary, as competent and highly motivated teaching personnel are a basic requirement in bringing about any change in schools.

Teachers require training to link activities done on the computer to the general education of children and act as facilitators in the process of learning. They need to be empowered with computing skills and to be made computer literate. However, there seems to be some challenges hindering academic staff engagement in computer-based training programmes. Several challenges or obstacles have been found to prevent academic staff from their engagement in computer education and training and they include; network and internet connectivity issues, poor power/electricity supply, distractions and time conflict with family and work (teaching) commitments, computer fatigue and physical risks (eye strain after staring at the screen for hours, sore back, chronic "pins and needles" in feet, legs), lack of organizational/management support from their home universities, inaccessibility and lack of availability to most of these emerging technologies, funding problems, lukewarm attitudes by the side of staff and students in the e-learning processes, lack of good policy implementation, insufficient funds to upgrade and maintain the equipment and the facilities, lack of sufficient, trained ICT professional or limited expertise, conflict with work schedule, lack of awareness of many of these computer-based training programmes on the part of teachers, lack of interest in learning ICT, among others (Igomu & Iyekekpolor, 2014; Manir, 2009; Onyema et al, 2020; Oye, Salleh & Iahad, 2014; Weli & Ollor, 2021). Also, several empirical studies have been conducted on academic staff or teachers' involvement and engagement in training programmes including their constraints or impediments, such as those of Abuhmaid (2011), Almerich, Suárez-Rodríguez, Belloch & Bo (2011), Igomu and Iyekekpolor (2014), Kiwonde (2018), Manir (2009), Onyema et al (2020), Suleiman (2015) and Weli and Ollor (2021). All these empirical studies have their own mix and findings which necessitates the present study. Moreover, if academic staff are made highly proficient and empowered to use emerging technologies in this Covid-19 pandemic, quality education and excellence in instructional delivery will be highly promoted in the universities including those in Anambra State. The issues relating to poor instructional delivery coupled with undergraduates' low academic performances and achievements both in the past and in era of Covid-19 pandemic have warranted this study on extent of universities academic staff engagement in computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State.

Statement of the Problem

In today's technological age, university academic staff computer literacy and proficiency is determined by their ability to effectively utilize and communicate through the emerging technologies such as the Internet and other hardware or software technologies in order to promote instructional delivery, students' learning and academic achievements. But preliminary examinations and observations from academic staff of the universities in Anambra State showcased that academic staff utilization of computers for their classroom communications, research work coupled with their engagement in teaching and learning activities seem to [8]be rather low, which poses a lot of threat on achievement of educational goals/objectives; and equally raises questions on extent of the university academic staff continuous active engagement in computer-based training programmes. Moreover, the ineffectiveness of many academic staff towards using most emerging computer technologies to promote quality instructional delivery in the universities, has thus, become worrisome and which has prompted the present study. It has equally been observed from other literature and empirical studies that many factors and challenges inhibit

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and constrain academic staff engagement in computer-based training programmes for their proficiency in promoting quality teaching and learning delivery in the Nigerian universities, including those in Anambra State. Notably, if academic staff of the universities in Anambra State can effectively engage in computer-based training programmes is highly beneficial to them; such will empower them towards using those emer[9]ging technologies in this era of Covid-19 pandemic to support teaching and learning in the classrooms and research, likewise quality services and teaching delivery will be guaranteed. The focus of many previous studies is on academic staff ICT accessibility and utilization without investigating aspect of the extent of their engagement in computer-based training programmes. Therefore, the need towards examining the extent of universities academic staff engagement in computer-based training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State has created a gap which needs to be filled and is equally the problem of this present study.

Purpose of the Study

The purpose of this study was to determine the extent of universities academic staff engagement in computer-based training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State. The specific objectives of this study aimed at finding out:

1. The extent of universities academic staff engagement in basic fundamental computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State.
2. The extent of universities academic staff engagement in e-learning computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State.
3. The extent to which most possible identified challenges inhibited universities academic staff engagement in the various computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State.

Research Questions

The following three research questions guided the study:

1. What is the extent of universities academic staff engagement in basic fundamental computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State?
2. What is the extent of universities academic staff engagement in e-learning computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State?
3. To what extent do most possible identified challenges inhibit universities academic staff engagement in the various computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State?

Methods

The descriptive survey research design was adopted in the study. Adopting the design involved constructing a research instrument, such as, the questionnaire and using it to gather information from academic staff of two universities in Anambra State and thereafter, the information gathered were analyzed using the most suitable statistics to analyze data collated and report the findings of the study, likewise conclude, and make recommendations for the study. Total population of the study comprised 2,397 academic staff from two

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universities in Anambra State. Justification for selecting only the universities' academic staff was because the present study concerns them greatly and they are in better position to describe their extent of engagement in the various computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State. The sample size was 719 academic staff of the two universities in Anambra State selected at 30% using the simple random sampling technique. To select the sample, 30% of each of the university academic staff were selected to have a sizeable number for the study due to their large population. This selection is in line with the recommendation of Nworgu (2015) who noted that for a large sample size, 5% and above is enough to conduct any study. This indicated that the sample was okay for the study. A 29-item questionnaire personally developed by the researcher and titled "Extent of Universities Academic Staff Engagement in Computer Training Programmes for Empowerment Towards using Emerging Technologies (EUASECTPETET) was the main instrument for data collection. It was structured on a 4-point scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE). Construction of the questionnaire was based on the purpose of the study and research questions. The questionnaire was validated by three experts from the Department of Educational Management and Policy including a Measurement and Evaluation expert, from the Faculty of Education, in Nnamdi Azikiwe University, Awka, Anambra State. These experts who validated the research instrument determined the content validity of the instrument as regards to the content, sentence construction and arrangement of items in the instrument. They also made useful corrections which were incorporated in the instrument before finally printing out and distributing it to the respondents, that is, academic staff. A pilot test was conducted on a sample of 25 academic staff from one of the universities in Delta State in order to establish reliability of the instrument. Using Cronbach Alpha statistics to measure the scores collated after the pilot test, this gave coefficient reliability value of 0.91, 0.95 and 0.93 for the three clusters respectively, which also yielded an overall internal consistency reliability value of 0.93 when the three scores were added up, showing that the instrument was reliable. The questionnaire was distributed to the two universities academic staff through a direct, hand delivery and personal contact with them. The researcher employed the assistance of three research assistants who were equally academic staff of the different universities. While distributing the questionnaire, the researcher and research assistants maintained the Covid-19 rules of use of face mask, hand sanitizers and maintaining 3-meter social distancing with the respondents. A total of 719 copies of the questionnaire were distributed on the spot and were equally retrieved immediately by the researcher and research assistants. All the 719 copies of the questionnaire distributed at an interval of two weeks were all retrieved at a 100% rate of return and sent out for appropriate computation. Data were analyzed using mean scores rated at 2.50 and standard deviation statistics.

Results

Research Question One: What is the extent of universities academic staff engagement in basic fundamental computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State?

Table 1: Mean Scores and Standard Deviation (SD) of the Universities Academic Staff on the Extent of their Engagement in Basic Fundamental Computer Training Programmes for their Empowerment Towards using Emerging Technologies in Era of Covid-19 Pandemic in Anambra State

N = 719 Universities Academic Staff

S/N	Please indicate the extent of your engagement in the following under listed basic computer training programmes in:	VHE	HE	LE	VLE	X	SD	Decision

1.	Microsoft office (word processor)	199	313	92	115	2.83	1.01	**High Extent**
2.	Spreadsheet or Excel	92	164	202	261	2.12	1.04	**Low Extent**
3.	PowerPoint	101	208	191	219	2.27	1.04	**Low Extent**
4.[10]	Microsoft outlook	89	199	233	198	2.25	0.99	**Low Extent**
5.	Desktop publishing	70	141	301	207	2.10	0.93	**Low Extent**
6.	[11]Microsoft access	64	155	267	233	2.07	0.94	**Low Extent**
7.	Small accounting programmes	52	124	244	299	1.90	0.93	**Low Extent**
8.	Photoshop	76	163	238	242	2.10	0.99	**Low Extent**
9.	Graphic design such as Corel draw and Adobe	80	171	245	223	2.15	0.99	**Low Extent**
	Overall Mean Score & SD =					**2.20**	**1.02**	**Low Extent**

Analysis of result in Table 1 showed that all the items from items 2 to 9 were rated below the acceptable mean score of 2.50 by both universities academic staff in order to show their disagreement with these statements. Except only item 1 which was rated above the acceptable mean score of 2.50 by both universities academic staff in order to show their agreement with the statement. More so, the overall mean score and standard deviation (SD) of 2.20 and 1.02 indicated closeness in the mean responses of the academic staff. This analysis indicated that the extent of universities academic staff engagement in basic fundamental computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State was to a low extent.

Research Question Two: What is the extent of universities academic staff engagement in e-learning computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State?

Table 2: Mean Scores and Standard Deviation (SD) of the Universities Academic Staff on the Extent of their Engagement in e-Learning Computer Training Programmes for their Empowerment Towards using Emerging Technologies in Era of Covid-19 Pandemic in Anambra State.

N = 719 Universities Academic Staff

S/N	Please indicate the extent of your engagement in the following e-learning computer training programmes:	VHE	HE	LE	VLE	X	SD	Decision
10.	SPSS (social science statistical package for research)	84	112	247	276	2.01	1.00	**Low Extent**
11.	Synchronous training programmes such as Skype, YouTube, BlogSpot, zoom, videoconferencing, Web Browsers, WhatsApp, digital imaging hardware, instant messaging, Blackboard Collaborate Ultra, etc	59	138	253	269	1.98	0.95	**Low Extent**
12.	Asynchronous training such as discussion forums, Messaging (emails), Web logs (Blogs), Surveys and polls (Blackboard surveys and pools, Microsoft forms), Voice Thead, Streaming audio/Streaming video and wiki	61	129	302	227	2.03	0.91	**Low Extent**
13.	Online collaboration training programmes through google classroom, google meet, hangouts, google calends, etc	57	101	265	296	1.89	0.93	**Low Extent**

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14.	Training in cloud computing	46	94	277	302	1.84	0.88	
15.	Training in Learning Management System (LMS)	34	88	249	348	1.73	0.85	**Low Extent**
	Overall Mean Score & SD =					**1.91**	**0.93**	**Low Extent**

Analysis of result in Table 2 revealed that all the items from items 10 to 15 were rated below the acceptable mean score of 2.50 by both universities academic staff in order to show their disagreement with these statements. None of the items was rated above the acceptable mean score of 2.50 by both universities academic staff in order to show their agreement with any of these statements. More so, the overall mean score and standard deviation (SD) of 1.91 and 0.93 indicated closeness in the mean responses of the academic staff. This analysis indicated that the extent of universities academic staff engagement in e-learning computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State was to a low extent.

Research Question Three: To what extent do most possible identified challenges inhibit universities academic staff engagement in the various computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State?

Table 3: Mean Scores and Standard Deviation (SD) of the Universities Academic Staff on the Extent to which these most Possible Challenges Inhibited their Engagement in various Computer Training Programmes for their Empowerment Towards using Emerging Technologies in Era of Covid-19 Pandemic in Anambra State.

N = 719 Universities Academic Staff

S/N	Please indicate the extent to which these challenges inhibit your engagement in various computer training programmes:	VHE	HE	LE	VLE	X	SD	Decision
16.	Lack of personal funds to engage into computer-based training programmes	219	251	123	126	2.78	1.06	**High Extent**
17.	Lack of financial support or encouragements from university management in ICT training	214	205	177	123	2.71	1.07	**High Extent**
18.	Inadequate information on available computer-based training programmes opportunities	263	196	116	144	2.80	1.14	**High Extent**
19.	Inadequate information (awareness) on the modalities for accessing development programmes	189	281	116	133	2.73	1.05	**High Extent**
20.	Inadequate accessibility of emerging technological resources coupled with standard ICT centre in the university to conduct constant training for staff	213	239	157	110	2.77	1.04	**High Extent**
21.	Failure to ensure that adequate personnel (ICT experts) are provided to implement training	205	245	135	134	2.72	1.07	**High Extent**
22.	Constant failure of electricity supply	199	277	127	116	2.78	1.02	**High Extent**
23.	Lack of transparency, equity and fairness in sponsorship of academic staff as those close to the university management are favoured to participate in training programmes	214	215	184	106	2.75	1.04	**High Extent**
24.	Poor implementation of ICT policy	211	244	125	139	2.73	1.08	**High Extent**
25.	Poor access to internet connectivity and network	133	263	204	119	2.57	0.97	**High Extent**
26.	Computer fatigue coupled with physical risks	141	167	211	200	2.35	1.08	**Low Extent**
27.	Academic staff lack of interest including lukewarm attitudes due to preference of the old conventional method of teaching over the use of emerging technologies/e-learning processes	138	146	220	215	2.29	1.09	**Low Extent**
28.	Absence or inconsistency from the planned training programme as a result of constraints from work schedule including other personal distractions and engagements	222	278	112	107	2.86	1.02	**High Extent**
29.	Poor maintenance culture of emerging technology tools, facilities or equipment	194	233	137	155	2.65	1.09	**High Extent**
	Overall Mean Score & SD =					**2.68**	**1.07**	**High Extent**

Analysis of result in Table 3 showed that only items 26 and 27 were rated below the acceptable mean score of 2.50 by both universities academic staff in order to show their disagreement with these statements. Except for items 16 to 25 and 28 to 29 which were rated above the acceptable mean score of 2.50 by both universities academic staff in order to show their agreement with these statements. More so, the overall mean score and standard deviation (SD) of 2.68 and 1.07 indicated closeness in the mean responses of the academic staff. This analysis indicated that the extent to which most possible identified challenges inhibited universities academic staff engagement in the various computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State was to a high extent.

Discussions

Findings of the study indicated that the extent of universities academic staff engagement in computer-based training programmes for th[12]eir empowerment towards using various emerging technologies in era of Covid-19 pandemic in Anambra State was to a low extent. It was discovered that universities academic staff engagement in such computer-based training programmes as basic fundamental computer training programmes and e-learning computer training programmes, for their empowerment towards using various emerging technologies in era of Covid-19 pandemic in Anambra State were both to a low extent. However, several factors were responsible for this situation. It was further discovered in the study most possible identified challenges which inhibited universities academic staff engagement in the various computer training programmes. Moreover, the finding of the study indicated that the extent of universities academic staff engagement in basic fundamental computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State was to a low extent. This finding further indicated that except for the universities' academic staff high extent engagement in Microsoft office (word processor) computer-based training programmes; their engagement in other basic fundamental computer training programmes such as the Spreadsheet or Excel, PowerPoint, Microsoft outlook, Desktop publishing, Microsoft access, Small accounting programmes, Photoshop, and Graphic design such as Corel draw and the Adobe; were all to a low extent. This finding agrees and corroborates with Weli and Ollor (2021) study found out that although teachers' professional development was very relevant and indispensable in the actualization of quality instruction in secondary schools in Rivers State, but the extent of teachers' engagement in these training programmes was relatively very poor. The finding of Igomu and Iyekekpolor (2014) study indicated that majority of the teachers rated their ICT competence as low. This finding indicated that Federal Unity College teachers were not sufficiently equipped through basic computer-based training to integrate ICT into the school system. If the universities' academic staff in Anambra State are not encouraged to actively engage themselves and participate in basic fundamental computer training programmes, it would be difficult for them to become empowered with such ICT basic skills and knowledge that will make them use the emerging technologies in era of Covid-19 pandemic.

The finding of the study also indicated that the extent of universities academic staff engagement in e-learning computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State was to a low extent. This finding included that the academic staff engagement in e-learning computer training programmes such as SPSS (social science statistical package for research), Synchronous training programmes such as Skype, YouTube, BlogSpot, zoom, videoconferencing, Web Browsers, WhatsApp, digital imaging hardware, instant messaging, Blackboard Collaborate Ultra, etc, Asynchronous

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training such as discussion forums, Messaging (emails), Web logs (Blogs), Surveys and polls (Blackboard surveys and pools, Microsoft forms), Voice Thead, Streaming audio/Streaming video and wiki, Online collaboration training programmes through google classroom, google meet, hangouts, google calends, etc, Training in cloud computing, and Training in Learning Management System (LMS), for their empowerment towards using emerging technologies in era of Covid-19 pandemic; were all to a low extent. This finding agrees and corresponds with Abuhmaid (2011) study which found out that ICT professional development courses for teacher were helping them to improve their ICT skills and knowledge, yet teachers' participation in the programmes was poor. However, other finding highlighted problems regarding the conduct and the nature of these courses including timing and modes of training, follow-up, teacher's belief, school culture, workload, and motivation, appeared to impact the effectiveness of training courses. The finding of Kiwonde (2018) study confirmed that ICT training programmes were well-implemented and that they were useful to teachers. Many teachers on their own part did not avail themselves opportunities to participate in these programmes. Almerich, Suárez-Rodríguez, Belloch & Bo (2011) study found out that that teachers demand higher-level training in the personal professional area, although their level of participation was poor, and they require more ICT training with students in classrooms and to integrate ICT into classrooms. Suleiman (2015) found out in a study that the management of the polytechnics did not adequately support staff development. The attitude of lecturers towards attendance and participation in conferences was positive. The attitude of lecturers towards attendance and participation in conferences was generally positive as they showed keen interest in attending conferences whether far or near and even in non-Polytechnic tertiary institutions. Bose (2016) study found out that computer training is not very effective in colleges of education. The respondents did not receive any computer training. If the universities' academic staff in Anambra State are not encouraged to actively engage into e-learning computer training programmes to a high extent, it becomes impossible that they will lack the potential skills and competences that will enable them to make use the emerging technologies in era of Covid-19 pandemic.

Finally, the finding of this study revealed the extent to which most possible identified challenges inhibited universities academic staff engagement in the various computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic in Anambra State, and which was to a high extent. This included that such challenges as: Lack of personal funds to engage into computer-based training programmes, Lack of financial support or encouragements from university management in ICT training, Inadequate information on available computer-based training programmes opportunities, Inadequate information (awareness) on the modalities for accessing development programmes, Inadequate accessibility of emerging technological resources coupled with standard ICT centre in the university to conduct constant training for staff, Failure to ensure that adequate personnel (ICT experts) are provided to implement training, Constant failure of electricity supply, Lack of transparency, equity and fairness in sponsorship of academic staff as those close to the university management are favoured to participate in training programmes, Poor implementation of ICT policy. Poor access to internet connectivity and network, Absence or inconsistency from the planned training programme as a result of constraints from work schedule including other personal distractions and engagements, and Poor maintenance culture of emerging technology tools, facilities or equipment; to a high extent inhibited the universities' academic staff engagement in the various computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic. It was further discovered that Computer fatigue coupled with physical risks; and Academic staff lack of interest including lukewarm attitudes due to

preference of the old conventional method of teaching over the use of emerging te[13]chnologies/e-learning processes, to a low extent inhibited the universities' academic staff engagement in the various computer training programmes for their empowerment towards using emerging technologies in era of Covid-19 pandemic. This finding agrees with such studies like that of Suleiman (2015) which confirmed that there were organizational issues that constrained staff development in Federal Polytechnics. More so, many organizational issues that hindered the training and development of lecturers were: inadequate information on available staff development opportunities, inadequate information on the modalities for accessing development programmes, failure by management to ensure that adequate resources (finance, people and[14] time) were provided to implement training, lack of transparency and fairness in sponsorship of lecturers as those close to management were favoured, being sent on training without consideration for its relevance to present job or future needs, more reliance on TETFund than the general allocation for sponsoring lecturers which limited the number of staff that could benefit, poor work environment (lack of adequate motivation, physical facilities and communication), absence of a planned, systematic and structured staff development programme.

Conclusions

The university academic staff proficiency and competence towards using the emerging technologies in era of Covid-19 pandemic in Anambra State which is superb, can be very supportive and beneficial towards achievement of educational goals and objectives. But this can only be made possible when the academic staff constantly and continuously engage themselves into various basic fundamental and e-learning training programmes for their empowerment and upgradement. However, the present study concludes that the extent of universities academic staff engagement in the basic fundamental and e-learning computer-based training programmes for their empowerment towards using various emerging technologies in era of Covid-19 pandemic in Anambra State was to a low extent. Also, challenges such as lack of personal funds to engage into computer-based training programmes, lack of financial support or encouragements from university management on ICT training, inadequate information on available computer-based training programmes opportunities, inadequate information (awareness) on the modalities for accessing development programmes, among others inhibited the universities' academic staff engagement into computer-based training programmes for their empowerment towards using various emerging technologies in era of Covid-19 pandemic. No wonder many academic staff cannot boastful use the emerging technologies to support teaching and learning, coupled with supervision of students' research work in this era of Covid-19 pandemic. This deplorable state calls for absolute redress in order to tackle this problem.

Recommendations

Based on the findings of this study, recommendations were proffered and among them include that;

1. The universities' academic staff constant engagement in basic fundamental computer-based training programmes for their empowerment towards using emerging technologies in the era of Covid-19 should be supported through the Federal and State governments adequate financing, scholarships and incentives by concerned officials such as the university management, private sector and other agencies, among others.
2. The university management should support and encourage academic staff engagement in e-learning computer-based training programmes for their empowerment towards using emerging technologies in the era of Covid-

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19 by organizing constant e-learning retraining programmes for all academic staff and also establish an active ICT training centre with up-to-date technological resources and constant internet services.

3. The government (both federal and state) in collaboration with NUC and the university management should assist and support the academic staff including the universities in Anambra State financially and through other encouragements/strategies to curb and overcome the challenges which prevent their engagement computer-based training programmes for their empowerment towards using emerging technologies in the era of Covid-19.

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