



Instructional Delivery Digitalization and Job Performance of Business Education Lecturers in Ignatius Ajuru University of Education Port Harcourt, Rivers State

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Abstract: *This work examined the influence of instructional delivery digitalization on job performance of business education lecturers in Ignatius Ajuru University of Education, Port Harcourt, Rivers State, Nigeria. The objective of the study was to examine the extent to which dimensions of instructional delivery digitalization such as networks and e-library facilitate the measures of lecturers performance such as supervision of students academic activities. The study also sought to determine the moderating role of technological level of the institution in the relationship between instructional delivery digitalization and lecturers performance. The study adopted the descriptive survey research design. A census study was used from a population of 22 lecturers of different categories drawn from the department of business education in Ignatius Ajuru University of Education, Port Harcourt. After validating the instrument, by two lecturers in the department of business education, Ignatius Ajuru University of Education, 22 copies of the structured questionnaire were administered, while 15 copies were retrieved. The reliability of the instrument was ascertained using Crombach Alpha test method. Mean and standard deviation were used to analyze the data generated. The results showed that dimensions of instructional delivery digitalization such as networks, and e-library facilitate measures of lecturers performance such as supervision of students seminars, projects, and industrial training. The study concluded that instructional delivery digitalization brings about lecturers performance in business education in Ignatius Ajuru University of Education. Consequently, the study recommended among others that the institution should improve the technological level of digital facilities to enhance digitalization of supervision of lecturers' activities.*

Keywords: *Industrial Delivery, Digitalization, Networks*

Backgrounds to the Study

Digitization is the process of creating a digital image and then presenting it on a computer, local area network or the Internet. Digitization refers to the conversion of an item in printed. text, manuscript, image or sound, film and video recording from one format (usually print. or analogue) into digital. The process basically involves taking a physical object and captured documents using a scanner or digital camera and converted to digital format that can be stored electronically and accessed via a computer. Digitization simply, is an electronic process of converging information from an analog format to the digital format.

Digitization has no doubt changed our education system, but we cannot say that it has diminished the value of our old time classroom learning. The best part about the digitization of

education in the 21st century is that it is combined with the aspects of both; classroom learning and online learning methods. Walking hand in hand both act as a support system to each other, which gives a stronghold to our modern students. Digitization in education has also proved to be the right method for saving resources. Online examination platforms have restricted the frivolous usage of paper, directly confining the cutting down of trees.

Business Education, according to Osuala (1987) is a broad based programme that has a composite of courses in general education, basic business and office education. Business Education is synonymous with any education given in the vocational tertiary institutions, which prepares the individual to acquire skills and competencies in office education as well as in pedagogy necessary for teaching. It equips students with business concepts, knowledge, attitudes, habits and skills for personal use, and for entry into the business world as employers or employees. Those who teach business education should be able to teach ethics and morals to students by the way they talk to them and show what they say by their behaviour. They should be versatile with modern information technologies like the word processors, computers, dictating machines, reprographic and storage machines, copiers and printers, microfilm machines, accounting and fax machines, calculators, electronic mail, voice mail, telecommunicating and teleconferencing machines etc. Therefore, the business educators should be ready to equip the students with the necessary skills, facts, knowledge, understanding, habits and attitudes that will make them meaningfully exist with others as useful and productive members of the society.

One of the goals stated in the National Policy On Education (NPE) is “The acquisition, development and inculcation of the proper value orientation for the survival of the individual and the society”. Wilkin(1979) agreed that for one to be economically literate and create awareness for other citizens, to be competent workers and wise consumers, one must have some understanding of how business education functions, so it becomes imperative that business educators should play critical roles in making Nigeria a self-reliant, patriotic and productive nation through educating students appropriately. In the National Policy on Education, Business Education was formulated when modern information technologies have not been introduced in Nigeria.

This accounts for the fact that Business Education essentially consisted of subjects like accounting, typewriting, shorthand, office practice, marketing, auditing, secretarial practice, and management etcetera. Some courses in Business Education have to be restructured in order to meet the needs of the changing society and also make teaching and learning easy. For example, the keyboarding skill in typewriting remains relevant because the typeface of the typewriter is the same with the computer keyboard, but there are some topics in typewriting that need to be restructured. This is necessary because the method of teaching them on the typewriter is not the same as that of the computer. The methods of setting margins, centering items, paragraphing, filing, tabulating jobs etc are not the same methods of doing them on the computer, so the scheme of work has to change in order to incorporate the facts that would enable the Business educators achieve success. Also, shorthand may no longer be relevant in

the school today because of the varied modern equipment, like the dictating machines, voice mail, recording and many others that can be used in place of shorthand note taking, so the curriculum planners in this respect should revisit that area. The modern Accounting and Auditing Principles with the use of the computer should be incorporated into the Curriculum.

However, the sordid situation in tertiary institutions offering Business Education is the use of insufficient, deficient and obsolete equipment in Business Education Departments. As a result of this the imparting of knowledge is eighty percent theory and twenty percent practical. The reverse should be the case. Office Education should be a core subject in Business Education and one, which should be made mandatory for all students in tertiary institutions, as all products of these institutions would one day end up in the office either as employers or employees. (Obindah, 2017).

Academic performance is the outcome of education, the extent to which a student and lecturer or institution has achieved their educational goals. The influence of lecturers or teachers' teaching effectiveness on the learning outcome of students as measured by student's academic performance has been the subject of several studies (Adediwura and Tayo 2007) and (Adu and Olatundun, 2007).

The teaching role of lecturers involves preparing and delivering of lectures, supervision of students in industrial training, final year project, post graduate students, marking assessments and grading of scripts. Other functions include development and promotion of innovative teaching methods, consultation with students and production of teaching materials for students. Research role involves carrying out investigations on identified problem(s), presentation of findings of such investigations in conferences/seminars and publishing the findings in journals and/or text books. The third role involves rendering services both to the school and the community at large. Such services include heading a department, faculty, committee, external supervisor, advisor of student societies, members of other recognized committees at departmental, faculty and university levels—example; sports, graduation, convocation etc. Goodall (2013) states that teaching and research are the core functions of a lecturer and their quality can be improved by hiring the best scholars and empowering them with good incentives.

Statement of the Problem

The performance of lecturers in tertiary institution in Nigeria has been criticized in recent times by stakeholders in the country. A keen observation shows that there is poor supervision of students' works with the use of digital facilities in Ignatius Ajurun University of Education, Port Harcourt, Nigeria. Many lecturers in tertiary institutions have cultivated the habit of not properly supervising students works, and they show lukewarm attitude to academic work. These lecturers are said to have poor attitude to work and poor digital skills resulting in poor graduates. These lecturers are said to lack the zeal to work, the briskness and the momentum of hardworking people; and generally, dedication, honesty, competence and determination,

all of which characterized highly performing and productive people in a society. In view of these misconducts, lecturers have been misconceived as being ineffective in performing their supervisory role. Stakeholders attributed this to lack of knowledge and digital skills while others blame the predicament on poor digitalization of the institutions. Obviously, many lecturers do not adequately monitor and supervise the activities of their students in the classroom. The poor performance of lecturers has negatively affected the image of their institution as stakeholders in the country believe that these lecturers are inefficient on the job. The poor performance of the lecturers could be traced to inadequate digital communication technologies in their institution. Many classrooms in tertiary institutions do not have adequate digital communication technologies such as Networks, social media means of communication and e- library facilities. This has made it difficult for lecturers to effectively supervise the activities of their students, thereby resulting in poor performance in that aspect. It is believed that the provision of adequate digital facilities for supervision would enhance the job performance of lecturers in Ignatius Ajuru University of Education. However, there is no empirical evidence to justify this claim in the Nigerian context as most of the studies on instructional delivery digitalization and job performance were carried out in the developed countries while empirical studies that examined the relationship between instructional delivery digitalization and job performance of lecturers in Ignatius Ajuru University of Education is lacking. These created the gap in empirical literature which the present study is set to fill.

Purpose of the Study

The purpose of this study was to examine the relationship between instructional delivery digitalization and job performance of male and female lecturers in Department of Business Education, Ignatius Ajuru University of Education, Port Harcourt. The specific objectives was to;

1. To determine the extent to which networks differ from Business Education Lecturers' supervision in Ignatius Ajuru University of Education, Port Harcourt.
2. To determine the extent to which e-library facilities differ from Business Education Lecturers' supervision in Ignatius Ajuru University of Education, Port Harcourt.
3. To determine the extent to which technological level of institutions moderate job performance of Business Education Lecturers in Ignatius Ajuru University of Education, Port Harcourt.

Research Questions

The following research questions will be put forward to address the objectives of this study;

1. To what extent does networks differ from Business Education Lecturers' supervision in Ignatius Ajuru University of Education, Port Harcourt.
2. To what extent does e-library facilities differ from Business Education Lecturers' supervision in Ignatius Ajuru University of Education, Port Harcourt.
3. To what extent does technological level of institutions moderate job performance of Business Education lecturers in Ignatius Ajuru University of Education, Port Harcourt.

Research Hypotheses

The following hypotheses were formulated to guide this study;

1. There is no significant difference in the mean rating of Male and Female Business Education Lecturers on the use of networks in the supervision of students' activities in Ignatius Ajuru University of Education.
2. There is no significant difference in the mean rating of Male and Female Business Education Lecturers on the use of e-library facilities in the supervision of students in Ignatius Ajuru University of Education.
3. Technological level of the University does not significantly moderate the difference between instructional delivery digitalization and job performance of Male and Female Business Education Lecturers in Ignatius Ajuru University of Education.

Scope of the Study

Content wise, the study focused on instructional delivery digitalization and job performance of lecturers. It covered the dimensions of instructional delivery digitalization such as; website networks, and e-library facilities and the measures of job performance of lecturers in terms of; supervision. The relationship between instructional delivery digitalization and job performance of lecturers were the main focus of analysis.

Geographically, this study was limited to Ignatius Ajuru University of Education, Port Harcourt, Nigeria. This tertiary institution was chosen on the basis that she offers Business Education. The unit of analysis was made up of lecturers in Business Education in Ignatius Ajuru University of Education Port Harcourt. The lecturers include: the Professors, Readers, Lecturer 1, Lecturer 11, Assistant Lecturers, and Graduate Assistants.

Operational Definitions of Terms

The following key terms are defined for the purpose of understanding

Instructional Delivery: Instructional Delivery refers to the interaction among the student, the teacher, the content, and the knowledge/skills/dispositions students will need for learning and collaborating with others in a diverse. society and rapidly changing world

Digitalization: Digitization refers to creating a digital representation of physical objects or attributes. For instance, we scan a paper document and save it as a digital document (e.g., PDF). In other words, digitization is about converting something non-digital into a digital

Networks: A network consists of two or more computers that are linked in order to share resources (such as printers and CDs), exchange files, or allow electronic communications. The computers on a network may be linked through cables, telephone lines, radio waves, satellites, or infrared light beams.

Conceptual Review

Concept of Instructional Delivery Digitalization in Nigeria

Digitalization for instructional delivery in Nigerian universities is still a mirage despite the fact that digitalization has become increasingly important in universities with its immensely usage in this era of technological advancement. Digitalization is a hot concept in universities which has been growing since the inception of the first web-based courses in the mid to late 1990s (Bich-sel, 2013). In recent decades, the use of information and communication technologies (ICT) for educational purposes has increased, and the spread of network technologies has caused e-learning practices to evolve significantly (Kahiigi, Ekenberg, Hansson, Tusubira, & Danielson, 2008). Digitalization is a new approach to teaching and learning, representing all or part of the educational model applied, that is based on the use of electronic media and devices as tools for improving access to training, communication and interaction and that facilitates the adoption of new ways of understanding and developing learning. Digitalization involves the use of a computer or electronic device (e.g. a mobile phone) in some way to provide training, educational or learning material. (Stockley, 2006). It is the delivery of a learning, training or education program by electronic means. Digitalization could also be considered a natural evolution of distance learning, which has always taken advantage of the latest tools to emerge in the context of technologies for structuring education (Albert, Dimitrios, & Nati, 2012).

The huge growth of computers, the internet and other electronic devices such as smart phones and tablets provide global opportunities for education, especially for learning outside the premises of the school (Ngwoke, 2011). They are powerful tools for the development of quality teaching. They are also catalysts for radical change in existing school practices and veritable vehicle for service delivery in universities. They have facilitated quick delivery of learning and dissemination of knowledge and information in a way that were not previously possible. The recognition of these facts, has led to the Federal government of Nigeria to instruct the National Policy on Education to set standards, regulate framework for the deployment of ICT infrastructure at all levels of education in Nigeria. The federal government urged the state government to adopt the National Policy on Computer Education of 1998 which has its objectives as to encourage teachers to develop a sense of rapport with computer and appreciate its potentials for solving teaching and learning challenges and to entrench computer culture that permeates all activities in institutions of learning (Adeosun, 2010).

Dimensions of Instructional Delivery Digitalization

Networks

Generally, networks are distinguished based on their geographical span. A network can be as small as distance between your mobile phone and its Bluetooth headphone and as large as the internet itself, covering the whole geographical world. Five types of internet network are discussed.

Personal Area Network (PAN)

A Personal Area Network (PAN) is smallest network which is very personal to a user. This may include Bluetooth enabled devices or infra-red enabled devices. PAN has connectivity range up to 10 meters. PAN may include wireless computer keyboard and mouse, Bluetooth enabled headphones, wireless printers, and TV remotes. For example, Piconet is Bluetooth-enabled Personal Area Network which may contain up to 8 devices connected together in a master-slave fashion.

Local Area Network (LAN)

LAN is (by definition) a local network, usually operating in the same building or on the same campus. A computer network spanned inside a building and operated under single administrative system is generally termed as Local Area Network (LAN). Usually, LAN covers an organization offices, schools, colleges or universities. Number of systems connected in LAN may vary from as least as two to as much as 16 million. LAN provides a useful way of sharing the resources between end users. The resources such as printers, file servers, scanners, and internet are easily sharable among computers. LANs are composed of inexpensive networking and routing equipment. It may contain local servers serving file storage and other locally shared applications. It mostly operates on private IP addresses and does not involve heavy routing. LAN works under its own local domain and controlled centrally. LAN uses either Ethernet or Token-ring technology. Ethernet is most widely employed LAN technology and uses Star topology, while Token-ring is rarely seen. LAN can be wired, wireless, or in both forms at once.

Metropolitan Area Network (MAN)

The Metropolitan Area Network (MAN) generally expands throughout a city such as cable TV network. It can be in the form of Ethernet, Token-ring, ATM, or Fiber Distributed Data Interface (FDDI). Metro Ethernet is a service which is provided by ISPs. This service enables its users to expand their Local Area Networks. For example, MAN can help an organization to connect all of its offices in a city. Backbone of MAN is high-capacity and high-speed fiber optics. MAN works in between Local Area Network and Wide Area Network. MAN provides uplink for LANs to WANs or internet.

Wide Area Network (WAN)

As the name suggests, the Wide Area Network (WAN) covers a wide area which may span across provinces and even a whole country. When an organization needed to provide a network over a wider area (with locations in different cities or states, for example), they would build a wide area network (WAN). Generally, telecommunication networks are Wide Area Network. These networks provide connectivity to MANs and LANs. Since they are equipped with very high speed backbone, WANs use very expensive network equipment. WAN may use advanced technologies such as Asynchronous Transfer Mode (ATM), Frame Relay, and Synchronous Optical Network (SONET). WAN may be managed by multiple administrations.

e-library

The Electronic Library System enables users to obtain open digitized data from anywhere in the world by online access. The Electronic Library System was developed on the basis of the following five concepts: Digital Network Interactive Multimedia Scalable With the various functions as shown below, the Electronic Library System supports a series of user's actions for searching and reading books. Retrieval support functions **include**; Bibliographic data retrieval Hypertext retrieval, Keyword retrieval, Retrieval using term hierarchy. Reading support functions include; Simultaneous reference to multiple books, Dictionary, Notes and tags, Translation, Speech output, and others.

e-book

An eBook is a non-editable, reflowable book that is converted to a digital format to be read on any digital device such as computer screens or mobile devices. To have a better understanding of what an eBook really is, let us take a look at the characteristics of an eBook. For starters, eBooks are files that you can read on a digital device; a tablet, smartphone, computer, etc. But again, considering other files that *can* be read on digital devices (i.e. word documents) eBooks have specific characteristics that differentiate them. One distinct characteristic of an eBook: the text should not be editable. An eBook should always be converted into a format that ensures it's uneditable. With thousands of people having access to it on digital devices, people could potentially change any content without the author's permission. So, in order to qualify as an actual eBook, text should not be able to be changed in any way, just like a paperback book. Another important characteristic is that *true* eBooks should be reflowable. This means that no matter what the size of the screen you're viewing the eBook on, it will always fit your screen; text will remain formatted with line breaks and chapters and images will resize to fit the proportions of the device you are reading on. There is one exception though: PDFs. Considering PDFs cannot be edited, but they are not reflowable, they technically do not qualify as eBooks according to the characteristics that differentiate eBooks. But with businesses taking advantage of the ease of PDF downloads and distribution, PDFs have become "unofficial" eBooks and are still widely used eBook formats. Ebook format include the following:

e-mail

Electronic mail (e-mail) operates across computer networks, which primarily is the Internet. To use email requires an email package either on the host or on the client (your PC). *PINE* and *ELM* are packages installed on the host whereas *PCmail*, *Messenger*, *Outlook*, and *Eudora* are on PCs. All of these packages interact with the sendmail program that connects with the network but the amount of information that is passed between your PC and the host is relatively small. The host is always connected to the network and stores the mail it receives until you decide to open it on your PC and act on it. To use email, you need a terminal emulation software package on your PC that connects with the host, for example, *ProComm*

and *Hyperterminal*. Alternatively, one will use SLIP (Serial Line IP) or PPP (Point to Point Protocol) with a modem to simulate being connected directly to a LAN. These packages either help you send commands to the email package on the host (PINE, ELM, etc.) or help your PC-based email package (Eudora, etc.) interact with the SMTP server. Web-based email such as Hotmail is also popular. It is a free email system (www.hotmail.com), but the internet is needed as access to use it. The advantage with Web-based mail (in addition to the older Hotmail there is Yahoo, Gmail, Outlook and many others) is that you can receive and send email anywhere you can find access to the Web, for example, an Internet cafe anywhere in the world.

e-portfolio

An ePortfolio is a collection of work (evidence) in an electronic format that showcases learning over time. An ePortfolio may contain all or some of the following: Files of various formats (text, pictures, video, etc.), Evidence related to courses taken, programs of study, etc., Writing samples (which might include several drafts to show development and improvement), Projects prepared for class or extracurricular activities, Evidence of creativity and performance, Evidence of extracurricular or co-curricular activities, including examples of leadership, Evaluations, analysis and recommendations. The following are types of e-portfolio;

1. **Showcase/Professional ePortfolios** : These ePortfolios are primarily a way to demonstrate (showcase) the highlights of a student's academic career.
2. **Learning ePortfolios**: These portfolios are typically created by a student as part of a course as a way to demonstrate learning and the learning process. These portfolios are often shared with other students to elicit peer feedback. Learning portfolios support the idea of formative feedback as an essential part of the learning process.
3. **Assessment/General Education ePortfolios** : The use of portfolios play a substantive role in the assessment of general education competencies. Using both formative and summative assessments feedback provided to colleges, departments and instructors on the quality of evidence students used in their portfolios to demonstrate general education competencies.

Concepts of Job Performance

Performance is defined at the level of each individual within the organization or at organization level. It is perceived as an understanding of the achieved results of behavior and outcome. The behavioral aspect refers to what an individual does in the work situation. It encompasses behaviors such as assembling parts of a car engine, selling personal computers, teaching basic reading skills to elementary school children, or performing heart surgery. Not every behavior is subsumed under the performance concept, but only behavior which is relevant for the organizational goals: "Performance is what the organization hires one to do, and do well"(Campbell et al., 1993, p. 40). Thus, performance is not defined by the action itself but by judgmental and evaluative processes (Ilgen & Schneider, 1991; Motowidlo, Borman, & Schmit, 1997). Moreover, only actions which can be scaled, i.e., measured, are considered to constitute performance (Campbell et al., 1993). The outcome aspect refers to the consequence or result of the individual's behavior. The above described behaviors may result in outcomes

such as numbers of engines assembled, pupils' reading proficiency, sales figure, or number of successful heart operations. In many situations, the behavioral and outcome aspects are related empirically, but they do not overlap completely. Outcome aspects of performance depend also on factors other than the individual's behavior. For example, imagine a teacher who delivers a perfect reading lesson (behavioral aspect of performance), but one or two of his pupils nevertheless do not improve their reading skills because of their intellectual deficits (outcome aspect of performance). Or imagine a sales employee in the telecommunication business who shows only mediocre performance in the direct interaction with potential clients (behavioral aspect of performance), but nevertheless achieves high sales figure for mobile phones (outcome aspect of performance) because of a general high demand for mobile phone equipment. In practice, it might be difficult to describe the action aspect of performance without any reference to the outcome aspect.

Measures of Job Performance of Lecturers

The University is a place where human minds are trained and knowledge developments are facilitated. It is a community of scholars and researchers, who are keen on improving the quality of existing knowledge or recreating as well as reinterpreting existing social, cultural, economic, scientific or technological findings. The university, like any other organization relies on its employees who work to stir up the activities/affairs of the organization in order to achieve its objectives and improve organizational performance. These employees are regarded as most important and tangible assets in the organization (Onyeizugbe & Orogbu, 2015). It is a popular knowledge that no university will grow beyond the quality of human resources that constitute the teaching and nonteaching staff. This is because productivity lies within the employees' ability and commitment as well as initiatives to improve the sustainability of the organization, which are often ratified by management (Markos & Sandhya, 2010). Performance is the measurement of actual output or result against set goals. The line managers and leaders play vital roles by accommodating employees concerns so as to maintain organization performance (Kazimoto, 2016). The performance of universities in Nigeria is regulated by National Universities Commission (NUC), and this agency is saddled with the responsibilities of ensuring quality assurance of academic programs and providing framework for ranking the performance of universities against set criteria. According to the framework for measuring the lecturers' performance, a lecturer's performance is measured based on his/her research output, supervision, quality of teaching, evaluation, community services among others

Supervision

Supervision is the ability to manage, lead and supervise students during the learning process. It has been shown to be an indispensable component of effective teaching and learning, more so in Sub-Saharan Africa where the challenge of overcrowded classrooms hinders effective teacher instruction in the classroom. For the classroom to serve its purpose, the teacher must be able to establish order. This requires him/her to have the knowledge, attitude and skills necessary. He/she must be able to establish rapport with the students and

their parents, involve students in the processes of establishing ground rules for behavior and being accountable for their actions, manage transitions during instructions, motivate students to maximize time-on-task, supervise students in their learning activities, Seminar works, teaching practice, industrial training, project and lastly deal with students' misbehavior effectively.

Seminar Supervision

A seminar may be defined as a gathering of people for the purpose of discussing a stated topic. Such gatherings are usually interactive sessions where the participants engage in discussions about the delineated topic. A seminar is, generally, a form of academic instruction, either at an academic institution or offered by a commercial or professional organization. It has the function of bringing together small groups for recurring meetings, focusing each time on some particular subject, in which everyone present is requested to actively participate. This is often accomplished through an ongoing Socratic dialogue with a seminar leader or instructor, or through a more formal presentation of research. Normally, participants must not be beginners in the field under discussion. The idea behind the seminar system is to familiarize students more extensively with the methodology of their chosen subject and also to allow them to interact with examples of the practical problems that always occur during research work. It is essentially a place where assigned readings are discussed, questions can be raised and debates can be conducted. It is relatively informal, at least compared to the lecture system of academic instruction. A seminar may have several purposes or just one purpose. For instance, a seminar may be for the purpose of education, such as a lecture, where the participants engage in the discussion of an academic subject for the aim of gaining a better insight into the subject. Other forms of educational seminars might be held to impart some skills or knowledge to the participants. Examples of such seminars include personal finance, web marketing, real estate, investing or other types of seminars where the participants gain knowledge or tips about the topic of discussion.

Industrial Training

Industrial training refers to the work experience that is relevant to professional development prior to the graduation. In *Industrial training* students join the company. The industrial training exposes the students to professional skills and experiences in industrial engineering practices. In preparing the students for the real working environment as Business Educators, industrial training helps to produce Business Education students with technical and soft skills competency. The industrial training is offered in the semester break between the sixth semester and the seventh semester. The students are attached for 10 to 12 weeks of training at various industries in Malaysia. Students earn six credit hours after the completion of industrial training. A grade of Pass or Fail is given after the presentation and submission of the industrial training report. After the completion of the industrial training, undergraduates are

expected to:

1. Practice actual Business Education knowledge and skills at the industry.
2. Practice and implement soft skills in actual Business Education working environment such as office management skill, planning skill, computer skill, presentation skill and typing skill.
3. Have interpersonal skills and professional ethics.
4. Have insights into the future professional life of Business Educators.
5. The internship has to be completed in an industrial enterprise or office. The students participate in all activities and is tutored under an industrial based supervisor and an institutional supervisor. This ensures that all activities carried out during the period of industrial training are related to Business activities.

Teaching Practice

Teaching practice is an important component of becoming a teacher. It grants student teachers experience in the actual teaching and learning environment (Ngidi & Sibaya, (2003). During teaching practice, a student teacher is given the opportunity to try the art of teaching before actually getting into the real world of the teaching profession (Kasanda, 1995). Student teachers also know the value of teaching practice and as remarked by Menter (1989), they perceive it as 'the crux of their preparation for the teaching profession' since it provides for the 'real interface' between student hood and membership of the profession. As a result, teaching practice creates a mixture of anticipation, anxiety, excitement and apprehension in the student teachers as they commence their teaching practice (Manion, Keith, Morrison & Cohen, (2003).

Project

A project is defined as a sequence of tasks that must be completed to attain a certain outcome. According to the Project Management Institute (PMI), the term Project refers to "to any temporary endeavor with a definite beginning and end". Depending on its complexity, it can be managed by a single person or hundreds.

Theoretical Review

The researcher anchors this study on cognitive flexibility theory by Spiro in 1950. Among the approaches to learning that draw on cognitive theories, cognitive flexibility theory recognizes that some domains of knowledge are complex and ill-structured. In contrast to well-structured domains that may be organized in linear or hierarchical formats that translate into sequential instruction, ill-structured domains are viewed as irregular and contextual (Spiro *et al.*, 1987). The theory suggests that instructional design for such domains should represent the complexity of the domain by creating webs of information (e.g., through the use of hypertext), using multiple perspectives, and embedding the knowledge within multiple contexts. Students of ill-structured knowledge domains should engage in critical analysis, perspective taking, and problem framing to support the transfer of knowledge to new contexts. Thus, cognitive flexibility within such complex domains. This theory includes the ability to represent knowledge

from different conceptual and case perspectives and then, when the knowledge must later be used, the ability to construct from those different conceptual and case representations a knowledge ensemble tailored to the needs of the understanding or problem-solving situation at hand (Spiro *et al.*, 1987). While some aspects of learning to teach may reside in learning factual information and theoretical principles, many aspects of teaching can be considered a complex and uncertain endeavor. Many illustrations of teaching practice demonstrate the complexity of teachers' knowledge application, decision making, immediacy of response, and the overall management of dilemmas in daily practice. Based on this view of teaching, knowledge for teaching requires a flexibility of application and practiced decision making that would allow beginning teachers to respond flexibly to messy and context-dependent variation.

Empirical Review

Omotayo and Yunus (2016) in their work “e-supervision of students' research writing in Nigerian open and distance educational institutions: challenges and prospects” opined that research is an aspect of the academic programme which students in tertiary educational institutions are expected to undergo. It involves identification, investigation and suggestion of solutions to societal developmental problems. Higher education students in open and distance learning institutions and centers make use of print and electronic media in knowledge and skill acquisition with minimal physical contact. Their research activities are also electronically supervised. They examines prospects and challenges of using electronic method of research project supervision in Nigeria. It also discussed the roles of a supervisor in assisting distance learners to achieve the objectives of conducting an academic research. More funding of ICT education for lecturers and students, Public and Private Partnership (PPP) for the provision of facilities among others were recommended by the study to ameliorate the challenges of E-supervision in Nigerian higher institutions.

Onihunwa, Inyene, Archibong, Joshua, Irunokhai, and Omole (2020) did a work on Student Industrial Work Experience Scheme (SIWES) Online Interactive Platform For Students And School Supervisors The SIWES online interactive portal has been able to highlight majority of the problem the existing system has and also clearly defined the proposed system if integrated into the existing system will offer a lot. The proposed SIWES System has been implemented using HTML, CSC, BOOTSTRAP, SQL, and JAVASCRIPT. The implemented system, students can update their logbook at any time via a paperless, environmentally-friendly method as well as submit their logbook and final report online. Supervisors can access the student's logbook at any time; therefore they can evaluate and grade the student at their own pace. The SIWES coordinator may also access the grades at any time to monitor the progress of the industrial training process. Each stakeholder is classified into user sub-groups of a specific kind whose permissions and functionalities are pre-defined. Users of different kind are allowed to interact among themselves and also with users from different sub-groups in order to achieve common objectives or mutually beneficial tasks.

Cristina and Ricardo (2014) observed that students of online graduate or undergraduate programs are also needed of master or bachelor thesis to get their diplomas. In most of the

cases, directors and students must face these processes online. However, despite the overall satisfaction with the online learning process, for these works, some students express negative attitudes, such as mistrust and insecurity. Obviously, these negative attitudes are not conducive to learning and student performance. As a result, supervisors are required to minimize the effects of these negative attitudes. Therefore, the monitoring activity is not limited to academic leadership, but also an activity similar to coaching. In this paper, authors investigate what lays behind bachelor and master thesis supervision in online settings. Specifically, authors sought to determine whether academic direction occur while coaching processes. In order to do so, authors applied an open questionnaire to a sample of supervisors. This questionnaire includes questions on four aspects: students' negative attitudes, strategies applied to reduce inappropriate attitudes and to promote good ones, similarities to coaching processes and finally, consideration on the difficulties of online supervision compared with the traditional one in terms of general difficulties, more negative student's attitudes and more effort during supervision. Results show that the majority of the supervisors interviewed had to apply some managerial complements to their duties. These strategies can be considered true coaching processes, although there is not substantial difference between conventional online supervision and traditional supervision of bachelor and master thesis.

Methodology

This study adopted descriptive survey research design. The population of twenty two (22) lecturers (17 male and 15 female) were drawn from Business Education Lecturers in Ignatius Ajuru University of Education, Port Harcourt, Nigeria. Because the population was small, the researcher used all the population as a census study. The researcher designed a questionnaire tagged Instructional Delivery Digitalization and Job Performance of Business Education Lecturers (IDEDIJOPAL) which contained twenty (20) items drawn from the research questions, this instrument was given a facial validation by a Doctorate Degree holder in the department of Psychology, Ignatius Ajuru University of Education. A test-re-test approach was used to determine the reliability of the instrument. Four (4) points Likert scale was used and was represented thus; High Extent (HE), Moderate Extent (ME), Low Extent (LE), and Very Low Extent (VLE) respectively. The questionnaire was personally administered and retrieved. Fifteen (15) copies (11 males and 4 females) which represent 60% retrieval were achieved. The mean score statistical tool was used to analyze the data using the questionnaire items. A mean score above 2.5 was accepted as agreeing to the question posed. While a mean score below 2.5 was rejected. Four hypotheses were formulated and tested in the course of this study. The t-test distribution was used to test the hypotheses at a critical value of 0.05 significance.

Results

Data presentation, analysis and interpretation of results

Research Question 1:

To what extent does networks facilitates Business Education Lecturers' supervision in tertiary institutions.

Table 1.1 Extent of Network on Lecturers Supervision

s/no	Questionnaire items	Male		Decision	Female		Decision
		X1	B1		X1	SD1	
1.	LAN and supervision of seminar	2.55	0.82	HE	2.25	1.50	LE
2.	LAN and supervision of project	2.73	0.79	HE	1.75	0.96	LE
3.	WAN an supervision of seminar	3.09	0.94	HE	3.25	0.96	HE
4.	WAN and supervision of project	3.27	0.79	HE	3.25	0.96	HE
	Grand mean	2.91	0.84	HE	2.63	1.10	HE

Survey Data 2021

The data presented in table 4.1 showed a grand mean total of 2.77 for the research question, which is greater than 2.5.this indicates that the extent to which network facilitates lecturers activities in supervision in Ignatius Ajuru University of Education is high

Research Question 2:

To what extent does e-library facilities facilitates Business Education Lecturers' supervision in tertiary institutions.

Table 1.2: Extent of e-Library on Lecturers Supervision

s/no	Questionnaire items	Male		Decision	Female		Decision
		X1	SD1		X2	SD2	
1.	E-book and supervision of seminar	2.27	1.10	LE	1.25	0.50	LE
2.	E-book and supervision of project	2.55	1.13	HE	1.50	0.58	LE
3.	E-portfolio and supervision of seminar	2.73	1.01	HE	1.75	0.96	HE
4.	E-Portfolio an Supervision of Project	3.27	0.79	HE	3.25	0.96	HE
	Grand mean	2.91	0.84	HE	2.63	1.10	HE

Survey Data 2021

The data presented in table 4.3 showed a grand mean total of 2.04 for research question three, which is less than 2.50. This implies that the extent which lecturers use e-library in supervising students' academic activities in Ignatius Ajuru University of Education is low.

Research Question 3:

To what extent does technological level of institution moderates job Performance of Business Education lecturers in tertiary institutions.

Table 1.3: Extent of Technological Level of Institution on Job Performance of Business Education Lecturers.

s/no	Questionnaire items	Male		Decision	Female		Decision
		X1	SD1		X2	SD2	
1.	Technological level and lecturers skills	1.82	0.98	LE	1.75	0.96	LE
2.	Technological level and lecturers effective supervision	1.27	0.65	LE	1.25	0.50	LE
3.	Extent of technological usage	1.45	1.04	LE	1.75	0.96	LE
4.	Level of dependence of Lecturers on e-supervision	1.45	0.99	LE	1.25	0.50	LE
	Grand mean	1.50	0.92	LE	1.50	0.73	LE

Survey Data 2021

The data presented in table 4.4 showed a grand mean total of 1.50 for research question four, which is less than 2.50. This is an indication that the technological level of digitalizing lectures job performance in Ignatius Ajuru University of Education is low.

Test of Hypotheses

Ho₁ There is no significant difference in the mean rating of Male and Female Business Education Lecturers on the use of networks in the supervision of students in tertiary institutions.

Table 1.4: t-test analysis of mean response of male and female lecturers on the extent of networks in supervision

Items	N	Mean	SD	Df	t-cal	t-tab	Decision
Male	11	2.91	0.84	13	0.97	2.160	Accepted
Female	4	2.63	1.10				

Source: Survey data 2021

The data presented in table 4.5 revealed that t-calculated value of 0.97 is less than t-tabulated value of 2.160 at 0.05 level of significance. Therefore the null hypothesis was accepted. It can then be stated that there is no significant difference in the mean rating of male and female lecturers on the extent of the use of network in supervision.

Ho₂ There is no significant difference in the mean rating of Male and Female Business Education Lecturers on the use of e-library facilities in the supervision of students in tertiary institutions.

Table 1.5: t-test analysis of responses on the e-library facilities and supervision

Items	N	Mean	SD	DF	t-cal	t-tab	Decision
Male	11	2.40	1.11	13	1.44	2.160	Accepted
Female	4	1.68	0.75				

Source: Survey data 2021

The data presented in table 4.7 revealed that t-calculated value of 1.44 is less than t-tabulated value of 2.160 at 0.05 level of significance. Therefore, the null hypothesis was accepted. It can then be stated that there is no significance difference in the mean rating of male and female lecturers on e-library facilities and supervision.

Ho₄ Technological level of Universities does not significantly moderates the difference between instructional delivery digitalization and job performance of Male and Female Business Education Lecturers in Ignatius Ajuru University of Education.

Table 1.6: t-test analysis of responses on the extent of technological level of institution and digitalizing job performance of lecturers

Items	N	Mean	SD	DF	t-cal	t-tab	Decision
Male	11	1.50	0.92	13	0.00	2.160	Accepted
Female	4	1.50	0.73				

Source: Survey data 2021

The data presented in table 4.8 revealed that the t-calculated value of 0.00 is less than t-tabulated value of 2.160 at 0.05 level of significance. Therefore the null hypothesis was accepted. It can then be stated that there is no significance difference the technological level of the institution and job performance of lecturers.

Summary of Findings

1. The mean rating of the extent on networks to ease lecturer's performance in supervising student's academic works is high.

2. There is no significance difference between the mean rating of male and female lecturers on instructional delivery digitalization and job performance of lecturers in Ignatius Ajuru University of Education.
3. The extent to which technological support in digitalizing lecturers job performance in Ignatius Ajuru University of Education is low. The research showed that there are no much facilities on ground to facilitate digitalization.

Discussion of Findings

From the research work, the extent to which network facilitate the supervision of seminar, projects etc., is high. It is easy for students to submit their topics online than in paper form and this makes it easy for proof reading, correction and approval. During the process, students upload their works to the lecturers to make corrections and in turn lecturer downloads, corrects and uploads back to the students. This however is helpful in distance learning. This process was used during the covid 19 era. In line with this digitalization mode, Michchaela (2014) carried out a study titled "Using social networks for supervising and mentoring" and opined that social networks have the potential to be used in supervising, but that they have a lot of disadvantages in making their adoption harder.

The mean rating on the extent of e-library and e-portfolio in supervising students' works is low. This is in agreement with the work done by Ogadebo, Oladipupo and Ilori (2016) on the extent of usage of electronic library facilities and argued that the use of e-library resources do not affect students' courses. On the contrary, Omotoyo and Yunus (2016) opined that higher education students in open and distance learning institution and centers make use of print and electronic media in knowledge and skill acquisitions, with manual and physical contact and their research activities are electronically supervised.

Even though this study suggested that the extent of supervision of industrial training is low, Onihunwa, Inyere, Archibon, Jeshua, Iruriokho and Omoa (2020) on the other hand argued that it is very possible as the implemented system, students can update their logbook at any time through a paperless environment-friendly method as well as submit their logbook and final reports online. They opined that supervisors can access the students' logbooks at any time and therefore can evaluate and grade the students at their own pace. The SIWES coordinator may also access the grade at any time to monitor the progress of Industrial Training Students' process.

For effective digitalization to be adopted in Ignatius Ajuru University of educating, Port Harcourt, there should be information communication and technology facilities on ground to facilitate digital information; sharing of ideas and collaboration. This study showed that there are no much facilities on ground to facilitate digitalization in the school. In view of this assertion, Amos (2019) observed that building online learning communities, assists students and lecturers in seminar, project, and industrial training supervisions. He asserts that benefits

of mobile technologies/ubiquitous computing, internets, networks and social media platforms have facilitated and eased lectures performance of their obligation.

Summary, Conclusion and Recommendations

Summary

Change is a constant thing in life. The educational landscape has experienced drastic changes as technology and globalization intensifies. The educational process has also experienced significant innovation as we now use the internet, multimedia, social media, and educational software to enhance the quality of supervision in Business Education. However, digitalizing the supervision of seminar, projects, teaching practice, and industrial training in business education can be achieved.

In the light of the above, this work gave brief but comprehensive information about the background of the study, revealed the problem that necessitated the study which centers on the switching over from paper work to digital form. Effort was also made to state the main purpose and objectives of the study, research questions, hypotheses and showing the significance of the study. The work also described the scope or delimitation of the study and defined key terms operationally.

This research showed the theoretical basis of this work which was anchored on Cognitive Flexibility Theory by Spiro et al in 1987. It also dealt with the conceptual review where important and key concepts in the work were discussed in detail from the perspectives of various authors and researchers. Empirical review was also done to provide previous related empirical studies. It dealt with research methodology, and contained full description and specifications of the research design of this study, area of the study and the population of the study. The study critically analyzed primary data collected from the field as well as presents its results, and also summarized major findings of the study and the findings were also discussed. Finally, the work made a comprehensive attempt of summarizing the whole work, and draw conclusions.

Conclusion

Based on the analysis of data and discussion of findings, the study concluded that e-supervision innovations such as the use of network, internet, educational software, and multimedia should not be undermined; the study also concluded that business education lecturers in Ignatius Ajuru University of Education should digitalize the supervision of seminar, project, industrial training and teaching practice. Finally, the determinant of digitalization is built on the lecturers, students and the technological level of the institution.

Recommendations

Considering the importance of e-learning technology in supervising students' work.

1. Curriculum planners should embrace innovation and as such build in e-learning programmes in the Business Education Curriculum.
2. There should be the provision of good environment such as private power plants, e-classrooms, e-books etc for a switch over.

3. Government should employ professionals who are proficient in e-learning to manage the e-technological environment and assist the lecturers and the students where necessary.
4. There should be adequate funding for e-learning programmes in universities. Companies operating around Rumuolumini Area should be approached to fund this programme and let them understand the need for e-learning programmes in Ignatius Ajuru University of Education.
5. Capacity building seminars should be conducted to enhance the skills and willingness of Business Education Lecturers to the use of e-learning facilities for supervision.

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