

**SKILLS COMPETENCIES IN THE USE OF MULTIMEDIA AND HYPERMEDIA TECHNOLOGIES FOR INSTRUCTIONAL DELIVERY OF BUSINESS EDUCATION IN SOUTH-SOUTH UNIVERSITIES, NIGERIA**

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**ABSTRACT**

*The study investigated the extent of skills competencies in the use of multimedia and hypermedia technologies for instructional delivery of Business Education programmes. The study was anchored on five theories ie constructivism theory representing technology acceptance model representing skills competence and process virtualization theory representing ability competence. The findings includes that there is differences in male and female lecturers' skills competence in the use of multimedia and hypermedia technologies for instructional delivery of Business Education programme but that both male and female lecturers indicated low pedagogy competence in the use of multimedia and hypermedia technologies for instructional delivery of Business Education programme. This study recommended that Business Education programme curriculum designers should emphasize the re-education and reorientation of female lecturers to emancipate them from their stereotype mindset and that individual lecturers should endeavour to undertake personal and self-sponsored upskilling and reskilling efforts in order to stay abreast with current innovations and skills requirements relevant in the instructional delivery of Business Education programme. This study concluded that re-education, reorientation and consolidation of multimedia and hypermedia technology use competencies is a necessity for all Business Education lecturers for effective instructional delivery.*

**Keywords: Skills Competency, Multimedia, Hypermedia, Technology**

**INTRODUCTION**

Users may effortlessly browse between web page content via hyperlinks, which can be in the form of texts, images, videos, or other hypermedia. This allows for both linear and non-linear browsing of multimedia material. Hypermedia is a program that enables users to engage with words, visuals, sounds, and videos, all of which may be accessed from any of the others. According to Turner and Handler (1997), hypermedia and hypermedia technologies may be described as a distinctive software environment that integrates the characteristics of both hyper text and multimedia. The hyperlink allows for the integration of photographs or graphics from a website into a text page. When clicked, this hyperlink may redirect the user to another page, which may or may not be relevant to the present page.

For educational delivery, the use of multimedia and hypermedia technologies may alleviate the weariness associated with recurrent teaching, particularly in situations where the same ideas and visuals need to be used across several study groups. The use of multimedia and hypermedia technologies allows instructors to develop their creativity and proficiency in using various forms of media such as videos, graphics, audio, games, and texts. This enables them to effectively accomplish the desired objectives in instructional delivery. Teachers have recognized the growing importance of using multimedia and hypermedia technologies in instructional delivery. This allows for the development of skills that may help graduates of the instructional process to be well-informed and well equipped for the job world. This aligns with the objectives of higher education as outlined in the National Policy on Education NPE (2014), which aims to contribute to national development by providing advanced training for skilled professionals and equipping individuals with the necessary physical and intellectual abilities to become self-sufficient and valuable members of society.

Teachers highly prioritize the use of multimedia and hypermedia technologies as effective tools for delivering teaching in the educational system. Through the utilization of multimedia and hypermedia technologies, both teachers and students are granted access to an extensive array of knowledge options and resources. These tools, equipment, and content serve as supplementary teaching aids for instructors, enhancing instructional delivery. Additionally, they provide students with additional resources for self-directed learning. Adekumisi and Oshinaike (2016) said that multimedia and hypermedia technologies have the ability to provide a learning environment that allows learners to go at their own speed, have control over their learning, and get personalized instruction.

Multimedia and hypermedia often consist of visual and auditory representations of educational information. The representations may include many components such as images, text, artwork, music, and video animation. The system may either be restricted, meaning access is limited, or open/free-access, where information is digitized and processed by a computer, either offline or online. The multimedia and hypermedia technologies include several applications in which users have an active role, either as instructors or learners. The instructor must use educational materials that may assist in the advancement of concepts and information to cater to the unique requirements of each student. By using multimedia and hypermedia technology, the instructor may provide novel educational approaches that can be used in a conventional classroom, remotely, or at home, therefore enhancing chances for remote learning. It provides instructors with access to instructional tools that aid in the development of constructive concepts and information, allowing them to better concentrate on promoting learning while working with individual students.

It is important to recognize that the ownership and use of multimedia and hypermedia technologies for teaching purposes may differ between male and female Business Education teachers. This is due to the presence of literature that provides evidence of disparities in the usage of technology based on gender. Within a research that specifically examines the relationship between gender roles and technological change Ganiser (1990) observed that the incorporation of technologies in tasks that were previously performed using conventional methods resulted in an increase in the number of women who utilize, operate, and create these technologies.

He argues that there is a nuanced connection between technology creators (often presumed to be male) and consumers (typically female). Male students exhibit more confidence in using technology compared to female students due to socially built gender inequalities in the field of computing, rather of any inherent differences in their abilities as learners.

Kaino (2008) said that a greater number of girls than men expressed that computers are both intriguing and beneficial, but they considered the process of learning to use them less pleasurable compared to their male counterparts. On a worldwide scale and in smaller groups, males consistently report a much greater level of perceived computer literacy compared to females. The source cited is Poelman, Truyen, and Desle (2009). However, regardless of gender and institution types, Business Educators have a low level of integration of multimedia and hypermedia technologies in their instructional delivery. Emenka and colleagues (2017). This research will examine the impact of gender on the use of multimedia and hypermedia technologies, specifically focusing on the abilities of Business Education instructors in technology usage.

While the advantages of using multimedia and hypermedia technology for instructional delivery by instructors are significant, it is crucial for the teacher to demonstrate remarkable professionalism in the emotive, cognitive, and psychomotor domains of learning. Proficiency in multimedia and hypermedia technologies is necessary for these tasks, since they need a strong understanding and mastery of these tools. The teacher's aptitude for establishing a flawless integration of technology, pupils, and oneself inside the learning environment and throughout the educational delivery process. University lecturers who have adopted the usage of multimedia and hypermedia technologies for instructional delivery are now confronted with the difficulty of their proficiency in using these technologies effectively. This research aimed to determine the proficiency of lecturers at south-south institutions in using multimedia and hypermedia technologies for instructional delivery.

### **Aim and Objectives of the Study**

Ascertain the mean rating on the extent of male and female lecturers' skills competence in the use of multimedia and hypermedia technologies for instructional delivery of Business Education in South-South Universities, Nigeria.

### **Concept of Skills and Skills Competence**

Functional competence refers to the level of proficiency in certain skills. Job performance involves the regular use of an individual's cognitive, methodological, technical, and linguistic expertise. The term "principal actor" refers to an individual's capacity to demonstrate the desired result to participants, particularly in an educational setting. Performance evaluation is a technique used to assess the efficiency of a person in carrying out their responsibilities or tasks. Jones, et al (2000) proposed that skills competence pertains to the learning of job-specific information and procedures necessary for successful performance in an organizational position.

Proficiency is a fundamental aspect of human existence that a prosperous person cannot be without. It is the foundation of every attempt that somebody would undertake in order to achieve excellence. In order to distinguish oneself from others, it is necessary for a person to possess a high level of expertise in their specific field. Bolt-Lee and Foster (2003) defined skill as the capacity to effectively and competently do the tasks necessary for a certain profession, including attributes such as power, authority, and competence. This implies that only those with the necessary expertise can successfully carry out the required tasks, and no one else.

Tajudeen (2014) defined abilities as a kind of competence that allows individuals to do tasks effectively, acquired via the process of learning and receiving specialized training. Proficiency may be defined as the aptitude developed by a person via a purposeful, methodical, and consistent endeavour. This capability allows a person to efficiently and flexibly carry out intricate tasks or operations that include concepts, technology, and others. Skills competence refers to the set of competencies that students must acquire before graduating in order to become productive members of society. Olabiyi, et al (2013) defined skills competence attainment as the capacity to undergo training in a certain activity or task until one becomes an expert in the skill. It requires a high degree of expertise and creative thinking to achieve mastery. Skills competence refers to the acquired capacity to consistently achieve desired outcomes with high performance, often within specified time and energy constraints. This proficiency is assessed and shown via specific environmental stimuli and scenarios. Onyerinde and Falana (2016) defined skill competence as the aptitude to do a task effectively, often acquired via training and experience, and deemed necessary. It pertains to the skills and competencies that are suitable for a certain profession. It characterizes an adept someone who has exceptional proficiency in their field. Skills refer to the tangible display of one's capability to effectively execute a certain activity, resulting in a positive outcome. Chell (2013) said that skill competence refers to the abilities and capabilities in doing tasks that may be improved via practice and training. Skills mostly consist on psychomotor abilities. It encompasses several actions within the appropriate field, such as delivering teaching in education.

Skills competency in instructional delivery refers to the teacher's ability to effectively explain complicated and abstract topics to pupils using suitable medium. It is the demonstration of skilled proficiency in using suitable tools to teach practical skills to the learner. The proficient teacher transforms theoretical information into practical knowledge by using essential instructional tools, such as multimedia and hypermedia, in the process of teaching and learning. Skills competency may be shown via the process of instructional delivery, which involves the usage of skills that are based on expertise. Particularly, for courses that need advanced skills and include repeated practical components. The teacher is supposed to have attained expertise via specialized educational activities that guarantee competency, which are gained and developed through a prolonged, rigorous, methodical, and intentional training experience. The instructor applies this skill during instructional delivery in courses that demand manual dexterity, such as in the Business Education curriculum.

### **Business Education Programme**

The Business Education curriculum is classified under the Vocational Education category. Business Education's occupational goals are taken from vocational education. The aims of Business Education recognize its use in equipping individuals for starting work, enhancing current abilities, and facilitating retraining for new and related jobs. The purpose of Business Education is to develop practical skills that are applicable in many professional fields. This allows business educators to be relevant in both teaching and non-teaching professions, as well as in self-employment. Business Educators has the necessary knowledge and skills related to the field of business. The inclusion of both general education and vocational education components enables Business instructors to possess a high degree of adaptability. According to Edokpolor & Egbri (2017), the objective of the Business Education program is to equip individuals with the skills and knowledge required for specific office occupations, job creation, entrepreneurship, and a comprehensive understanding of business and technology. The Business Education curriculum is available at the senior secondary school level as a pre-vocational course and at the university level as a vocational programme. Business Education is available at the tertiary level at Colleges of Education, Polytechnics, and Universities. At educational institutions that provide them The Business Education program is housed within the schools of Business Education or Vocational Education. In Polytechnics, the school of Business and Management is where they are located. Business Education courses at universities are often housed inside colleges of Education, vocational education, or faculties of technical and scientific education, depending on the institutional structure. The Business Education course has progressed from basic handwriting skills to more advanced specialties such as accounting, office technology or information management (OTM/OIM), marketing, and entrepreneurship. Tertiary education programs, ranging from NCE/OND to Masters and PhD degrees, provide this qualification. Umoru (2015) emphasized that Business Education is an essential program in Nigerian universities as it has the potential to empower and motivate citizens for national development. Business Education program recipients can be found in all sectors of the economy, making it a crucial aspect of the country's progress. The ever-evolving and intricate technology world imposes significant demands on workplace expectations. These issues have arisen for the Business Education course due to the need for continuous upgrades and improvements to its curriculum in order to achieve these expectations. Changes in the curriculum are accompanied by advances in learning equipment and higher demands for instructors' teaching abilities. Many other issues in the Business Education program, including public perception, professionalization, course content, institutional administration, job placement, finance, and staff development. The majority of the difficulties listed may be improved by using technology into instructional delivery. The Business Education curriculum has the ability to develop people who can create possibilities that help learners integrate into learning communities with a global perspective. Implementing technology-based instructional delivery in the Business Education curriculum has the potential to revolutionize the perspectives and prospects of both instructors and students, as well as the program's global outlook.

### **Concept of Instructional Delivery**

Instructional delivery is a skillful and impactful presentation in the classroom that significantly influences the behaviour of learners, both in the short term and in the future. According to Adom, Hussein, and Agyem (2018), instructional delivery refers to the interaction between the instructor, student(s), and the particular knowledge and abilities required for learners to collaborate effectively with others. Instructional delivery refers to the manner in which a lesson is provided. The instructional delivery approach should be founded upon predetermined learning goals for the lesson. The teacher's role includes introducing students to the subject matter, teaching various tactics and approaches, promoting students' positive engagement with the learning environment, using available resources, and conducting evaluations. Lukman perceives instructional delivery as the reciprocal engagement between students, teachers, material, and the intellectual abilities, competencies, and attitudes necessary for students to learn and cooperate with others in a diverse and ever-changing society. Rosenshine (2012) defined instructional delivery as the understanding

and implementation of teaching approaches in a way that promotes effective learning without misrepresenting the teacher's objectives in the classroom. The International Bureau of Education (IBE, 2010) defines instructional delivery as the deliberate preparation and execution of well-designed plans to guide the process by which learners acquire information, understanding, and skills, as well as develop attitudes, appreciations, and values, under the guidance of a teacher.

### **Lecturers' Competence in the use of Multimedia and Hypermedia Technologies for Instructional Delivery of Business Education Programme**

The instructional delivery process necessitates the display of many abilities that allow students to enhance their knowledge, skills, attitudes, and values. These competencies are shown by the instructor throughout the instructional delivery process. Katane (2001) argued that the proficiency of instructors in instructional delivery is related to their capacity to effectively combine various types of experiences and use them correctly. Lecturers play a crucial role in transferring information and skills to students by using necessary talents. The competences of lecturers in multimedia and hypermedia technologies refer to their experience in effectively using textual, audio, visual, and graphic elements to convey ideas, skills, information, and create an appropriate learning environment. Lecturers must possess a range of competences in areas such as knowledge, skills, human relations, abilities, and pedagogy in order to improve the quality of their instructional delivery. Once again, the use of technologies like multimedia and hypermedia necessitates that instructors acquire and insist on these skills. This is particularly true for courses that have a strong emphasis on practical application, prioritize student involvement, and demand a high level of participation. This will empower teachers to flourish in their instructional delivery and is essential for their training to become professionals in instructional delivery.

### **Gender Differences in Competencies in the use of Multimedia and Hypermedia Technologies**

The majority of research studies tend to prioritize and emphasize gender-related concerns. The majority of studies have made efforts to demonstrate gender disparities in the use of technology to enhance productivity. Ikolo (2010) identified a gender digital gap characterized by a disparity in the number of female technology users relative to male users. This is a non-western scientific approach that is both intuitive and holistic. In contrast, the masculine approach to utilizing computers is characterized by a rule-driven and analytical method influenced by Western ideologies known as "hard" mastery. Furthermore, there are notable disparities in cognitive capabilities (Tong & Klecum, 2004) that Pohl (1997) categorized as spatial perception, mental rotation, spatial visualization, and spatial-tempered skills. Oghagbephan and Asamgo (2010) argue that although both males and females are capable of using computers, there is a notable disparity in the amount of time they spend using computers, the software they use, and the specific obstacles they encounter. According to Mahmood and Bokheri (2012), gender inequality is the cause of limited access to and use of ICT for educational purposes. Nevertheless, Nwadiani and Egbri (2016) found no substantial disparity in the ability to access and use ICT tools depending on gender. According to Asuquo and Onasanya (2006), there are several factors, both within and outside the classroom, that hinder females from accessing and using technology. These factors include societal norms and expectations, the organization of learning activities, and the sort of feedback given in relation to performance expectations. According to Wajcman (2016), the vocabulary used to describe technology is inherently male and goes beyond just learning abilities. These talents are ingrained in a society characterized by masculinity. Thus, in order to immerse oneself in this culture and acquire its language, the woman must first abandon her feminine perspective. Despite the existence of a gender disparity in technology use worldwide, some have verified a substantial rise in women's access to and utilization of technology, leading to an overall reduction in the gender gap. Although there has been significant attention on the use of technology in Nigeria, Sanda and Kurfi (2013) found that women are disproportionately underrepresented in terms of their access to and usage of technology. They argue that women's contribution to the development of

their cultures is significant, but their influence is suppressed in the realm of technology owing to limited access and proficiency. Ementa, et al (2017) argued that Business Educators, regardless of gender and institution type, have a limited ability to use web-based resources into their instructional delivery.

The aforementioned study demonstrates that gender may impact the level of proficiency in using multimedia and hypermedia technologies for educational purposes. The variation in knowledge, abilities, skills, human relations, and pedagogy competencies may lead to differences in the use of multimedia and hypermedia technologies for instructional delivery of the Business Education program in tertiary institutions. Therefore, it is necessary to determine the level of competence of lecturers in utilizing these technologies, taking into account the gender of the target population.

### **Process Virtualization Theory: Eric Overby (2008)**

The notion of process virtualization was proposed by Eric Overby in 2008. This hypothesis posits that some processes are more suitable for virtual execution than others. The process virtualization hypothesis assesses the incorporation and use of electronic devices in educational processes, as opposed to conventional instructional approaches. Virtualization is more suitable for some procedures, such as distant learning and digitization of instructional material in Business Education. More and more, educational instructors who formerly depended on in-person engagement in physical classrooms with their pupils and learning materials are transitioning to virtual methods and environments, mostly due to the inevitability of the situation. Operationally, process virtualization theory is based on the feasibility of virtualizing operations. The inquiry aims to determine the feasibility of incorporating virtual approaches into the instructional process and the expected result of doing so. The theory also aims to determine the potential correlation that may exist between the required equipment, the receiver of the process, and the executor of the process, as well as the user's capacity to recognize and use the item or device. The user must possess the requisite information, skills, attitude, and capacity to effectively use, influence, and adapt instructional technology. Each of the aforementioned capabilities is essential for the potential and feasible virtualization of an instructional delivery process, particularly in Business Education, which primarily focuses on practical skills and requires both the teacher and students to possess repetitive practical knowledge competence in order to achieve favourable results. Implementing virtual instructional delivery may require significant investment in acquiring and installing the necessary resources, but it may ultimately result in cost savings in terms of ongoing maintenance and use. It offers dependable and fast methods of delivering teaching to both teachers and students, facilitating self-learning and cooperation among students both inside and beyond their academic setting. Business Education instructors may use this tool to effectively adjust to technology advancements while creating and delivering program material.

### **CONCLUSION**

The proficiency of male lecturers in using multimedia and hypermedia technologies may be strengthened by providing them with assistance and incentive. This will enable them to fully use these technologies in delivering the Business Education curriculum. The study also found that female lecturers demonstrated lower competencies compared to male lecturers. As a result, it is recommended that female lecturers undergo reeducation to acquire the necessary competencies for effectively using multimedia and hypermedia technologies in delivering instruction in the Business Education Programme.

### **RECOMMENDATIONS**

In line with the findings and conclusion from this study, this study makes the following recommendations

1. Designers of Business Education programme curriculum should emphasize the re-orientation and reeducation of female lecturers to emancipate them from their feminine mindset.

2. Individual lecturers should endeavor to undertake personal and self-sponsored upskilling and reskilling efforts in order to stay abreast with current innovations and skills requirements and relevant in the scheme of things.
3. Federal, State and Local government should engage in concerted efforts in ensuring the provision, adequacy accessibility and utilization of multimedia and hypermedia technologies for instructional delivery of Business Education programme anchored in their institutions to ensure the production of economically ready and skills relevant graduates of the programme.

## REFERENCES

- Adekunnusi, S. R. & Oshinake, A. B. (2012). Use of multimedia for teaching in Nigeria university system: A case of university of Ibadan.
- Bolt-Lee, C. & Foster, S. (2003). The Core Competency Framework: A new Element in Continuing for Accounting Education change in the USA. *Accounting Education Journal*, 12(1) 33-47.
- Chell, E. (2013). Review of Skill and Entrepreneurial Process. *International Journal of Entrepreneurial Behavioural Science*. 19(1) 16-31.
- Edokpolor, J. E. & Egbri, J. N. (2017). Business Education in Nigeria for Value Re-orientation: A Strategic Approach for Poverty Alleviation and National Development. *Journal of Educational Research and Review (JERR)* 5(3), 41-48.
- Ementa C. N.; Onokpaunu M. O. and Okonkwo M. U. (2017). Integration of web-based instructional technologies in teaching entrepreneurship courses in tertiary institutions in Delta State. *Nigeria Journal of Business Education* 4(3), 224-234.
- Gamser, M. S.; Appleton H. & Cartar N. (1990). *Tinker, Tiller, Technical Change*, IT Publications London.
- Kanno L. M. (2008). Usefulness and employment of using computers in learning. A gender dimension. *Gender and behaviour* 6(2) 1841-1857.
- Katane, M. (2001). Teacher Instructional Delivery Competency. <https://www.instructionmedia.com>.
- Nwadiani C. O. & Egbri J. N. (2016). Tertiary institutions business education students access to and utilization of available ICT resources for learning in Edo State. *Nigerian Journal of Business Education*, 3(1) 171-180.
- Olabiyyi, O. S.; Aiyelabowo, O. P. and Keshinro, O. T. (2013). Relevance of Computer Assisted Instruction (CAI) for *Effective Skill Development among Technology Education Students in Nigeria Journal of Education and Practice* 4(21) 80-89.
- Rosensline, V. (2012). Principles of Instructional Delivery. <https://www.rosensline.com>
- Saeed, M. & Mahmood, K. (2023). Management. *The International Journal of Education* 1(6) 190. Doi:10.1088/1742-6596/1097/1/012106 retrieved 6<sup>th</sup> October, 2023 at 5:21pm.
- Tajudeen, A. A. (2014). Higher Education and Skills Development: An Overview of Nigerian Policy on Education (NPE) *International Journal of Development and Sustainability* 3(12) 2218-2227.

Tong, A. & Klecum, E. (2004). Toward accommodating gender differences in multimedia communication IEEE Transactions on Professional Communication.

Umoru, T. A. (2015). Challenges and Opportunities of Utilization of Social Media Business Education Students in Nigeria Universities, world academy of science, engineering and technology. *International Journal of Educational and Pedagogical Sciences*, 9(1), 3969-3972.