

**ABILITY 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 ability 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 pedagogy competence, connectivism theory representing human relations competence, adaptive theory representing knowledge competence, 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 ability 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: Ability Competencies, Multimedia, Hypermedia, Technology***

**INTRODUCTION**

Business Education instructors must have the capacity to recognize, choose, and use contemporary technology essential for delivering instruction in Business courses. The lecturers of the Business Education program are responsible for equipping students with the skills necessary to solve problems in the field of business and office administration. They are also required to develop plans for future development and devise methods for ensuring the effective and efficient operation of businesses or organizations. The instructor use contemporary technology to carry out these tasks. In order to do this, the Business Education lecturer must possess the requisite skills, knowledge, and expertise necessary to operate effectively in a technologically advanced teaching and learning setting. The lecturer must have proficient communication and interpersonal abilities, as well as strong organizational and planning skills, in order to effectively provide education, differentiate training, and evaluate instructional results. Efficient classroom management is crucial for establishing and sustaining an optimal learning environment. It involves effectively handling student behaviour and classroom dynamics. Additionally, facilitation and engagement skills are essential for capturing and maintaining students' interest, effort, participation, and enthusiasm in both the content and process of learning. It may also be seen as a kind of coaching that facilitates the use, evaluation, and feedback to improve students' learning, cooperation, and teamwork with others in order to reach learning goals and objectives. An inclusive atmosphere is created to support and care for all pupils, allowing them to demonstrate flexibility and adaptation in response to changing situations. The Business Education instructor may do these things and more with the assistance of contemporary technology. The Business Education lecturer may enhance learners' problem-solving

skills via interactive stimulation and can evoke favourable feelings about a course in a student by using new technology. The use of technology in the instructional delivery process enables Business Education course instructors to effectively prepare for their lessons, maintain students' attention, prolong engagement time, and foster debate, teamwork, and cooperation among students. The lecturer's competency may be determined by their skill and willingness to use modern technology.

Competence refers to the constant display of knowledge, competence, and skill in carrying out a certain task or role. Competence allows the lecturer to recognize the tasks associated with the course material and the specific skills, knowledge, ability, and aptitude that both the lecturers and learners need in order to provide the appropriate instructional response. This will help achieve the desired result of instructional delivery. Competency empowers the Business Education instructor to cultivate transferable knowledge and abilities in the pupils. It refers to the capacity to demonstrate proficiency, proactivity, deep understanding, complete control, and adaptability in utilizing contemporary technology when delivering instruction.

According to Heijike et al. (1998) and Brunello and Comi (2004), a method for assessing an individual's competency in the education field is by examining the outcomes of their studies during instructional delivery. Competence may be assessed across several aspects, including knowledge, skills, talents, human connections, tools, and pedagogy. Having specialized expertise in a given field, such as Business Education, increases the likelihood of finding employment and work satisfaction. It also enables educators to effectively pass on the same information, skills, and talents to their students.

The professor of the Business Education program demonstrates his expertise by his extensive knowledge, advanced skills, and proficient use of new technology, including multimedia and hypermedia. The significance of multimedia and hypermedia technologies is increasing among educators and their students due to its ability to provide a wide variety of teaching tools and material. According to Gunawardhana and Palaniappan (2016), multimedia and hypermedia technologies refer to the combination of computer hardware that enables users to combine video, audio, animation, graphics, and text resources in order to create compelling presentations on an inexpensive desktop computer.

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

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

### **Concept of Ability and Ability Competence**

Ability is a comprehensive concept that encompasses an individual's possession of the abilities and skills required to successfully carry out a given activity. This is a concise explanation of an individual's current capabilities and actions. This assumption suggests that any learning or developmental process required must have already been achieved. This aligns with Pelegrino's (1996) definitions, which state that ability refers to an individual's capacity to acquire and use new information or skills. It is an inherent or learned ability to do or accomplish anything. According to Carr & Kingsbury (2016), capacity is a capability that a person has, which is not directly observable but may be inferred from their actions. Thus, it is mostly a conceptual idea. Carr and Kingsbury (2001) propose that ability may be seen in three distinct ways: by direct observation, by its potential to hinder future behaviours of the one possessing it, and by the manner in which a human responds in situations that demand the use of their ability. Abilities are enduring traits that may delineate an individual's cognitive, sensory, and physical faculties. Ability refers to an individual's inherent capacity in a certain field of expertise, which allows them to successfully carry out the tasks and duties that are assigned to them and for which they are given responsibility. Ability refers to an individual's specific skill set, which may be either inherent or learned, and can pertain to mental or physical capabilities. Ability refers to an individual's aptitude to effectively perform a wide range of duties associated with a certain career. Over time, these talents may stabilize and enhance an individual's performance in

activities. There are primarily two categories of skills: physical abilities and cerebral powers. There are also various more abilities that may or may not fit into these two main divisions. These skills include the following types:

**Physical Ability** refers to the aptitude for doing tasks that involve physical exertion and stamina. It refers to the personal level of physical efficiency and capability. It encompasses fundamental physical attributes such as muscular strength, endurance, flexibility, manual dexterity, and hand-eye coordination.

**Psychomotor Abilities** refer to the ability to successfully demonstrate manual dexterity and eye-to-hand coordination in work performance.

**Intellectual Ability** refers to an individual's capacity to make rational judgments and efficiently digest information. The assessment encompasses many cognitive abilities, such as numerical aptitude, verbal understanding, speed of perception, inductive and deductive reasoning, and memory capacity.

**Critical thinking ability** refers to an individual's aptitude for thoroughly analyzing information, taking all elements into careful account before arriving at a well-founded conclusion. The task involves scrutinizing assumptions and using caution to prevent the oversimplification of matters. Engaging in profound contemplation of complex matters and attaining a clear comprehension.

**Issue Solving Ability** refers to an individual's capacity to analyze an issue and devise a solution. It refers to a collection of strategic plans that empower a person to effectively address any obstacles they may face in their professional role. The problem-solving skill entails the capacity to collect information on an issue, engage in critical thinking and analysis of the material, and interpret the generated meaning from the process.

**Cognitive Complexity** refers to an individual's ability to collect and organize material and information, and make connections to past knowledge or existing situations. By using cognitive complexity, individuals are capable of making improved decisions by generating innovative and pragmatic solutions to current or forthcoming issues.

**Cognitive capacity:** This refers to an individual's mental aptitude for acquiring and retaining information.

**Emotional Intelligence:** It pertains to an individual's ability to comprehend and regulate their own emotions. Additionally, they possess the ability to perceive and react to the emotions of other individuals.

**Capability Competence** refers to an individual's inherent or learned ability to effectively perform certain activities or jobs. Proficiency requires an individual to demonstrate efficient and innovative analytical thinking, thorough knowledge acquisition, strong verbal understanding, and empathetic behaviours while performing their responsibilities. The foresight of a skilled and capable worker ensures the attainment of effective and pragmatic solutions in a problematic circumstance. Competence guarantees that an individual worker carefully considers the specific aspects of a scenario, setting, occurrence, and the people involved before coming at a judgment. A proficient worker has self-awareness and exercises control over their emotions, ideas, and behaviours. Competence, whether learned or innate, undergoes changes over time by consistent application. This leads to a dynamic, enhanced, and more developed ability over time. Ability may be categorized as either non-specific or specialized competence. Specific ability skills are mostly task-oriented or person-oriented. These tools are specifically designed for certain tasks and possess the capability to use and modify related tools to effectively complete the job. In the context of instructional delivery, ability competence is assessed from three distinct viewpoints, all of which are essential for a good teacher.

**Effective Strategies for Managing a Classroom:** Classroom management refers to the teacher's skill in effectively maintaining discipline and order, as well as controlling students' activities to facilitate their learning endeavours. It allows the instructor to maintain mental stability and provide a favourable environment for effective teaching and learning.

**Teaching Skills:** Teaching skills refer to a teacher's capacity to effectively convey their knowledge to pupils in a manner that enables the learners to understand and perhaps draw their own conclusions

about the subject matter. The teacher's proficiency in teaching abilities allows them to effectively assist students in independent thinking and perhaps cultivate a deep enthusiasm and expertise in the subject matter, which will continue to grow and improve over years of practice.

topic Knowledge: Subject knowledge refers to the teacher's capacity to possess a comprehensive and profound grasp of the topic, regardless of the learner's level, via extensive learning and intentional growth. A solid understanding of a topic is fundamental for effective teaching. It facilitates the process of transferring information, making it simple and effortless for the instructor. The instructor adeptly eliminates any misunderstandings in a lecture due to his extensive topic expertise. He has the ability to establish connections between abstract concepts and real-life scenarios, as well as to bring life to inanimate things and make them comprehensible to the student.

### **Business Education Programme**

Business Education offers a platform for instructors to cooperate and exchange their experiences and achievements, enhance motivation and retention of both students and teaching staff, and enhance learning results.

Business Education equips instructors with the necessary pedagogical and business skills and expertise to effectively teach students the practical skills, information, and business mindset needed for vocational purposes and to make informed consumer decisions. The primary objective of Business Education is to train and certify educators to teach business courses in secondary schools, Colleges of Education, Polytechnics, and Universities. Ezeani (2012) argued that Business Educators gain proficiency in four key areas (marketing, office technology and administration, accounting, and entrepreneurship) of Business Education and are capable of efficiently imparting these abilities to their students. Business Education is a comprehensive and adaptable educational curriculum that incorporates contemporary instructional tools. Otamiri (2013) argued that Business Education encompasses the examination of technologies and associated sciences, as well as the development of practical skills, attitudes, comprehension, and information pertaining to the profession of different sectors of the economy and social life. Business Education provides individuals with the necessary skills and competences required for many vocations in the business field, as well as for the teaching profession. The business education lecturers are an essential means of conveying information, skills, and traits, which cannot be avoided. They are given the task of instructing the essential skills, information, talents, and attitudes that guarantee personal and national progress and advancement for both the individual receivers specifically and the economy as a whole.

The Business Education professor engages in research endeavours to explore innovative methods for enhancing instructional delivery and instructional delivery systems. They are burdened with identifying trends in technology developments and understanding their impact on the workplace, as well as adapting instructional techniques to address these gaps. Business education professors are expected to stay current in terms of knowledge, skills, and pedagogical advancements. They enhance their professional growth with ongoing research endeavours.

According to Olaitan et al. (2019), business education lecturers carry out their instructional activities in lecture halls, workshops/laboratories, and by instructing, assessing, and evaluating the learners. The business education professor is responsible for managing and creating a suitable learning environment to successfully offer teaching. Business Education lecturers must possess strong interpersonal skills in order to effectively engage and maintain students' attention over an extended duration. The Business Education lecturer develops and adapts instructional materials to cater to the individual characteristics and learning environment of the students. Simultaneously, they aim to achieve the desired outcomes of the instructional process by selecting suitable methods and tools for delivering the instruction. Business Education lecturers at the tertiary education level also have administrative duties. These administrative responsibilities can be their main duties, such as being heads of departments, or they can be additional responsibilities, such as serving on subcommittees or being elected to Institutional Board membership, like the deanship. These administrative tasks may include overseeing and advising students, managing the admission and registration processes, guiding and directing various units, departments, universities, institutes, schools, and colleges.

**The objectives of Business Education**

- i. To provide opportunity for practice job preparation or vocational studies for students in order to make them render effective and efficient services in office, distributive and service occupations.
- ii. To prepare students based on interest and aptitude with the skills, knowledge and attitudes needed to enter into business occupation, advance and profit in it.
- iii. To provide opportunities for students to develop an understanding of the business and economic system of the nation so as to enable them to participate actively as producers and consumers of goods and services
- iv. To develop in the students the basic awareness of the contribution which business and office employees make to the nation's economy.
- v. To develop and improve the personal qualities and attitudes of students as required in personal and employment situations.
- vi. To serve as a guide for individual students for suitable placement in business and office employment.
- vii. To enable students have career consciousness and economic understanding of the free enterprise system.
- viii. To prepare students for leadership position in both public and private lives.

The Business Education programme is specifically designed to equip and support teachers in becoming continuous learners. They must constantly improve their capabilities in order to effectively guide others in acquiring the necessary skill sets. This enables diligent learners to achieve mastery and proficiency in any situation they encounter.

A business education professor may effectively manage many tasks by using new technologies like multimedia and hypermedia. These are technologically advanced devices that include audio, video, graphics, charts, text, and simulation capabilities. They may assist the Business Education professor by lowering the amount of time and energy spent on certain duties, as well as eliminating repetition. However, using, applying, and using them effectively demands skill. The Business Education lecturer must possess a significant degree of experience, competence, skill, and aptitude in using multimedia and hypermedia technologies for all aspects of their employment, including academic, administrative, and other responsibilities. Competence refers to the demonstration of a high degree of expertise in using technical applications for work performance.

**Concept of Hypermedia Technologies**

Hypermedia technologies include many forms of media, such as text, graphics, pictures, sounds, and video, that possess the characteristic of non-linearity. Hypermedia is a distinct kind of software environment that integrates the features of hypertext and multimedia. Hypermedia environments are characterized by network-like information structures, in which bits of information are stored and linked. These may be obtained via electronic linkages. Hypermedia is a kind of computer program that enables users to interact with several forms of media, such as movies, texts, pictures, and sounds. Each of these media elements may be accessed from inside any of the others. Hypertext refers to the capability of accessing or interacting with unrelated network information by clicking on text or visual links inside a web page or website, which are separate from the original content. Hypermedia is an enhanced version of a hyperlink that enables the linking of photos, videos, and flash animation to other material on a web page. A hyperlink is a feature that allows photographs or graphics on a web page to function as a link or be connected to another web page. Hypermedia technologies may be classified into three categories: navigation tools, information or instructional tools, and hyper authoring.

**Multimedia and Hypermedia Technologies for Instructional Delivery of Business Education Programme**

Multimedia and hypermedia technologies alleviate the burden of repetitious instruction, particularly in many study groups that use the same ideas and images. These technologies also include tools and links that allow for interaction between different types of information, whether they are related

or unrelated. The purpose of these digitally enhanced tools and links is to facilitate instruction. Multimedia and hypermedia technologies showcase a teacher's professional inventiveness and expertise.

According to Abdulkarim and Agburuga (2016), using multimedia and hypermedia materials in instructional settings allows students to absorb knowledge into their long-term memory more effectively. This is because these materials engage several sensory organs, such as the eyes and the ears, which work together to enhance memory retention and facilitate easier recall. The advantages of using multimedia and hypermedia technologies for educational delivery include enhanced comprehension, heightened problem-solving abilities, higher pleasant emotions, broader access to diverse information, and enhanced immersion and exploration. It facilitates the development of ideas and may cater to the unique learning demands of pupils, hence enhancing learning outcomes via increased attention and information retention. Teachers will have access to extensive repositories of material and instructional methodologies that may assist in the teaching process by using novel methods to convey ideas to students. By using multimedia and hypermedia technologies, teachings may be customized to suit the learner's individual tastes and cognitive requirements. It facilitates more thorough analysis of material provided during instructional delivery. Patterson (2000) said that it compels learners to consistently evaluate the information necessary for attaining their learning objectives and to make judgments on various units of information. Azevedo (2005) emphasizes that the use of hypermedia and multimedia technologies in instructional delivery facilitates the acquisition of topic knowledge and enhances students' capacity to self-regulate their learning process. For educational purposes, the effectiveness of multimedia and hypermedia technologies is maximized when the many forms of media complement each other rather than one media dominating over the others.

### **Constructivism Learning Theory: Jean Piaget (1973) in Triantafyllo (2013)**

Constructivism is a broad and intricate field including modern psychology, philosophy, and education. It is used by philosophers, curriculum designers, psychologists, educators, and other professionals. It is a learning paradigm that views learning as a process in which people derive meaning or new information from their past experiences. Constructivism posits that knowledge and meaning are created via the interplay between individuals' experiences and ideas. The majority of constructivism proponents highlight the learners' role in creating meaning and acquiring knowledge via personal engagement and active participation. The constructivists' perspectives are founded upon the investigations conducted by Piaget (1968), Vygotsky (1976), the Gestalt Psychologists (1979), Bartlett and Bruner (1979), John Dewey (1982), and others. Constructivism is often linked to educational methods that advocate for active learning via hands-on experiences. This approach emphasized a curricular framework that examined the core concepts, connections, or patterns in the domains of vital knowledge or abilities. Constructivists assert that learning becomes more meaningful, practical, and enduring for students when they prioritize comprehending the fundamental concepts of the topic they are studying. In order to understand the fundamental essence of a topic, constructivists argue that students must actively engage with the subject matter and independently discern the underlying principles, rather than passively accepting the explanations provided by professors. The constructivism hypothesis posits that a learner's motivation and ability to sustain it throughout the learning process mostly rely on the learner's confidence and capacity for learning. The conviction in one's competency and aptitude to tackle new challenges is derived from personal experiences of comprehending and mastering similar difficulties. Hence, the act of effectively resolving a problem or proficiently managing a complex assignment empowers a student to acquire confidence and the impetus to tackle more arduous and demanding activities.

Moreover, the constructivism theory lays a strong emphasis on the role of professors or lecturers, namely those in the Business Education curriculum at higher institutions. Their task is to provide the educational materials and setting that may both facilitate and stimulate the learner's cognitive capabilities. The learners must possess the ability to derive significance from their interactions with

one other in order to develop the information necessary to engage and resolve various social and cultural issues. Additionally, they should be able to confront and solve intricate educational difficulties within the learning environment. The constructivism theory supports the idea that lecturers' proficiency in using multimedia and hypermedia technologies for educational delivery is enhanced by engaging in actual tasks and activities that entail numerous interacting aspects. When learning, individuals encounter many challenges that have several potential resolutions, which are likely to be encountered in the actual work environment. During the learning process, learners require direction and help from instructors while they try to resolve these challenges. The proficiency of lecturers in utilizing multimedia and hypermedia technologies for instructional delivery in Business Education encompasses expertise in knowledge, skills, abilities, pedagogy, and human relations. This proficiency is essential for effectively utilizing multimedia and hypermedia resources during the instructional delivery process in Business Education programs at tertiary institutions. The instructors' proficiency in using multimedia and hypermedia technologies in instructional delivery within the Business Education curriculum at institutions would empower lecturers who possess the necessary abilities to impart practical knowledge and skills to students. Additionally, it will guarantee that instructors provide a dynamic and captivating educational setting that empowers students to experience the benefits of independent learning and personal growth.

### **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. The study ultimately determined that both male and female lecturers should enhance their pedagogical competencies in order to effectively utilize the most efficient and effective pedagogical approaches when delivering business education programs, particularly in courses that involve the use of multimedia and hypermedia technologies for instruction.

### **RECOMMENDATIONS**

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

1. Faculties and departments of Business Education programme should ensure regular seminars and workshops on the need for the acquisition and utilization of multimedia and hypermedia technologies of all its lecturers to reduce the job specific skills gap between the male lecturers and their female counterparts.
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.

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