



USEFULNESS OF VIRTUAL CLASSROOMS FOR INSTRUCTIONAL DELIVERY OF BUSINESS STUDIES COURSES IN UPPER BASIC EDUCATION

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Abstract

The study sought to assess the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level in Udenu Local Government Area, Enugu State. It adopts the descriptive survey design. One research question and one hypothesis tested at .05 level of significance were used. Population consisted of 297 Business studies teachers in Udenu LAG, Enugu State. A validated questionnaire with reliability coefficients of 0.80 was used for data collection. Mean and standard deviation were used to analyze research question while t-test was used to test the hypothesis. Based on the data analysis, it was found that the itemized items were identified as the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level. The findings of the study showed that there was no significant difference between the mean ratings of male and female business studies teachers on the identified items on the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level. It was recommended that teachers should teach students to be more aware of the usefulness of virtual classrooms in instructional delivery, business studies teachers should be using online teaching and communications to the students to arouse their interest in an online class, government should provide facilities for virtual learning environment.

Keywords: Usefulness, Virtual Classroom, Instructional Delivery, Business Studies, Upper Basic Education

Introduction

Effective instructional delivery demands that teachers should have adequate competences to deliver instructions effectively to students. The teachers are the facilitators of learning and the students' achievements to a large extent are anchored on the competencies of the teachers. 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. When effective instructional delivery strategies are used by teachers, the academic and behavioural skills of students will improve. It creates positive learning environment thereby reducing negative behaviour and improves students-leturers relationship. Educational system is dynamic and changes with time. It responds to the demands of the society, by assimilating the advances in technology. This assimilation of technology leads to a new mode of education. Considering this, it is necessary to find ways to make education of good quality, accessible and affordable to all, using the latest technology available. The rapid development of information and communication technologies (ICTs) and the move towards more knowledgeintensive,interdependent and internationalized societies create new opportunities and challenges for the design anddelivery of education.(Gupta & Gupta, 2014). The increasing use of Information and Communication Technology (ICT) innovations has led to the phenomenal growth and use of ICT in higher education over the past decade. Visual classroom which is an aspect of online learning environments can offer learners opportunities for flexibility, interaction and collaboration distinctly different from face-to-face learning environments. Business studies being one of the courses taught in upper basic education level can benefit from visual classroom environment.

Concept of Business Studies

Business studies is defined as one of the basic subjects, which is given to pupils to enable them, acquire pre-vocational skills for further knowledge and skills. It is made up of five components - Office practice, Commerce, Book keeping. Amaewhule (2010) opined that Business Studies encompasses knowledge, attitudes, and skills needed by all citizens in order to effectively manage their personal businesses and economic system. Business studies as a subject in junior secondary schools helps in training the students on those subjects that are relevant in developing skills, aptitudes, potentials and competencies to be useful citizens and contribute economically to the society. Being a skill acquisition subject, the teaching and learning of business studies as a pre-vocational subject requires the application of different instructional methods and strategies (FRN, 2013).

In the same vein, Agwumezie (2010), explained that business studies is a course that prepares students for entry into advancement of jobs within business, and prepares them to handle their own business affairs to function intelligently as consumers and citizens in a business economy. Business Studies is an embodiment of vocational knowledge and skills needed for employment and advancement in a broad range of business careersAbdullahi (2012) also noted thatbusiness studies is an aspect of total educational programme which provides the recipient with knowledge, skills, understanding and attitude needed to perform well in the business world as a producer or consumer of goods and services. Okoye (2013) extensively defined business studies as an education program that orientate students in: art of business making (marketing), typing and shorthand skills (currently competing with computer appreciation and operation), service delivery, secretarial jobs, stenography, account clerking, office information system and management. Therefore, business studies are integrated in the sense that it comprises more than one subject. It is also practical because most of the subjects that make up business studies such as shorthand, skills for business, book-keeping, business success, keyboarding as a communication tool among others are practical in nature according to its curriculum in upper basic education level.



Concept of Upper Basic Education

Upper Basic Education is a component of basic education which came on board with the Universal Basic Education (UBE) programme in 1999. Such education has a duration of three years and is meant for children of between the age of twelve (12) and fifteen (15) years. The children are expected to undergo occupational training in order to develop vocational competence and/or prepare them for self-employment or proceed to the senior secondary classes where they will be further trained for tertiary education. Upper Basic Education is unique because apart from complementing the education already received by a child at the primary level, it completes the required nine-year basic education cycle. It is a stage where the vocational thrust of basic education is consolidated and where core, vocational, non-prevocational and academic subjects are offered and taught. It is expected to: provide an increasing number of primary school pupils with the opportunity for education of higher quality; diversify its curriculum to cater for deficiencies in talents, opportunities and roles; equip students to live effectively in our modern age of science and technology; develop and project Nigerian culture; raise a generation of people who can think for themselves, respect the views and feelings of others as well as have respect for dignity of labour; foster the unity of Nigeria; and inspire its students with a desire for achievement and self improvement (Federal Republic of Nigeria, 2010).

Concept of Virtual Classroom

Virtual classroom has been described by Schutt & Linger (2013) as a web-based environment that allows an individual to participate in live training events without traveling to any other place. You can sit in the comfort of your environment and listen to teachers. You can participate in the lab exercises, ask questions and effectively interact with the teacher as if the action is taking place in a conventional classroom but it is done with the convenience of technological gadgets as desktop that have internet and phone connection. The internet on the other hand provides such advantages and new ways of communicating, interacting, and assessing information for both teachers and students. Virtual classroom is a teaching and learning environment located within a computer-mediated communication. Just like in a real-world classroom, a student in a virtual classroom participates in synchronous instruction, which means that the teacher and students are logged into the virtual learning environment at the same time. (Gupta & Gupta, 2014).

In another words, virtual classroom could be seen as the classrooms, capable of replacing partially or totally the conventional educational, evaluative and administrative functioning of a regular classroom by adopting the advanced computer and ICT technologies like the internet, e-mail, on-line chatting, www, CD-ROMS, DVDs, tele-conferencing and video conferencing" (Mangal and Mangal, 2009). In a virtual classroom, students may be in a different location from their teacher, or from other students in their class. Second, teachers and students in virtual classrooms may be using a range of ICTs to facilitate learning, communication and collaboration in ways that may not be typical in a conventional classroom.



Racheva (2018) also explained that virtual classroom is an online learning environment that allows for live interaction between the tutor and the learners as they are participating in learning activities. In other words, the virtual classroom is a shared online space where the learners and the tutor work together simultaneously. Usually, these interactions take place through video-conferencing. The participants have tools to present learning content in different formats, as well as to implement collaborative and individual activities. In this type of interaction, the teacher has the particularly important role of the moderator who guides the learning process and supports group activities and discussions. Virtual classrooms are online environments that enable students and instructors to communicate synchronously, by means of audio, video, text chat, interactive whiteboard, application sharing, instant polling, and other such features, as though they were standing face to face in a classroom (Parker & Martin, 2010). Therefore virtual classroom is online classroom that enables the teacher and learner to participate in teaching and learning process.

Benefits of Virtual Classroom

Virtual classrooms have the potential to provide significant added value to online learning by addressing the needs of the learners as they relate to social interaction and psychological safety. They can also create a new standard in the learning experience that goes above and beyond the physical space of the classroom and traditional teaching methods. The virtual classroom provides an abundance of opportunities, especially when combined with self-study platforms (learning management systems) or when used in addition to traditional classroom learning activities. Unlike asynchronous learning environments (traditional), the synchronous (virtual classroom) allows for instant feedback, direct teacher-student interaction, and engaging activities to increase motivation and active participation. Immediate communication favors relationship building within the group, as well as a sense of community (Racheva, 2018). Racheva also noted virtual classroom requires new pedagogical approaches and a redesign of the instructional model that includes the following characteristics:

1. Virtual Classroom's high Interactivity

Training in a synchronous virtual classroom can only be successful with the active participation and engagement of the learners. This creates a positive learning environment and helps the participants achieve the expected outcomes. During the virtual session there should be opportunities for frequent interaction between learner and tutor, learner and other learners, and learner and content. This can be achieved by a variety of activities such as brainstorming, small group discussion, collaborative and individual tasks, Q&A sessions, hands-on experience, among others.

2. Collaborative Learning

Collaborative learning means that the learners work together to achieve a common goal, exchange views, clarify the meaning of concepts, or solve problems together. It creates opportunities for cooperation in skills development. The emphasis is placed on interaction in which common understandings are subject to discussion and are developed precisely through exploring the differences in the participants' level of knowledge, skills, and positions. Applied in the virtual classroom, this approach is associated with an active process of the collective construction of knowledge using the group as a source of information, a motivational agent, and a means of mutual support.



3. Student-Centered Instruction

This approach is more applicable to asynchronous virtual teaching – the tutor creates video lectures and self-directed activities, which the learners cover at their own pace. Synchronous virtual classes require student-centered instruction in which the learners and the tutor interact equally – active participation, collaborative work, and communication are encouraged in this type of classroom. The tutor creates opportunities for both independent learning and learning from one another, and guides the learners in developing and practicing the skills they need. This increases the motivation level of the learners, as well as their interest in the learning activities.

4. Variety of Content Presentation and Learning Activities

This approach is related to differentiated instruction, which takes into consideration the differences in the needs, levels, and learning styles of the learners. It favors the creation of a more personalized learning experience and individual success. When a teacher uses various sources to present the content – text, images, diagrams, audio, video, etc. – this can greatly improve the learning process by providing a flexible learning experience that is tailored to the various needs and preferences of the students. Presenting the content through various types of media retains the attention and interest of the learners.

5. Psychologically Safe Environment

Interactions in a virtual classroom create the sense of a more informal and safer emotional environment as the learners usually participate from the comfort of their homes. The learning process is much more focused because of the absence of the usual physical distractions that are found in the conventional classroom. Psychological safety leads to better learning outcomes. It also fosters creativity, confidence, and a willingness to experiment on the part of the learners. The virtual teacher also has a crucial role here – they need to encourage safe discussions, mutual respect, equal opportunities to participate, and the free sharing of different viewpoints. The teacher can enhance the psychological safety of the learners and make things more personalized by adding options for self-directed learning, as well as by communicating more frequently with every student through a Learning Management System.

Anaekwe (2017) came up with the following as the merits of virtual classroom:

- The system has the capability of employing the services of most experienced personnel in different areas of need which is not possible in traditional classroom setting.
- Another educational value is the intellectual and social partnership created by the technology of virtual classroom. Students in their use of technological equipment cultivate the habit of leadership role in relation to other students (Bolstad, 2009). The implication is that the technology used increases group cohesion and mutual support more especially in remote classrooms. Besides the virtual classroom enables the students to develop a range of communication skills that enable them perform creditably in class.
- Cost effectiveness is a great advantage. Virtual classroom saves money, time and transport for students. The students who are motivated could work on their own at their home environment without wasting time and money to travel to school.



- The teacher equally enjoys the teaching because everything is digital and these works in general are sent through e-mail typed. The teacher can easily re-use his materials and can easily get materials elsewhere.
- The system can prove quite advantageous to the students in various ways with regard to its on-line features.
- It provides the learners the flexibility of getting the learning experiences at the time, place and rate of assimilation.
- Virtual classroom can help in good class organization. The operational documents, assignments, class notes and other related information in the internet can be readily categorized for easy accessibility by the teachers and students. The information posted on the internet could be easily revised and updated for more effective teaching and learning.

Parker & Martin (2010) also noted that the following features are supported by the virtual classroom

- **Interactivity:** Students can interact with each other, with instructors, and with online resources.
- **Synchrony:** users are connected at the same time, enabling users to exchange electronic messages with one another, as though they were exchanging words in a face-to-face setting. Students in online courses are accustomed to asynchronous technologies, such as e-mail, websites, and forums, which require greater independence and may be more demanding.
- **Usefulness and ease of use:** usefulness refers to the functionality of the technology itself, whereas ease of use refers to the ease with which a user becomes skilful at using the technology to satisfy his or her natural curiosity to explore the unknown, thereby greatly reducing students' levels of frustration and facilitating a user-friendly learning environment.
- **Sense of community:** The development of virtual learning environments is based on the belief that learning should happen within communities that focus on the students' experiences and their relationship with one another in the virtual classroom. Four elements are essential for developing a sense of community: membership, influence, integration, and shared emotional connections. Focusing on meeting these needs would lead to further adjustments likely to increase the effective use of the virtual classroom and improved learning outcomes.

Collis in Yilmaz (2015) outlined four equally compelling advantages of synchronous systems in an instructional context.

- **Motivation** synchronous systems provide motivation for distance learners to keep up with their peers.
- **Telepresence** real time interaction fosters development of group cohesion and a sense of community.
- **Good feedback** synchronous systems provide quick feedback and support consensus and decision-making in group activities.
- **Pacing** synchronous events encourage discipline in learning and help students prioritize their studies.

With virtual classroom instructional delivery, an instructor can assess students' levels of knowledge and tailor the course material appropriately.



Threats to Virtual Classrooms Instructional Delivery

Anekwe (2017) also came up with following as challenges to Virtual Classroom instructional delivery:

- Flexibility of the system: The flexibility of the system to the learners as they go about their studies with ease and convenience, comforts and adjustment of the space and timings to suit them could be abused. When they are young in age and immature to handle responsibilities to build up their career, they play away their time and fall short of expectation in the long run.
- Poor quality of organization and the poor quality of study materials with low quality of teaching staff make virtual classroom unacceptable in quality educational pursuit. The staff inefficiency and low productivity will adversely affect the students enrolled in the system which will affect the overall assessment of the virtual classroom.
- Training problem of personnels: In a virtual classroom, professional training is very essential. Teachers who are not trained in computer and internet functions should not operate effectively. Consequently, the teachers should undergo training because the more conversant they are with the online services, the more efficient the teaching strategy and curriculum would be.
- The virtual classroom is not providing real classroom experiment such as teacher-student face-to-face interactions. The warmth of teacher-student relationship is absent in virtual classroom.
- Students at times generate problems for themselves by enrolling on online classes without an e-mail address or account with an internet service. This means that they cannot assess information for virtual classroom consumption. Consequently, they cannot achieve their objectives of effective learning.
- Effective participation in virtual classroom requires 'robust hardware and a broad band internet connection'. Some classrooms or computer labs may not have computers that meet the minimum or recommended specification for optimal use of virtual world (Stacy & Liz, 2008).

Gedera (2014) also noted that some of the constraints of the virtual classroom were as follows: arranging the schedules to participate at specific times can be troublesome; If students are attracted to online courses it is mainly due to their flexibility, and if students have to participate at a given time, they may not find it flexible enough; having limited capacity for only one speaker to talk at a time, discussions took a longer time and also students had to wait until their turn came to talk; the unexpected technical difficulties also caused some students to feel frustrated in the virtual classroom activity; students lacked knowledge to use it to its full potential. Virtual classrooms need multiple knowledges to get the best from virtual classrooms. Students generally struggled to transfer communication practices and their skills from face-to-face environments to virtual settings. The students' lack of knowledge and familiarity of the tool influenced the way students participated in the activity denoting how tools shape humans' action and vice versa(Falloon, 2011).



Statement of the Problem

Business studies is aimed at preparing people for entrance into business career and become successful. With the advancement in technology and global practices, there is need to restructure the method of instructional delivery so that business studies students will fit into the global practices and function effectively. The recent COVID-19 pandemic devastated all sectors worldwide, including education. Most secondary schools in Nigeria were out of school and learning for seven months during this COVID-19 pandemic. There is need to consider instructional delivery in the light of emerging opportunities such as virtual classroom which **is an online learning environment that allows for live interaction between the teacher and the learners as they are participating in learning activities.** In the light of this, the study was poised to look at the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level.

Purpose of the Study

The purpose of the study was to ascertain the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level. .

Research Questions

The following research question guided the study.

1. What are the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level.

Hypotheses

The hypothesis was tested at 0.05 level of significance

Ho₁: There is no significant difference between the mean ratings of male and female business studies teachers on the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level.

Method

The researchers adopted a descriptive survey design for the study. The population of this study was 297 business studies teachers comprises of male 94 and female 203 from the 13 public secondary schools in Udenu LGA, of Enugu State, Nigeria. There was no sample because the whole population was used for the study. The instrument for data collection was questionnaire designed by the researchers titled usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level. The questionnaire was made of two sections; section A and section B. Section A is made up of the demographic profile of the respondents while section B contained ten (10) items that were used to answer the research question. The research instrument utilized a 4-point scale with the following response option: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD) with weighting numerical values of 4, 3, 2 and 1 respectively. The instrument was validated by three experts, two in Business Education Unit and one in Measurement and Evaluation in the Department of Science Education all in College of Education, Michael Okpara University of Agriculture, Umudike. The reliability of the instrument was determined using Cronbach Alpha which yielded 0.80. The



researchers and two trained research assistants distributed and collected the copies of the questionnaire. This indicates that the instrument was of a high reliability. Method of data collection was the use of questionnaire. Mean with standard deviation was used for analyzing the research questions while t-test was used to test the hypotheses at .05 level of significance. The decision was based under the principle of upper and lower limit of the mean thus.

3.50– 4.00	Strongly Agreed
2.50 – 3.49	Agreed
1.50 – 2.49	Disagreed
1.00– 1.49	Strongly Disagreed

When the mean value of an item was 2.50 and above it was regarded as agreed and below 2.50 was regarded as not agreed. t-test was used to test the hypotheses at 0.05 level of significance. The null hypothesis will be upheld if the t- calculated value was less than the p-value at the significant level of 0.05 and rejected if the t-calculated value was equal to or greater than the p-value at the significant level of 0.05.

Results and Discussions

Research Question: What are the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level.

Table 1: Mean responses of teachers of business studies on the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level in Udenu LGA

S/N	Item Statement	X ₁	SD ₁	Decision	X ₂	SD ₂	Decision
1	Collaboratively learning with other students from diverse environments.	3.69	1.41	Agree	3.44	1.48	Agree
2	Increase motivation among students	3.80	1.05	Agree	3.82	1.02	Agree
3	It gives substantial access to variety of curriculum options.	3.71	1.28	Agree	3.40	1.30	Agree
4	It encourages individualised learning both within and out the school.	3.97	1.06	Agree	3.20	1.60	Agree
5	Acquisition of computer literacy.	3.60	1.45	Agree	3.10	1.71	Agree
6	It is very ease to use	3.43	1.61	Agree	3.31	1.52	Agree
7	It encourages flexible schedule	4.00	0.97	Agree	3.66	1.12	Agree
8	It is cost effective	3.25	0.75	Agree	3.92	0.72	Agree
9	Encourages immediate feedback	3.91	1.06	Agree	3.96	0.70	Agree



Active participation and engagement of the learners. 3.04 1.04 Agree 3.28 0.99 Agree

Cluster mean 3.64 1.17 Agree 3.51 1.22 Agree

The analysis of data presented in table 1 above shows mean rating ranging from 3.10 to and 4.00 indicating agree. This means that the items showed the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level in Udenu LGA. Items 1-10 have mean scores that are above the cut-off mark of 2.50 that was regarded as acceptable limit as indicated by the researchers. The overall cluster mean of 3.6 further indicates that the business studies teachers agreed to the items. The low standard deviation of .59 indicates that the respondents have similar opinion to the items usefulness for virtual classrooms for instructional delivery of business studies courses in upper basic education level in Udenu LGA.

Hypothesis 1: There is no significant difference on the mean ratings of male and female business studies teachers on the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level

Table 3: Summary of t-test analysis of the difference between the mean ratings of male and female business studies teachers on the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level in Udenu LGA.

SN	Groups	X	SD	N	Df	t- cal	t-tab	Level of Sig	Rmk
1.	Male	3.64	1.17	92					
2.	Female	3.51	1.22	188	278	1.424	1.96	0.05	NS

The data obtained from the t-test analysis in Table 5 shows that the t-value at .05 level of significant and 278 degree of freedom for the ten items is 1.96 with a t- calculated value of 1.424. Since the t-cal value of 1.424 is less than the t -calculated of 1.96 at .05 level of significant the null hypothesis is not significant. This means that there is no significant difference with respect to the ten items on the mean ratings of male and female business studies teachers on usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level in Udenu LGA.

Discussion of Findings

The findings in table 1 showed that all the respondents agreed with the 10 items under usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level. These items include: Collaboratively learning with other students from diverse environments. It gives opportunity of interacting with experts from other countries. It gives substantial access to variety of curriculum options. It encourages individualised learning both within and out the school among others. This is in line with Anaekwe (2017) whose study revealed that the merits of virtual classrooms include the following: The system has the capability of employing the services of most experienced personnel in different areas of need. Cost effectiveness, is a great advantage. Virtual classroom saves money, time and transport for students. The students who are motivated could work on their own at their home environment without wasting



time and money to travel to school, provides the learners the flexibility of getting the learning experiences at the time, place and rate of assimilation, help in good class organization. In the same vein Parker & Martin (2010) also noted that the following features are supported by the virtual classroom: Interactivity: students can interact with each other, with instructors, and with online resources, Usefulness and ease of use, sense of community among others. The findings further depicted that gender had no significant influence with regard to ten items as the usefulness of virtual classrooms for instructional delivery of business studies courses in upper basic education level in Udenu LGA.

Conclusion

Based on the findings of this study, it was concluded that virtual classroom is very useful for instructional delivery of business studies in upper basic education. Virtual classrooms encourages collaboratively learning with other students from diverse environments, gives opportunity of interacting with experts from other countries, encourages individualised learning both within and out the school, cost effectiveness, ease of use among others.

Recommendations

Based on the findings and conclusion, it is recommended that:

1. Teachers should teach students to be more aware of the usefulness of virtual classrooms in instructional delivery.
2. Business Studies teachers should be using online teaching and communications to the students to arouse their interest in an online class.
3. Government should provide facilities for virtual learning environment.



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