The Effectiveness of Instructional Videos in Enhancing Learning Experience of Architecture Students in Design and Drawing Courses: A Case Study of Rivers State University, Port-Harcourt

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Abstract
Technology in a radical manner has greatly influenced the manner in which information and ideas are exchanged between educators and students. Institutions of higher learning have also embraced changes in technological innovation with their support systems adjusted by creating online learning platforms, instructional videos and other digital teaching techniques. However, the use of digital learning resources other than software applications in architectural education is yet to gain ground especially in Nigeria. This study focuses on the use of instructional videos in teaching design and drawing courses in undergraduate architecture programmes. It employs the use of structured questionnaires administered randomly to 50 out of 102 students in the 3rd and 4th year of the undergraduate programme.Mean and standard deviation was used to analyse the data and examine if the integration of digital media such as instructional videos is effective in enhancing learning experience of students in design and drawing courses in architectural education.

Keywords: Instructional Videos, Architecture, Education, Design Courses, Learning Experience

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1. Introduction

There is an enormous chance for learners of all ages due to the incorporation of technology in education. Online learning platforms, digital resources and non-digital learning devices used in combination, and other collaborative and experimental methods are gradually transforming the traditional classroom settings in today's technology oriented society. However, the widespread use of digital learning resources in the tertiary learning environment especially in the field of architecture is only beginning to gain ground. The design studio environment in architectural education has also begun experiencing some change, although some may say it's not commensurate to the change in technology related programmes in educational institutions. As the Studio Culture Task Force of the American Institute of Architecture Students (AIAS) noted, the ongoing changes in architecture education are not aligned with today's fast changing world, especially in the context of architectural practice Koch, Schwennsen, Dutton and Smith (2006).

The use of instructional videos in classrooms has increased in the past decade due to new forms of online education. Considering learning method in educational classes, Yousef, Chatti and Schroeder (2014) suggest that Video-based learning (VBL) has been a long standing tradition. The second war witnessed the pioneering experiments with soldiers being trained using audio and film strips combined. Resultantly, their skills were increased and a lot of time saved by using the static film strips. Educational television was thus an extra tool in classrooms towards the late 1960s, with teachers gaining the opportunity for reflection on their teaching approaches towards strategy and performance improvement. Studies present that video broadcast and streaming in education has positive impacts (Greenberg and Zanetis, 2012) and educators/teachers are encouraged to use them interactively, more particularly with children.

Visual stimuli coming from devices such as television, videos and more recently, computers are being used by children growing up in the world today. The rising awareness of visual media can be explained in parts, by the reliance of human on images as a way to think and interact. Therefore, visual perception plays an important role in the process of grasping the world and making sense of it. It is not a surprise that the academic society are increasingly relying on visual media to improve learning. According to a 1997 survey reviewed by Corporation for Public Broadcasting, it was disclosed by the use of television and video in North American school that, multimedia was strongly accepted in the classrooms. The interviews carried out on teachers reveals that 92% were of the opinion that television and video aided them to be more effective, 88%'s reaction was that the technology brought about more creativity in them, while about 80% discovered high improvement in the students due to the use of video technology in classrooms.

For many children, the reliance on text, the use of text book and written material, is like expecting them to learn another language before being able to partake in the learning process. Children have different styles of learning and different ways of processing information, so if forced to learn with only printed text it is not surprising that so many children fail to attain what is often expected of them. Visual learning is the single most effective way to overcome this problem (Zane education, 2016).

One of the challenges of teaching design and drawing courses in architectural education to students who often lack creative arts and technical drawing background is "translating or painting theoretical concepts into visual or practical images, it is really important to talk about different types of models, objects, concepts, shapes, forms and images from the point of view of specific problems and have such viewed on the projection system in a classroom.

1.1 Purpose of Study and Research Questions

The specific purposes of the study which double as the research questions as well, is to;

- Examine the effectiveness of the use of instructional videos in enhancing the learning experience of architecture students in design and drawing courses.
- Ascertain the appropriate teaching method that uses collaborative learning in the teaching and learning of design and drawing courses in architectural education.
- Ascertain if the use of videos can help bridge the perceived gap between theory and practice in design and drawing courses in architecture.
- Determine whether the absence of adequate studio will hinder the use of instructional videos.

1.2 Scope of the Study

This study was carried out in the department of Architecture of the Rivers State University of Science and Technology (RSUST) in Port-Harcourt.The need to undertake such a study came about due to the perceived positive learning experience observed when a YouTube instructional video was used to teach 3rd year students in a computer aided design (CAD) drawing course. The exercise engendered more student participation by way of motivation and enthusiasm, increased attention span, more questions being asked, less side talks and information retention as students could recall information from the previous classes more readily than before.

Following the perceived success of the CAD training course, the study was then expanded in scope to cover free hand sketching, architectural graphics and architectural design which are some practical modules in undergraduate programme.

1.3 Definition of Terms

For the purpose of this study the following definitions are as used by the researcher:

Instructional Materials: Instructional materials are tools for accessing, manipulating, and using information, they are used for active learning in educational lessons and can aid in introducing new concepts to students; the teacher models effective use of various materials. They are broadly defined to include varieties of media.

Projectors: This is an optical instrument that projects an enlarged version of graphic or photographic images and materials on screens or surfaces.

Instructional Videos: The instructional video is any video used to teach a specific lesson, it could be an instructional DVD or likely be videos found on sites like YouTube® or downloaded on-line that can fit on an MP3 player or computer screen. (Granberg E.M, 2000).

Design and Drawing Courses: Design courses are courses in curriculum that aid in developing an idea or concept that takes the part of a building or other physical structure and unifies them into a coherent and functional whole, design ideas and concepts are developed by special requirements/data collected from a client(teacher, educator or manufacturer) and the specifications are then analysed and synthesised to produce clear and succinct results through drawing, models and written description. While drawing courses has to do with courses that develop students in the field of architecture, art or technical drawing by teaching them about the use of equipment, tools and scale drawings. The tools and equipment could be manual or computer aided.

Learning Experience: This is any interaction, course or experience in which learning takes place regardless of the setting or format but that reinforces the goal of an educational interaction.

2.0 Methodology

The study was based on descriptive research design to examine the effectiveness of the use of instructional video in enhancing students' learning experience in design and drawing courses in architectural education. The population of this study was made up of the third (3rd) year and final (4th) year students of the Department of Architecture Rivers State University of Science and Technology (RSUST) Port Harcourt. This was made up of 64 students in final year and 38 students in the third year. Hence, the population for the study was 102 students. But, there were some students with issues of carry over who were unable to partake in the class where the instructional video was used. Therefore, the random sampling technique was used to select 50 students for the study.

The research instrument for gathering data from respondents is a self-structured questionnaire. The instrument was divided into two parts, 1 and 2. Part one (1) comprised personal data items while Part two (2) consist of fifteen (15) questions generated from the three(3) research questions. The instrument was constructed on a four (4) point scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagreed (SD) with numerical values of, 4, 3, 2, and 1 respectively. Primary data collection was given priority in this research as there was limited published material on the subject under study. The research instrument used was validated by three (3) experts in measurement and evaluation.

The reliability of the instrument was established using the test re-test reliability method. Ten (10) questionnaires were administered to a group of 10 students in the department of architecture, Rivers State University of Science and Technology Port Harcourt, twice within the interval of two weeks. Cronbach

Alpha procedure was used to find the relationship of test scores, and it gave a coefficient value of 0.85 which is accepted for utilization.
Mean and standard deviation was used to analyse the data by answering the research questions.

3.0 Literature Review

(Salama, 2009) states that students should be viewed as active learners and not as passive listeners, as emerging studies overtime prove that transformative pedagogies are necessary in the development of teaching approaches and this should be a primary challenge to university educators. Instructional media is one such way to create active learners by enhancing the students' learning experience. It includes all the materials, substantial resources and physical means an educator might use to implement instruction and facilitate students' achievement of instructional objectives. It facilitates learning or increased understanding of material and enhances comprehension of the learners.
Instructional media may include traditional materials such as digital display boards, slides and videos or film. It also includes newer materials and methods such as computers, DVDs, CD-ROMs, interactive whiteboard, the Internet, and interactive video conferencing etc. This study focuses on the use of videos, with emphasis on instructional videos.

3.1 An Overview on Instructional Videos

One of videos most obvious characteristics is its visual aspect as humans are built to rationally grasp the power of images to communicate easily. The ability of audio-visual method to attract learners attention, increase motivation and transform learning experience in now widely recognised by educators, since the first use of filmstrips during World War II. The value and availability of audio visual materials in learning environments has thus developed in content and technology from then on (Cruse, 2007). According to a series of studies conducted by the Corporation for Public Broadcasting, it was discovered that the use of educational video and television in classrooms has been on the rise over the past 20 to 30 years. The survey carried out included forms of usage, teachers' position and expectations for outcomes. Educational video is not only widely used in the classroom; it is also highly valued as a means of teaching more effectively and creatively.
Cruse (2007) observed that the direct relationship between the frequency of use and the sensed accomplishment and motivation by students is the most substantial survey that affirms the significance of multimedia tools. Furthermore, teachers who frequently use television or videos for two or more hours per week reported that two-thirds of their students learn better when video or television is used and about 70% of the teachers noted that the students' motivation increased.
According to a summary of current research and educator surveys, carried out by corporation for public Broadcasting in Cruse (2007), educational television and video:

- Reinforces reading and lecture material.
- Aids in the development of a common base of knowledge among students.
- Enhances student comprehension and discussion.
- Provides greater accommodation of diverse learning styles.
- Increases student motivation and enthusiasm.
- Promotes teacher effectiveness.

The basis for creating technology enriched learning is the technological pedagogical content knowledge (Angeli, 2008). It defines the ways familiarity about tools, pedagogy, students and the framework are amalgamated. Information facilitated by instructors can be modified to educate more efficiently with technology in ways that indicate the added value of technology (Angeli, 2008).
Research is increasingly challenging the pervasive belief that television and video viewing is a passive activity and viewers are only affected trivially with what they are watching and with time television and videos will hinder or have precedence over academic achievement (Cruse, 2007). But, Cruse 2007 supports the theory that viewing is instead an active process, one which can be 'an on-going and highly interconnected process of monitoring and comprehending' and 'a complex, cognitive activity that develops and matures with the child's development to promote learning'.

Visual learning is a great way of learning because it helps in increasing a learner's interest in a subject matter, makes the process of learning more enjoyable, and captures the student's interest for longer periods.

3.2 The Use of Media in Instructional Education

According to a publication in instructions at Florida State University handbook (2011), first hand educational experiences involving learners physically with the use of concrete examples are easily processed and retained longer than abstract experiences which include listening to a lecture. Instructional media brings elements of reality into the subject matter, for example, adding pictures or videos in a lecture. The following instructional activities can be supported with the use of media;

- ***Gain attention.*** A picture on the screen, a question on the board, or music playing as students enter the room all serve to get the student's attention.
- ***Recall prerequisites.*** Use media to help students recall what they learned in the last class, so that new material can be attached to and built upon it.
- ***Present objectives to the learners.*** Hand out or project the day's learning objectives.
- ***Present new content.*** Not only can media help make new content more memorable, media can also help deliver new content (a text, movie, or video).

Types of Instructional Media (culled from instruction at FSU handbook 2011)

- Real objects and models; Printed text (books, handouts, worksheets); Printed visuals (pictures, photos, drawings, charts, graphs); Display boards (chalk, bulletin, multipurpose); Interactive whiteboards; Overhead transparencies; Slides and filmstrips; Audio (tape, disc, voice); Video and film (tape, disc); Television (live); Computer software; The Web.

3.3 Factors Affecting Media Selection

Strauss and Frost (1999) identify nine key factors that should influence media selection:

1. Institutional resource constraints, 2. Course content appropriateness, 3. Learner characteristics, 4. Educators attitudes and skill levels, 5. Course learning objectives, 6. The learning relationships, 7. Learning location, 8. Time (synchronous versus asynchronous), and 9. Media richness level.

These factors were further distilled by Reiser and Dick (1996) down to three major criteria for selecting instructional media: practicality, student appropriateness, and instructional appropriateness;

Practicality: Is the intended media practicality in that the media is available, cost efficient, time efficient, and understood by the instructor.

Student Appropriateness: Is the intended media appropriate for the developmental and experiential levels of the students.

Instructional Appropriateness: Is the intended media appropriate for the planned instructional strategy? Will the media be allowed for the presentation of the proposed lesson in an efficient and effective manner? Will the media be facilitated for the students' acquisition of the specific learning objectives?

3.4 The Choice of Instructional Video as the Instructional Media of this Study

In 1983 Howard Gardner proposed the theory of multiple intelligences (which includes logical-mathematical, linguistic, spartial, bodily kinaesthetic, interpersonal, musical, and intrapersonal) which relates to a person's set of capabilities. What can be deduced from this theory is that students learn in different ways. Some students' best method of learning is by listening, some by touching and others prefer visual stimuli. In addition, video mixes a number of learning methods for instance image, motion, sound and text etc, thereby, reaching out to the diverse learning styles of students. While this theory has come under a lot of scrutiny over the years, one important conclusion that has been drawn by educators is that our teaching styles needs to vary and increase the scope of delivery method into our pedagogy. Gone are the days of engaging a theatre full of student for 90 minutes with only one teaching method or thinking "one size fits all". In this times, incorporating technology and video into teaching will in effect, get to more students and create more impact. Unlike most print media, videos seem more informal the narrator appears to be speaking to us. Videos are also frequently entertaining. They are deliberately encouraging, sending assurances that the viewers can easily apply the lessons.

Video also offers a richer channel of communication that allows simultaneous broadcast of textual, video, and auditory information. Circulation on clearinghouse sites like YouTube and Vimeo, fueled by the hordes of amateur and professional videographers makes the volume and reach of this content unmatchable. The energy and enthusiasm that amateur technical communicators bring to the most idiosyncratic tasks simply would not be possible except in a context of mass collaboration.

Emphatically, video addresses an underlying information design problem that Swarts, (2012) uncover while still arguing the value of the structural advantages of in-print documentation. One approach to understanding the problem is through Carliner's three-part framework of information design. He proposes three overlapping areas:

- ***Physical Design****:* Design that directs users to a message.
- ***Cognitive Design****:* Design that helps users understand a message.
- ***Affective Design****:* Design that helps users engage with and feel comfortable about a message.

Instead of meeting their needs for instruction with print documentation, however, users are shifting those needs elsewhere, toward forums and video. Addressing physical design issues, video provides procedural information in multiple simultaneous channels (text, moving image, sound), creating complementary repetition that can help users isolate instructional messages.

Video addresses cognitive design issues by combining various modal displays of content to allow richer details of the procedure to rise to the surface. Users can attune to the spoken message, which will have different details than what is visible in the video or the accompanying text. In this way, videos help address issues like a lack of detail and level matching. Finally, videos can address affective design issues as well. For some, videos are engaging and easier to consume than a book. Further, narrators, perhaps better through spoken discourse than written, play an important role in encouraging and motivating potential users.

It was reported by teachers who use instructional videos that their students retain more information, easily understand concepts and are more excited about what they are being taught. With the use of videos in a lesson plan, students are able to connect the world outside to the curriculum topics in the classroom. Furthermore, the following were stated;

Video is uniquely suited to:

- take students on impossible field trips inside the human body, or off to Jupiter
- take students around the globe, to meet new people and hear their ideas
- illustrate complex, abstract concepts through animated, 3-D images
- show experiments that can't be done in class
- bring great literature, plays, music, or important scenes from history into the room

By exploiting the medium's power to deliver lasting images, teachers can:

- reach children with a variety of learning styles, especially visual learners, and students with a variety of information acquisition styles
- engage students in problem-solving and investigative activities
- begin to dismantle social stereotypes
- help students practice media literacy and critical viewing skills
- provide a common experience for students to discuss

4.0 Videos and Multimedia Learning in Architectural Education

The concept of today's architecture and design studios began with the French Royal Academy and continued with the methodologies of the Ecole des Beaux-Arts. It became traditional for schools in the United States to pattern their instruction in Beaux-Arts format, in which the studio is the central focus of the curriculum. Studios (where drawing, debate, and analysis of design take place) are considered more of an active learning experience than a lecture-style classroom. This traditional format of teaching architecture is also applicable in schools of architecture in Nigeria.

Learning how to design in architecture is difficult. The requirement includes students learning a totally different way of thinking and developing a new way they see the world. Even a whole new vocabulary has to be acquired. According to Wozniak (2016), while the school of architecture is difficult, it is known to be hard for the wrong reasons; a lot of Non- architecture students on college campuses view the architecture design studio as a mystical place filled with sleep- deprived students who are made to carry out their design work

simply because their lecturers ordered them to. This is due to the fact that studio is still being guided by ideas arising from the Beaux Arts teaching method that flourishes on competition and intensity.
In a recent publication by Zane education, (2016) as educators, getting students excited and ready to learn in the hands-on learning process should be the intent of every educator, and video is obviously an instructional media that is captivating and produces a greater amount of interest than the traditional printed material. This is a combination of using sight and sound to teach as video is a very good medium for students who are auditory or visual learners. 'Video stimulates and engages students creating interest and maintaining that interest for longer periods of time, and it provides an innovative and effective means for educators to address and deliver the required curriculum content'.
There are different types of educational experiences and they range from hands-on apprenticeship to role-model playing, from demonstrations to reading printed text. Some educators believe that different experiences can be used effectively in achieving different types of instructional outcomes. For instance, a publication stated that text with pictures is not as effective as live demonstrations for teaching motor skills and instructors who consider the use of media should ask themselves, 'How do I expect the media or type of learning activity to make learning more effective?'. Matthews & Weigand as cited in the research carried out by Bender & Verdevoogd said Technology is also having an effect on the process and culture of architectural education, as evident in previous research on digitally immersed classes and studios. The success of design education and future architecture is hinged on vital pedagogical integration of digital media.

5.0 Data Analysis and Discussion of Findings

The main research question is "how effective is the use of instructional videos in enhancing learning experience of architecture students in design and drawing courses?" In this study, enhanced learning experience was measured by a number of factors which include;

- Observed improvement in memory retention of the topics taught when instructional videos were used
- Improved or increased class participation, less side talks and distractions when instructional videos were playing
- Better understanding of taught drawing and design courses when instructional videos were used
- Observed reduced levels of anxiety or tension when learning design or drawing courses using instructional videos
- Observed improved or increased attention span
- Had more fun when learning using instructional videos
- Observed that the classes were more interactive in terms of questions and answers when taught with instructional videos

The result of the analysis of the data collected were presented and discussed to examine the effectiveness of instructional videos in enhancing learning experience of architecture students in design and drawing courses in RSUST. Mean statistics was used to analyse the research questions.

Table 1: The student's response to each question

No. of Respondent = 50

S/N	STATEMENTS	SA	A	D	SD
Research Question 1: How effective is the use of instructional videos in enhancing learning experience design and drawing courses?					
1.	The use of instructional videos provides a better understanding of taught drawing and design courses	29	15	6	2
2.	The use of instructional video encouraged memory retention of the courses taught	21	18	9	2
3.	I prefer to be taught with instructional videos in all my drawing and design courses for the rest of my degree programme	13	23	11	3
4.	Class participation greatly improved with the use of instructional videos	19	23	7	1
5.	I normally experience anxiety or tension while learning practical and design related courses	7	10	6	27

6.	The use of instructional videos reduced my anxiety and tension in learning design related and practical courses	6	14	9	21
7.	When learning with instructional video your attention span is improved compared to learning through other media like (chalkboard, white board or printed media)	26	13	9	2
8.	Learning with instructional video is fun and very interesting	27	17	6	-
9.	The classes were more interactive in terms of questions and answers when taught with instructional videos	21	11	9	9
Research Question 2: What is the appropriate teaching method that uses collaborative learning of design and drawing in architectural course?					
10.	The following teaching methods are methods used for teaching design and drawing courses in your school				
A	Verbal and oral method (lecture method)	28	12	6	4
B	Demonstration methods	11	6	18	15
C	Case study/field study	24	19	7	-
D	Collaborative work(group work)	19	12	11	8
E	Designing and presenting a project	35	15	-	-
11.	The following instructional media are frequently used in teaching most of your design and drawing courses				
A	Real objects and models	12	8	7	23
B	Printed text (books, handouts, worksheets)	30	12	8	-
C	Printed visuals (pictures, photos, drawings, charts, graphs)	30	12	4	4
D	Display boards (chalk, marker, bulletin, multipurpose)	29	11	7	3
E	Audio (tape, disc, voice)	-	1	32	17
12.	You have been taught a drawing course using instructional video in the studio	32	12	6	-
Research Question 3: Does the absence of adequately equipped studios hinder the use of instructional videos?					
13.	Instructional videos are not used during lectures because your studios are not equipped to do so	23	15	9	3
14.	Most of your lecturers will prefer to use instructional videos if your studios are well equipped to do so	22	19	5	4

Research Question 1

How effective is the use of instructional videos in enhancing students' learning experience in design and drawing courses?

Table 2: Mean and standard deviation analysis on the effectiveness of instructional videos on design and drawing course

No. of Respondents = 50

S/N	STATEMENTS	Mean $\bar{x}$	SD	Criterion Mean	Remark
1.	The use of instructional videos provides a better understanding of taught drawing and design courses	3.50	0.42	2.50	Accept
2.	The use of instructional video encouraged memory retention of the courses taught	3.16	0.37	2.50	Accept
3.	I prefer to be taught with instructional videos in all my drawing and design courses for the rest of my degree programme	2.92	0.35	2.50	Accept

4.	Class participation greatly improved with the use of instructional videos	3.20	0.37	2.50	Accept
5.	I normally experience anxiety or tension while learning practical and design related courses	1.94	0.36	2.50	Reject
6.	The use of instructional videos reduced my anxiety and tension in learning design related and practical courses	2.10	0.35	2.50	Reject
7.	When learning with instructional video your attention span is improved compared to learning through other media like (chalkboard, white board or printed media)	3.26	0.39	2.50	Accept
8.	Learning with instructional video is fun and very interesting	3.42	0.41	2.50	Accept
9.	The classes were more interactive in terms of questions and answers when taught with instructional videos	2.88	0.33	2.50	Accept

With exception of item 5and 6, the data in Table 2 attracted mean scores above 2.50. This indicates that the respondents agreed on effectiveness of the use of instructional videos on design and drawing courses. Item 5 and 6 are about anxiety or tension when design and drawing courses are being taught. Since it wasn't up to the criterion mean, this implies that most of the students don't experience anxiety or tension when the course is being taught. The standard deviation values range from 0.35 to 0.42 indicates that the responses from the respondents are not far from each other.

Research Question 2

What is the appropriate teaching method that uses collaborative learning of design and drawing in architectural course?

Table 3: Mean and standard deviation analysis on appropriate teaching method that uses collaborative learning of design and drawing in architectural courses

No. of Respondent = 50

S/N	STATEMENTS	Mean $\bar{x}$	SD	Criterion Mean	Remark
10.	The following teaching methods are methods used for teaching design and drawing courses in your school				
A	Verbal and oral method (lecture method)	3.28	0.39	2.50	Accept
B	Demonstration methods	2.26	0.33	2.50	Reject
C	Case study/field study	3.34	0.40	2.50	Accept
D	Collaborative work(group work)	2.84	0.33	2.50	Accept
E	Designing and presenting a project	3.7	0.47	2.50	Accept
11.	The following instructional media are frequently used in teaching most of your design and drawing courses				
A	Real objects and models	2.18	0.33	2.50	Reject
B	Printed text (books, handouts, worksheets)	3.44	0.41	2.50	Accept
C	Printed visuals (pictures, photos, drawings, charts, graphs)	3.36	0.40	2.50	Accept
D	Display boards (chalk, marker, bulletin, multipurpose)	3.32	0.40	2.50	Accept

E	Audio (tape, disc, voice)	1.62	0.40	2.50	Reject
12.	You have been taught a drawing course using instructional video in the studio	3.52	0.44	2.50	Accept

With exception of item 7b, 8a and 8e, Table 3 attracted mean scores above 2.50. This indicates that the respondents agreed on all the items as appropriate teaching methods forcollaborative learning of design and drawing in architectural courses. The standard deviation values range from 0.33 to 0.47 indicates that the responses from the respondents are not far from each other.

Research Question3
Does the absence of adequately equipped studios hinder the use of instructional videos?

Table 4: Mean and standard deviation analysis on if the absence of adequately equipped studios hinder the use of instructional videos.

No. of Respondent = 50

S/N	STATEMENTS	Mean $\bar{x}$	SD	Criterion Mean	Remark
13.	Instructional videos are not used during lectures because your studios are not equipped to do so	3.16	0.37	2.50	Accept
14.	Most of your lecturers will prefer to use instructional videos if your studios are well equipped to do so	3.18	0.37	2.50	Accept

The data in Table 4 indicates that the respondents agreed on all the items that the absence of adequately equipped studios hinders the use of instructional videos and if their studios are properly equipped most of their lecturers will use videos as an instructional media. The standard deviation value is 0.37 which shows that the responses of respondents are close to each other.

6.0 Discussion of Findings
From research question 1 which refers to the effectiveness of the use of instructional video in design and drawing courses, most of the response of the respondents from the mean data shows that the use of instructional videos is very effective in these courses because they were above the criterion mean of 2.50. The effect of the use of instructional videos and projector assisted teaching of design and drawing was also a welcome experience by the students based on their response to the test instrument. The only questions that the mean data was not up to the criterion mark of 2.50 was if the students had anxiety in these classes usually to which most of them strongly disagreed to. While they don't have anxiety or tension in learning design and drawing courses the use of instructional videos has improved their memory retention of the courses and improved their participation in class.
This result agrees with the findings of earlier studies by Yamauchi (2008) who carried out a research on the Effects of multimedia instructional material on students' learning and their perceptions of the instruction, some students were provided with additional instructional material; Digital Video Disk (DVD), to facilitate the review process when they performed their upcoming hands-on experiences as table and beverage servers. In conclusion the Tearoom Service Procedure DVD is believed to have positively influence students' learning outcomes and to have some influence on students' perceptions of the instruction. Brecht, et al (2008) in his study also noted that Students use the video lectures to (a) understand concepts and problems presented in the classroom lectures, (b) do homework, (c) prepare for weekly exams, and (d) receive instructor-quality tutoring assistance.[20] In the survey, it was stated that the number of students using and being helped by the videos for these purposes was statistically significant in all cases. It was concluded that video lectures are substantially appealing to many students and are perceived as effective for learning.

This research question also agrees with the research carried out by Science Education Resource Centre (SERC) at Carleton College (2012) which also observed that media enhances teaching and learning. Willingham (2009) in his research asked a simple question to make his point, "Why do students remember everything that's on television and forget what we lecture?" – Simply due to the fact that visual media helps students retain concepts and ideas. Research shows that instructional video has a great impact and Bergsma (2002) as cited in CPB(2004) stated that the brain processes visual messages of multimedia in a different part of the brain different from where the textual and linguistics learning is processed and the response of the limbic brain to these multimedia pictures is by setting off instinct, feeling and impulse.

The result of the findings emanating from the answers to the research questions no two (2) shows that different teaching methods and materials are employed by the lecturers in the university which encourages collaborative learning of design and drawing courses through the use of various teaching methods and teaching aid. The table also shows that demonstration method is not really used and the audio and real objects/models are rarely used. For teaching method that uses collaborative learning, Srinivas (accessed Nov 2016) in his research listed about forty-four (44) benefits of collaborative learning which agrees with this research.

Collaborative learning stimulates individual capacities and arouses critical thinking but the weakness is in classroom management and the need for continual training. collaborative learning appears to be more efficient in design and drawing courses because these courses require a great amount of work, since many different activities or steps (for example research, discuss, analyze, draw/planning and present) are involved. Daugherty (2014) in her research on the benefits of collaborative learning in the elementary classroom also concurs that collaborative learning is of immense help.

Equally revealed in the findings from research question three (3) all the statements posed to the students were accepted as they were all above the criterion mark of 2.50 meaning most of the students agreed that instructional videos has help improved their understanding of these courses.

The research finding from research question three (3), Table 4 revealed that the lack of properly equipped studios has not stopped the lecturers from trying out new teaching methods. This drives home the point that even when the studios are not well equipped for some of these instructional media the lecturers still make efforts and improvise to ensure that the students are able to grasp what is expected of them. The students also agreed that the lecturers will use this equipments and facilities if they are provided by the school.

In view of these findings, architectural educators and the university are expected to include the use of instructional videos as an important instructional media in the teaching of most courses in architectural education. The university's role in this is to provide the facilities that will encourage the use of this instructional media since they are expensive and the educators have done their best by improvising as they are educators who are interested in effective teaching.

7.0 Conclusions

The purpose of this study was to determine the effectiveness of instructional videos inenhancing learning experience of Architecture students in design and drawing courses in architectural education.

In carrying out the research, a survey was conducted using structured questionnaires. The sample of 50 students used werestudents in the 3rd and 4th year as they have more experience and were able to provide adequate feedback.Mean and standard deviation were used to analyze the data and the research questions. From the data analyzed, it was apparent that the use of instructional videos enhanced the learning experiences of architecture students in design and drawing courses.

The data analyzed also shows that most of the lecturers employ different teaching methods and instructional media during their classes and have made efforts to improvise to assist the learners in grasping the rudiments of the courses taught.

8.0 Recommendations

Educators should not teach without instructional media as it is an additional supplement to the teaching and learning process and it will help the students perform to their maximum. Taking it a step further and using instructional video will provided the added advantage as it has been said earlier, visual perception helps in the retention of information by the learner.

The findings of this study lead the researchers to make the following recommendations.

1. Educators should recognize the importance of instructional media in schools by improvising them where they are not readily available.
2. The schools should provide funds for the educators to make available the required instructional media
3. Audio- visual aids should be effectively used in schools; government should make these facilities available and provide training for the educators so that they can know how to use it to teach effectively.
4. The use of instructional video is not new in the field of education so using this to boost the learning process will be an added advantage.

Based on the findings of this study, it is obvious that there are some factors which are responsible for the use of instructional videos in the classroom. The researcher is therefore of the opinion that further research should be undertaken in the following areas:

1. Challenges encountered by educators in the effective use of instructional videos.
2. The availability of instructional videos and the educators' attitude towards the use of instructional videos in higher education.
3. Strategies in solving problems associated with the use of instructional videos in higher education.
4. Support facilities that will enhance the effective use of instructional videos by the educators.

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