Development and Evaluation of Instructional Video for Teaching Educational Research Methods in Nigerian Universities

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Abstract

This study developed and evaluated instructional video for teaching educational research methods to students in Nigerian Universities and also tried out to know if this teaching strategy affects students' performance. Four research questions and one hypothesis were used for the study. The study adopted Research and Development (R&D) design for production of the video and One-group Pretest-Posttest Design to test the students' performance. The population of this study comprised of 684 final year students and 138 lecturers in Faculty of Education from five public Universities in South-East geopolitical zone in Nigeria from which 296 students and 52 lecturers were selected for the study through simple random sampling technique. To collect data for the study, the researchers developed instructional video and was faced and content validated by five experts using 40-item structured questionnaire. The student's performance was measured through 20-item pretest and posttest multiple-choice type of test. Cronbach alpha statistics was used to determine the reliability coefficient of the instrument which gave a value of .83. A fivepoint rating scale was provided for the respondents to make their responses on the research questions. The research questions were analyzed using Mean and standard deviation while t-test was used to test the hypothesis at .05 level of significance. The findings of the study revealed that the contents, specific objectives, instructional methods, materials, learners' task and evaluation techniques of the developed instructional video are appropriate for teaching educational research methods in Nigerian Universities Faculty of Education. The study further revealed a significance difference between the students taught with the video and students taught without the video. The researchers recommended among others that the video can be a supplementary material for distance learning, especially for learners who can learn independently. That the National Universities Commission should adopt the developed instructional video for teaching students in Nigerian Universities.

Keywords: Faculty of Education, Educational Research Methods, Instructional Video, Nigeria, Universities

Introduction

Universities are recognized as institutions established for the advancement of knowledge through research and innovation. According to Owo and Ajie (2020), a university is an educational institution established primarily to champion human capacity development through quality teaching, research and community services. In the same view, Amadi and Urho (2015), Charles-Zalakoro and Efere (2016), Oyeniran et al, (2020), stated that the major dream of any university is to become a pace-setting institution in learning, character building and service to humanity with a duty to produce competent, reliable and creative graduates of high moral standards in the society as well as championing a complete development of men and women in an enabling environment through appropriate teaching, research and service to humanity. In Nigeria according to Okorji and Nwogbo (2014), universities are established to provide students access to knowledge as well as tools for increasing and diversifying their knowledge through research in faculties including faculty of education. It is evident that educational research is extremely critical and important, if universities are to serve as engines of development well as solving existential problems (Charles-Zalakoro & Efere, 2016).

Over that years, educational research has been defined by different researchers. According to Bently and Kyvik (2013), Imo (2015), Etejere and Muraina (2016), educational research is a systematic and deliberate process of finding dependable solutions to the problems of education. In the same vein Ubogu (2019), stressed that educational research can be regarded as an activity designed to evolve theories guiding the principle and practice of education. Similarly, Nworgu (2015), defined educational research as a systematic approach which involves the application of scientific method in finding solutions to educational problems. Educational research methodology in Nigerian universities is a course designed for students in the Faculty of Education (Okorji & Nwogbo, 2014). Educational research methodology is a basic requirement for students and they are expected to do the course in the penultimate year to enable them acquires the necessary research skills for handling their project work (Okorji & Nwogbo, 2014). The course is designed to help students solve problems in education as they get into the world of work. According to Nwogbo (2014), Okorji and Nwogbo (2014) and Cyril (2019), whatever approach or strategy is followed, the steps in educational research process can usually be summarized are identify and formulate the research topic or problem; literature search and review; research objectives, questions, and hypotheses; research approach, design, and strategy; data collection; analysis and interpretation of data; generalization and write-up.

Nzimande (2017), Amasi and Yellowe (2018), posited that the emergence of digital technologies has prompted researchers to predict the end of traditional pedagogical, didactic and philosophical approach to teaching. Robles and Acedo (2019), highlighted that in the escalating dependence on technology, the development of educational materials such as comics or videos may serve as a platform in meeting the changing needs of the students. The importance of videos in education cannot be over emphasized. According to Latha (2019), Robles and Acedo (2019), institutions of higher learning in developed nations use video solutions, integrated into their learning management systems for teaching and students' assignment. In the view of Aquino (2022), the instructional video refers to the creation of videos that a teacher makes outside of class contact hours that specifically teach a concept or content. Woolfitt (2015), Edem and Ekon (2021), described video-based instruction as recorded content that has sound and motion which can be stored, delivered live and streamed simultaneously to multiple devices. Kuiper, Carver, Posner, and Everson (2015), identified that this approach means that students can dramatically

impact the pace of the course as it enables learners to proceed at their own rate. In the same vein, Ekwueme, Ekon and Ezenwa-Nebife (2016), Edem and Ekon (2021), stated that the use of Video instruction increases the probability of students to learn more, retain and achieve better academic performance.

Educational research has been bedeviled by several problems which has retarded educational development such as inadequate funding of research projects, lack of necessary equipment, facilities and materials, poor communication network and attitude of the government and society (Aliyu, 2014). In the less developed countries like Nigeria, the utilization of educational research in policy making and development is low and, in some cases, entirely nonexistent (Ubogu, 2019). The situation is compounded by lack of credible and timely data absence of legal frameworks for research, low uptake and implementation of research results, academic corruption including protracted supervision of postgraduate students and low computer literacy amongst scholars (Echono, 2021). Similarly, Okoye and Okwelle (2013), Ekon and Edem (2015), Ayonmike (2020), Birabil and Ogeh (2020), Edem and Ekon (2021), stressed that instructional videos are not adequately utilized for teaching in Nigerian Universities due to lack of development of such instructional videos. Hence, this study seeks to develop and validate educational research methods instructional video for the teaching students in Nigerian universities Faculty of Education.

Statement of the Problem

Recent researches revealed that Nigerian universities are lacking modem sophisticated instructional resources and facilities for impartation of knowledge thereby making it uneasy for graduates to carry out independent research. Researches also revealed that there no instructional video for teaching educational research methods in Nigerian Universities. Hence, in order to improve the standard of educational research methods instruction, there is need to develop a valid, reliable and usable instructional video, which could enhance effective transfer of the knowledge to students in Faculty of Education in Nigerian universities. Therefore, this study seeks to develop educational research methods instructional video for teaching students in Faculty of Education in Nigerian universities.

Purpose of the Study

The purpose of the study was to:

- 1. Determine the contents, specific objectives, instructional methods, materials, learning task and evaluation techniques considered appropriate for inclusion in the educational research methods instructional video for teaching in Nigerian universities Faculty of Education.
- 2. Determine the level of the developed educational research methods instructional video for teaching in terms of visual quality; audio quality and production quality.
- 3. Try-out the educational research methods instructional video on students taught with the video and students taught without the video.

Research Questions

The following research questions guided the study:

- 1. What are the contents, specific objectives, instructional methods, materials, learning task and evaluation techniques considered appropriate for inclusion in the educational research methods instructional video for teaching in Nigerian universities Faculty of Education?
- 2. What is the level of the developed educational research methods instructional video for teaching in terms of visual quality; audio quality and production quality?
- 3. To what extent are students taught with the instructional video and students taught without the instructional video understand educational research methods in Faculty of Education in Universities in South-East, Nigeria?

Hypothesis

One hypothesis was formulated to guide the study:

H0₁: There is significant difference in the mean response of students taught with the educational research methods instructional video and students taught without the instructional video in Nigerian universities Faculty of Education.

Methodology

The study was carried out in Universities in South-East geopolitical zone in Nigeria. The study adopted Research and Development (R&D) design for production of the video and Onegroup Pretest-Posttest Design to test the students' performance. Alshahad (2013), stated that R & D is the use of research methods to design new products and procedures followed by the use of research methods to field test, evaluate and refine the products and procedures until they meet specified criteria of effectiveness, quality or similar standards. The video footage was produced beginning from writing content, scouting location, getting permit, equipment procurement, shooting the video, editing and coding the video. The study adopted Research and Development (R&D) design for production of the video and One-group Pretest-Posttest Design to test the students' performance. The population of this study comprised of 684 final year students and 138 lecturers in Faculty of Education from five public Universities in South-East geopolitical zone in Nigeria from which 296 students and 52 lecturers in the Department of Curriculum Studies and Industrial Technology Education were selected for the study through purposive sampling technique. In the same vein, student's performance was measured two times: once before and once after exposing a non-random group of participants to a certain intervention/treatment (Reichardt, 2019).

To collect data for the study, the researchers developed an instructional video and was faced and content validated by five experts in the Department of Industrial Technical Education and two from Curriculum Studies, Educational Management and Planning, University of Uyo, Akwa Ibom State using a 40-item structured questionnaire titled: Development of Instructional Video for Teaching Educational Research Methods in Nigerian Universities Questionnaire. The student's performance was measured through 20-item pretest and posttest multiple-choice type of test. A five-point rating scale of Strongly Agreed (SA=4.50-5.00), Moderately Agreed (MA=3.50-4.49), Lowly Agreed (LA=2.50-3.49), Strongly Disagreed (SD=1.50-2.49), Undecided (U=1.00-1.49) was provided for the lecturers and students to evaluate research questions. In order to ensure the reliability of the instrument, Cronbach Alpha statistics was used

to analyze the data collected which yielded a reliability coefficient of 0.83 which shows the instrument was reliable for the study.

The researchers administered the instrument directly to the lecturers and students in the Universities with the help of three research assistants who were instructed on what was required. The instrument was collected immediately after completion which recorded 100% return rate. Mean and Standard Deviation were used to analyzed the research questions. Any mean response of 3.50 and above was considered Strongly Agreed while mean response below 1.50 was regarded as Strongly Disagreed.

Presentation of Data Analysis and Results

- **Research Question 1:** What are the contents, specific objectives, instructional methods, materials, learning task and evaluation techniques considered appropriate for inclusion in the educational research methods instructional video for teaching in Nigerian universities Faculty of Education?
- **Table 1:** The contents, specific objectives, instructional methods, materials, learning task and evaluation techniques considered appropriate for inclusion in the educational research methods instructional video.

	Item Statement: Contents appropriate for the	Frequency						
S/N	development of educational research methods	SA	Μ	LA	SD	U	Mea	Dec
	instructional video	(5)	Α	(3)	(2)	(1	n	•
			(4))		
1.	Explain the concepts and processes of	47	5	1	0	0	4.96	SA
	educational research							
2.	Discuss the different types of research	44	6	1	1	0	4.79	SA
3.	Identify researchable problems in education	48	4	0	0	0	4.92	SA
4.	Formulate research questions and hypotheses	41	9	2	0	0	4.75	SA
5.	Relate theories and concepts to hypotheses	39	11	2	0	0	4.71	SA
	formulation.							
6.	Explain the different types of research designs	46	6	1	1	0	4.98	SA
7.	Carry out feasibility report of a research problem	37	13	2	0	0	4.67	SA
8.	Demonstrate skills in literature review	42	9	1	0	0	4.79	SA
9.	Explain constructs and variables	39	10	2	1	0	4.63	SA
10.	Differentiate between quantitative and	40	11	0	1	0	4.73	SA
	qualitative research							
11.	Describe the different types of research.	41	9	1	1	0	4.90	SA
12.	Select appropriate methodology for a specific	43	8	1	0	0	4.96	SA
	research.							
13.	Differentiate between population and samples	42	10	0	0	0	4.81	SA
14.	Select sample from a target population.	38	12	2	0	0	4.69	SA
15.	Utilize the different sampling techniques.	46	5	1	0	0	4.87	SA
16.	Design an instrument.	43	9	0	0	0	4.83	SA
17.	Use the appropriate instrument for data	41	10	1	0	0	4.77	SA
	collection.							
18.	Determine the validity and reliability of an	45	5	2	0	0	4.83	SA
	instrument.							

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19.	Produce a research proposal.	47	4	1	0	0	4.88	SA
20.	Write a research report.	44	6	1	1	0	4.79	SA
	Cluster Total						4.81	SA
B.	Item Statement A: Specific objectives were							
1.	Clearly stated in the video.	41	9	2	0	0	4.75	SA
2.	Attainable and achievable by the students.	44	8	0	0	0	4.69	SA
3.	Parallel with the content of the video.	42	7	2	1	0	4.72	SA
4.	Aligned with Most Essential Learning	39	11	2	0	0	4.71	SA
	Competencies.							
5.	Helpful to enhance the students critical thinking skills.	43	9	0	0	0	4.83	SA
	Cluster Total						4.74	SA
С	Item Statement B: Instructional methods							
6.	Demonstration method.	39	7	4	2	0	4.60	SA
7.	Buzz method.	37	11	3	1	0	4.62	SA
8.	peer tutoring method.	40	9	3	0	0	4.71	SA
9.	Lecture method.	47	4	1	0	0	4.88	SA
10.	Discussion method.	46	6	0	0	0	4.88	SA
-	Cluster Total						4.74	SA
D.	Item Statement C: Instructional							
	materials/facilities							
11.	Text books/lecture notes.	47	5	0	0	0	4.90	SA
12.	Multimedia Projector.	45	6	1	0	0	4.85	SA
13.	Interaction Whiteboard/Electronic Class Roll.	43	8	1	0	0	4.81	SA
14.	Charts, Real Objects, Photographs,	42	7	1	2	0	4.71	SA
	Transparencies							
15.	Desktop/Laptop Computer.	40	9	2	1	0	4.67	SA
	Cluster Total						4.79	SA
E.	Item Statement D: Learning Task							
16.	The video will keep the students engaged.	44	7	1	0	0	4.85	SA
17.	The video will reinforce concepts necessary for	47	5	0	0	0	4.90	SA
	mastery.							
18.	The video will enhance the understanding of the	42	9	1	0	0	4.79	SA
	lesson.							
19.	The video will promote active learning.	45	7	0	0	0	4.87	SA
20.	The video will allow the teacher to monitor	46	4	1	1	0	4.83	SA
	learner's performance.							
	Cluster Total						4.85	SA
F.	Item Statement D: Evaluation techniques							
21.	Ipsative Evaluation.	43	8	1	0	0	4.81	SA
22.	Criterion-referenced Evaluation.	42	7	2	1	0	4.73	SA
23.	Norm-referenced Evaluation.	44	6	1	1	0	4.79	SA
24.	Formative Evaluation.	47	4	1	0	0	4.88	SA
25.	Summative Evaluation.	46	5	1	0	0	4.87	SA

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	Cluster Total						4.82	SA
	Overall Mean						4.79	SA
NOTE: SA=4.50-5.00, MA=3.50-4.49, LA=2.50-3.49, SD=1.50-2.49, U=1.00-1.49								

The data presented in Table 1 shows overall mean of 4.79 on the contents, specific objectives, instructional methods, materials, learning task and evaluation techniques for teaching educational research methods to Faculty of Education students. The result indicates that the experts strongly agreed that the contents, specific objectives, instructional methods, materials, learning task and evaluation techniques are appropriate for inclusion in the instructional video for teaching educational research methods to Faculty of Education students in Universities in South-East geopolitical zone, Nigeria.

- **Research Question 2:** What is the level of the developed educational research methods instructional video for teaching in terms of visual quality; audio quality and production quality?
- Table 2: The level of the developed educational research methods instructional video for teaching in terms of visual quality; audio quality and production quality.

	Item Statement: Visual quality of the		Fr					
S /	developed instructional video	SA	Μ	LA	SD	U	Mea	Dec
Ν		(5)	Α	(3)	(2)	(1	n	•
			(4))		
1.	Text graphics remain on the screen long	43	8	1	0	0	4.81	SA
	enough for the average reader to read them.	1.5	_	-	0	0	1.00	
2.	Videos uses appropriate text format, images or symbols to highlight important learning concepts effectively	46	6	0	0	0	4.88	SA
3.	Video text available includes only minor errors	47	3	2	0	0	4.87	SA
4.	The background is appropriate for the video lesson.	44	7	1	0	0	4.82	SA
5.	Video is recorded, editing and delivered in the highest HD resolution, typically 1920x1080 or 1440x1080.	39	11	2	0	0	4.71	SA
	Cluster Total						4.82	SA
В.	Item Statement A: Audio quality of the developed instructional video							
1.	The audio presents a sense of likability and friendliness.	47	5	0	0	0	4.90	SA
2.	There are no unwanted sounds	46	4	2	0	0	4.85	SA
3.	There is no background distracted colors	44	7	1	0	0	4.83	SA
4.	Off-camera narration is clearly audible and listenable.	46	5	1	0	0	4.87	SA
5.	Audio level of the video was consistent throughout the video with no significant high or low incidents.	46	6	0	0	0	4.88	SA

	Cluster Total						4.87	SA
С.	Item Statement B: Production quality of the							
	developed instructional video							
1.	The length of the video is appropriate to	44	5	2	1	0	4.77	SA
	material covered and engaged attention span							
	of intended audience.							
2.	Content is organized and presented in a	46	6	0	0	0	4.88	SA
	logical, easy to follow sequence.							
3.	Narrator uses key phrases to set the tone or	45	5	1	1	0	4.81	SA
	mood of the video.							
4.	Voice narration is delivered at a speed that is	43	8	0	1	0	4.94	SA
	both natural sounding, and allows viewers							
	time to process and comprehend the content.							
5.	Viewers feel a positive connection with the	47	2	2	1	0	4.83	SA
	speaker or narrator based on how the narrator							
	express himself to the audience.							
	Cluster Total						4.85	SA
	Overall Mean						4.85	SA

NOTE: SA=4.50-5.00, MA=3.50-4.49, LA=2.50-3.49, SD=1.50-2.49, U=1.00-1.49

The data presented in Table 2 shows Overall mean of 4.85 on the visual quality, audio quality and production quality for teaching educational research methods to Faculty of Education students. The result indicates that the experts strongly agreed that the visual quality, audio quality and production quality of the instructional video are appropriate for teaching educational research methods to Faculty of Education students in Universities in South-East geopolitical zone, Nigeria.

- **Research Question 3:** To what extent are students taught with the instructional video and students taught without the instructional video understand educational research methods in Faculty of Education in Universities in South-East, Nigeria?
- Table 3: The extent students taught with the instructional video and students taught without the instructional video understand educational research methods.

S/N	STUDENTS UNDERSTANDING OF EDUCATIONAL RESEARCH METHODS	Stud Taugh the V	ents t with 7ideo	Students Taught Without the Video		
		Χ	SD	Χ	SD	
1.	I can explain the concepts and processes of	4.65	2.48	2.92	1.09	
	educational research					
2.	I can discuss the different types of research	4.27	2.65	2.84	2.63	
3.	I can identify researchable problems in education	4.72	2.54	2.93	2.37	
4.	I can formulate research questions and hypotheses	4.35	2.58	2.87	2.43	
5.	I can relate theories and concepts to hypotheses	4.83	2.64	2.82	1.27	
	formulation.					
6.	I can explain the different types of research designs	4.57	2.53	3.56	2.02	

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20.	I can write a research report.	4.28	2.52	2.68	2.43
19.	I can produce a research proposal.	4.43	1.89	2.74	1.08
	instrument.				
18.	I can determine the validity and reliability of an	4.74	2.45	2.80	1.26
1/.	collection.	4.21	2.47	2.82	2.83
10.	I can use the enpropriate instrument for date	4.34	3.14	2.80	1.08
15.	I can design an instrument	4.37	2.00	2.95	2.55
17.	I can utilize the different campling techniques	4.70	2.52	2.74	2.27 2.35
14	I can select sample from a target nonulation	4 76	2.03	2.94	2 27
13	I can differentiate between population and samples	4 58	2.65	3 47	1 38
12.	research	4.01	2.30	2.01	2.05
12	I can select appropriate methodology for a specific	4.81	2.70	2.81	2.83
11	I can describe the different types of research	4.66	2.76	2.87	1.07
10.	qualitative research	1.15	5.07	2.70	2.55
10	I can differentiate between quantitative and	4 4 3	3.07	2.96	2.35
9.	I can explain constructs and variables	4.87	2.63	2.73	1.78
8.	I can demonstrate skills in literature review	4.39	2.75	2.88	2.24
	problem			_	
7.	I can carry out feasibility report of a research	4.63	2.49	2.84	1.36

NOTE: SA=4.50-5.00, MA=3.50-4.49, LA=2.50-3.49, SD=1.50-2.49, U=1.00-1.49

The data presented in Table 3 shows Overall Mean and Standard Deviation of 4.61, 2.58 and 3.83, 2.04 respectively on students taught with the educational research methods instructional video and students taught without the instructional video. The result indicates that the students taught with the instructional video strongly agreed that they understand educational research methods while students taught without the video lowly understand educational research methods in Faculty of Education in Universities in South-East geopolitical zone, Nigeria.

- **Hypothesis 1:** There is significant difference in the mean response of students taught with the educational research methods instructional video and students taught without the instructional video in Nigerian universities Faculty of Education.
- **Table 4:** Independent t-test of mean response of students taught with the educational research methods instructional video and students taught without the instructional video in Nigerian universities.

	00.							
Variable	Ν	X	SD	Mean Diff.	df	t-cal.	t-crit.	Dec.
Students taught with instructional Video	196	4.61	2.58					
				1.78	294	6.85	1.65	S
Students taught without instructional Video	100	2.83	2.04					
Note: S = Significance								

Data analysis in Table 4 indicates that the mean score of students taught with educational research methods instructional video (experimental group, 4.61) was greater than the mean score

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of students taught without educational research methods instructional video (control group, 2.83). the Table also indicate that the t-cal was 6.85 while the t-crit. was 1.65 at 294 degree of freedom and mean difference of 1.78. Hence, since the t-cal was greater than t-crit., hypothesis of significance difference between the mean response of students taught who were taught with the instructional video and those who were taught without the instructional video was upheld.

Discussion of Findings

The data presented in Table 1 shows overall mean of 4.79 on the contents, specific objectives, instructional methods, materials, learning task and evaluation techniques for teaching educational research methods to Faculty of Education students. The result indicates that the experts strongly agreed that the contents, specific objectives, instructional methods, materials, learning task and evaluation techniques are appropriate for inclusion in the instructional video for teaching educational research methods to Faculty of Education students in Universities in South-East geopolitical zone, Nigeria. The finding of this study is in agreement with the finding of Gambari and Yusuf (2014), Aminu (2015) and Hassan (2019), who stated that expert opinions is required for selection of contents considered appropriate for inclusion in instructional module for teaching and learning.

The data presented in Table 2 shows Overall mean of 4.85 on the visual quality, audio quality and production quality for teaching educational research methods to Faculty of Education students. The result indicates that the experts strongly agreed that the visual quality, audio quality and production quality of the instructional video are appropriate for teaching educational research methods to Faculty of Education students in Universities in South-East geopolitical zone, Nigeria. The finding of this study is in agreement with the finding of Alshahad (2013), Hassan (2019), Archibong, George and Umoudo (2022), who stated that instructional module involves objectives, methods, materials and evaluation techniques that are considered appropriate for the topic to be taught.

The data presented in Table 3 shows Overall Mean and Standard Deviation of 4.61, 2.58 and 3.83, 2.04 respectively on students taught with the educational research methods instructional video and students taught without the instructional video. The result indicates that the students taught with the instructional video strongly agreed that they understand educational research methods in Faculty of Education in Universities in South-East geopolitical zone, Nigeria. This is in line with the study conducted Aquino (2022), who noted a significant difference on the Performance of Grade 11 Students in Pretest and Posttest utilization of instructional video developed for teaching Statistics and Probability.

Data analysis in Table 4 indicates that the mean score of students taught with educational research methods instructional video (experimental group, 4.61) was greater than the mean score of students taught without educational research methods instructional video (control group, 2.83). the Table also indicate that the t-cal was 6.85 while the t-crit. was 1.65 at 294 degree of freedom and mean difference of 1.78. Hence, since the t-cal. was greater than t-crit., hypothesis of significance difference between the mean response of students taught who were taught with the instructional video and those who were taught without the instructional video was upheld. This is in line with the study conducted by Robles and Acedo (2019), who stated that there was a significant difference between the pre-test and the post-test recorded video for teaching in Araling Panlipunan. The finding confirms with that of Chawla and Deshwal (2013) who in their

studies stated that students who used CAI performed better than the students who did not use CAI.

Conclusion

Research is an imperative aspect that is primarily implemented in higher educational institutions. It involves systematic steps and procedures and individuals are required to possess adequate knowledge regarding these, in order to carry out their research in a productive manner. The main procedures that are required to be taken into consideration in research includes, formulating the research problem, setting objectives, collecting data, testing the hypothesis, conducting an analysis of the data, and interpreting the findings. In order to carry out these steps, it is vital for students to possess proficient knowledge in educational research methods. The result of this study indicates that the experts strongly agreed that the contents, specific objectives, instructional methods, materials, learning task and evaluation techniques are appropriate for inclusion in the instructional video for teaching educational research methods. The result also indicates that the experts strongly agreed that the visual quality, audio quality and production quality of the instructional video are appropriate for teaching educational research methods. The study revealed that the students taught with the instructional video strongly agreed that they understand educational research methods while students taught without the video lowly understand educational research methods in Faculty of Education in Universities in South-East geopolitical zone, Nigeria. Further research can be extended to identify the research challenges and to provide possible solutions and implementation strategies to deal with those challenges for betterment of education sector and also for the well-being of our education system as well as for our society.

Recommendations

From the findings of study, the following recommendations were made:

- 1. The developed Educational Research Methods instructional video should be used to teach students in Nigerian Universities Faculty of Education.
- 2. Public universities and Education stakeholders should organize workshop and training programmes for lecturers on how to develop instructional video in every areas of Education.
- 3. Technical support staff like video editors should be employed in Faculty of Education in Nigerian Universities.
- 4. Public universities should provide grant for the development of instructional videos in every aspect of Faculty of Education to enable the Universities produce employable graduates with indebt practical knowledge.

References

Abimbade, A. (2005). Research Design and Statistical methods in Education. Accra: Woeli Publishing services.

Ajegbelen, A.J. (2016). The use of ICT to enhance university education in Nigeria. *International Journal of Education, Learning and Development*, 4(5)1-11.

Akinsola, M.K & Ogunleye, B.O. (2004). Statistical methods and research design in education.

- Aliyu, A.M. (2014). Educational research for sustainable development. Being proceedings of the Multi-disciplinary Academic Conference on Sustainable Development at M.L. Audu Auditorium, Federal Polytechnic, Bauchi 2(4)10-11.
- Alshahad, H.F (2013). Design simple instructional package of Arabic Language learning for non-Arabic speakers. *Journal of Kerbala University*,1(11)50-56.
- Amadi, E.C., & Urho, P. (2015). Educational management planners' view of strike action and its effects on educational management in universities in Rivers State. *Singaporean Journal of Business Economics and Management Studies*, 4(7), 45-55.
- Amasi, J. & Yellowe I.T. (2018). Availability and Utilization of ICT gadgets in Faculties of Education in Rivers State Universities, Nigeria. International Journal of Education and Evaluation, 4(4) 26-36.
- Aminu, T.U. (2015). Development and Validation of an Assessment Instrument for Assessing Performance of Students on Welding and Fabrication Trade at Technical College level. Unpublished Ph.D thesis. Moddibo Adama University of technology, Yola.
- Aquino, J.S. (2022). Development and Utilization of Instructional Video in Teaching Statistics and Probability, *International Journal of Research Publications*, 103(1),675-688.
- Archibong, E.E., George, W.K. & Umoudo, B.I. (2022). Industrial conflict management and resolution instructional module for teaching TVET in Nigerian universities. Asia-Africa Journal of Academic Research and Review, Vol. 2, 91-106.
- Ayonmike, C.S. (2020). Development and evaluation of instructional video for teaching and learning woodwork technology psychomotor skills in Nigerian universities: implication for the production of competent graduates. *International Journal of Vocational and Technical Education Research.*, 6(3)9-20.
- Bently, P., & Kyvik, S. (2013). Individual differences in faculty research time allocations across 13 countries. *Research in Higher Education*, 54(3), 329-348.
- Birabil, S.T. & Ogeh, O.W.M. (2020). Education in Nigeria: challenges and way forward. *International Journal of Academic Research and Reflection*, 8,(1),42-48.
- Cattaneo, A.A.P., Antonietti, C., & Rauseo, M. (2022). How digitalized are vocational teachers? Assessing digital competence in vocational education and looking at its underlying factors. *Computers and Education*. Retrieved on March 28, 2022 from https://doi.org/10.1016/j.compedu.2021.104358
- Charles-Zalakoro, J.L. & Efere, E.A. (2016). Challenges and Prospects of Research and Innovation in Tertiary Education Institutions: Niger Delta University in Focus. *Journal of Resourcefulness and Distinction*, 13(1),76-85.
- Chawla, A. & Deshwal, P. (2013). Effectiveness of computer assisted instruction on academic achievement of students in social science. *Darpan international research analysis*, 1(6)1-4.
- Cyril, M. (2019). Promoting educational research through effective instrument development. International Journal of Advanced Research and Publications, 3(3)205-212.
- Echono, S.S.T. (2021). Education, research and human development in Nigeria: The challenges and missing link. *Being a paper presented at the 18th Convocation Ceremony of Enugu State University of Science and Technology*, Enugu, Enugu State, Nigeria.
- Edem N.B. & Ekon E.E. (2021). The extent of use of video clip for teaching and learning in Nigerian universities: A case study of faculty of education, University of Calabar. *Educational Research and Reviews*, 16(7):289-295.

- Ekon, E.E., & Edem, N.B. (2015). Effects of computer-based constructivist instructions on students' achievement and interest in Biology. *International Research Journals*, 6(4):84-90.
- Ekwueme C.O, Ekon, E.E, & Ezenwa-Nebife, D.C. (2016). Effect of educational video clip on students' academic performance in basic science and mathematics concepts in junior secondary school three in Cross River State. A paper presented at the South African International Conference on Educational Technologies, 24th- 26th, Pretoria pp. 195-202.
- Etejere, P.A.O. & Muraina, M.B. (2016). An overview of challenges of data collection in educational research in Nigeria. *Journal of Curriculum and Instruction*, 9(1),1-11.
- Federal Republic of Nigeria (FRN, 2013). National Policy on Education. 6th Edition. NERDC Press.
- Gambari, I.A., & Yusuf, M.O. (2014). Development and Validation of Computer Instructional Package on Physics for Secondary Schools in Nigeria. *Educational Research International*, 3(1),112-130.
- Hassan, A.A. (2019). Development and Validation of an Instrument for Assessing Students` Practical Skills in Faults Diagnoses and Repairs in Electronics Works Trade in Technical Colleges in North-East, Nigeria. Unpublished Ph.D thesis, Moddibo Adama University of Technology, Yola.
- Imo, E.U. (2015). Data analysis in educational research. *Journal of Educational Research and Evaluators*, 14(2)56-68.
- Keijzer, R., Rijst, R., Schooten, E. & Admiraal, W. (2021). Individual differences among at-risk students changing the relationship between resilience and vocational identity. *International Journal of Educational Research*, 11(10)81-93.
- Kuiper, S., Carver, R., Posner, M., & Everson, M. (2015). Four Perspectives on Flipping the Statistics Classroom: Changing Pedagogy to Enhance Student-Centered Learning External link, *PRIMUS*, 25(8),655-682.
- Latha, R. (2019). Development and Validation of Video Lesson Package for Flipped Mastery Classroom in Computer Science Teaching for Higher Secondary School Students. *International Journal of Innovative Science and Research Technology*, 4,(10),778-780.
- Nworgu, B.G. (2015). Educational research: Basic issues and methodology. University Trust Publishers Nsukka, Enugu State, Nigeria.
- Nzimande, B. (2017). Address by Minister of Higher Education and Training, during the budget vote speech, National Assembly. Retrieved on March 28, 2022 from www.polity.org.za/dhet-blade-nzimande-address-by-minister-of-higher-education.
- Okorji, P.N. & Nwogbo, V.N. (2014). Appraisal of research methodology course for undergraduate education students: implications for curriculum development. *European Scientific Journal*, 10(4),402-411.
- Okoye, K.R.E. & Okwelle, P.C. (2013). Technical and vocational education and training (TVEI) in Nigeria and energy development, marketing and national transformation. *Journal of Education and Practice*, 4(14),134-138.
- Owo, O.T., & Ajie, P.M. (2020). Impediments to effective utilization of e-learning platforms for quality teaching and learning in universities in Niger-Delta, Nigeria. *International Journal of Innovative Research and Development*, 9(7),128-133.

- Owo, O.T & Deebom, M.T (2020). Assessment of the Technical Skills Acquired by Students of Technology Education for Employment Generation in Rivers State, Nigeria. *International Journal of Latest Research in Humanities and Social Science*, 3(2),35-41.
- Oyeniran, O.A., Oyeniran, S.T., Oyeniyi, J.O., Ogundele, R.A., & Ojo, A.O. (2020). E-Learning: Advancement in Nigerian pedagogy amid Covid-19 pandemic. *International Journal of Multidisciplinary Sciences and Advanced Technology*, 1, 85-94.
- Robles, A.C.M & Acedo, E.M. (2019). Development and Validation of Educational Video Tutorials for 21st Century Secondary Learners. *Asian Journal of Multidisciplinary Studies*, 2(2),2-9.
- Singh-Pillay, A. & Sotsaka, D.S. (2017). Engineering Graphics and Design Teachers' Understanding and Teaching of Assembly Drawing. *EURASIA Journal of Mathematics Science and Technology Education*, 13(5),1213-1228
- Ubogu, R. (2019). Challenges Affecting Educational Research in Delta State, Nigeria. *Makerere Journal of Higher Education*, 10 (2)191-199.
- Uddin, P.S.O & Nwachokor, S.C. (2019). Influence of Teachers' Experience on the Teaching of Technical Drawing in Technical Colleges in Edo and Delta States, Nigeria. *International Journal of Vocational Education and Training Research*, 5(1),38-42.