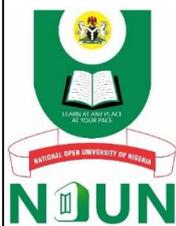


## COURSE GUIDE

### **ODL 713 DESIGN AND DEVELOPMENT OF OPEN AND DISTANCE LEARNING MEDIA RESOURCES**

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## INTRODUCTION

ODL713 – Design and Development of ODL media resources is a 3-credit unit first semester course for PGDDE students. This is a core course meant to equip you with knowledge and skills to design and develop ODL media resources in the 21<sup>st</sup> Century learning space. It will take you 15 weeks to complete the course. You will study for a period of 16 weeks which include the first week of orientation. The credit earned in this course is part of the requirement for graduation.

You will receive the course material which you can read online or download and read off-line. The online course material is integrated in the Learning Management System (LMS). All activities in this course will be held in the LMS. All you need to know in this course is presented in the following sub-headings.

## COURSE COMPETENCIES

By the end of this course, you will gain competencies in:

- Leveraging the capabilities of ICT to manage ODL system
- Selecting appropriate media for the Virtual Learning Environment (VLE)
- Searching for media elements under creative commons licenses
- Creating media content through screencasting, repurposing existing slides and so on
- Designing radio instructional content
- Designing television instructional content
- Exploring the capabilities of the internet to gather media resources for ODL
- Develop ODL media resources

## COURSE OBJECTIVES

The course objectives are to:

- Discuss the evolution of open and distance learning
- Search for media resources under creative commons agreement
- Create ODL media content through screencasting, repurposing of existing PPT slides, low-tech video recording and e-learning development tools like Adobe Captivate and Articulate Storyline
- Create instructional audio content
- Create instructional video content
- Create a Podcast for ODL
- Create a Vodcast for ODL

## WORKING THROUGH THIS COURSE

The course is divided into modules and units. The modules are derived from the course competencies and objectives. The competencies will guide you on the skills you will gain at the end of this course. So, as you work through the course, reflect on the competencies to ensure mastery. The units are components of the modules. Each unit is sub-divided into introduction, intended learning outcome(s), main content, self-assessment exercise(s), conclusion, summary, and further readings. The introduction introduces you to the unit topic. The intended learning outcome(s) is the central point which helps to measure your achievement or success in the course. Therefore, study the intended learning outcome(s) before going to the main content and at the end of the unit, revisit the intended learning outcome(s) to check if you have achieved the learning outcomes. Work through the unit again if you have not attained the stated learning outcomes.

The main content is the body of knowledge in the unit. Self-assessment exercises are embedded in the content which helps you to evaluate your mastery of the competencies. The conclusion gives you the takeaway while the summary is a brief of the knowledge presented in the unit. The final part is the further readings. This takes you to where you can read more on the knowledge or topic presented in the unit. The modules and units are presented as follows:

### **Module 1    The Growth of the Use of Technology in ODL**

- Unit 1        The Evolution of media in ODL
- Unit 2        Information and Communication Technology in ODL
  - Radio
  - Television
  - Computers
  - Internet
- Unit 3        The importance of media in ODL

### **Module 2    Application of Media to Engage Distance Learners**

- Unit 1        The Basic Characteristics of Distance Learners
- Unit 2        Using Print-based Media to Engage Distance Learners
- Unit 3        Using Instructional audio to Engage Distance Learners
- Unit 4        Using Instructional Video to Engage Distance Learners

### **Module 3    Computers and Communication Networks in ODL**

- Unit 1        The Roles of Computers in ODL
- Unit 2        Network Technologies

	Dial-Up
	ASDL
	VSAT
	Fiber
Unit 3	Internet for ODL

#### **Module 4 Development of Media in ODL**

Unit 1	Selecting Appropriate Media for ODL Instruction
Unit 2	Using Authoring Tools for ODL Resources
Unit 3	Creating ODL Media Resources through screen casting, repurposing of existing PPT slides, low-tech video recording and e-learning development tools

#### **Module 5 Quality Assurance in ODL Media Resources**

Unit 1	Issues of Quality Assurance in ODL Media Resources
Unit 2	Searching for Media under Creative Commons Agreement
	There are 15 units in this course. Each unit represents a week of study.

### **PRESENTATION SCHEDULE**

The weekly activities are presented in Table 1 while the required hours of study and the activities are presented in Table 2. This will guide your study time. You may spend more time in completing each module or unit.

Table I: Weekly Activities

Week	Activity
1	Orientation and course guide
2	Module 1 Unit 1
3	Module 1 Unit 2
4	Module 1 Unit 3
5	Module 2 Unit 1
6	Module 2 Unit 2
7	Module 2 Unit 3
8	Module 2 Unit 4
9	Module 3 Unit 1
10	Module 3 Unit 2
11	Module 3 Unit 3
12	Module 4 Unit 1
13	Module 4 Unit 2
14	Module 4 Unit 3
15	Module 5 Unit 1
16	Module 5 Unit 2

Week	Activity
17	Revision and Response to Questionnaire
18	Examination

The activities in Table I include facilitation hours (synchronous and asynchronous), assignments, and Discussion Forum. How do you know the hours to spend on each? A guide is presented in Table 2.

Table 2: Required Minimum Hours of Study

S/N	Activity	Hour per Week	Hour per Semester
1	Synchronous Facilitation (Video Conferencing)	1	14
2	Self-Study and Asynchronous Facilitation (Read and respond to posts including facilitator's comment, self-study)	2	28
3	Assignments, Discussion Forum, and portfolios	1	14
4	Examination		3
	Total	4	59

## ASSESSMENT

Table 3 presents the mode you will be assessed.

Table 3: Assessment

S/N	Method of Assessment	Score (%)
1	Portfolios	10
2	Discussion Forum	10
3	Assignments	20
4	Final Examination	60
	Total	100

## PORTFOLIO

A portfolio has been created for you tagged "My Portfolio". With the use of Microsoft Word, state the knowledge you gained in every Module and in not more than three sentences explain how you were able to apply the knowledge to solve problems or challenges in your context or how you intend to apply the knowledge. Use this Table format:

**Application of Knowledge Gained**

Module	Topic	Knowledge Gained	Application of Knowledge Gained

You may be required to present your portfolio to a constituted panel.

**DISCUSSION FORUM**

Your contributions in the discussion forums will be scored. You are expected to make your post on the discussion forum before you can read the posts of others.

**ASSIGNMENTS**

Take the assignment and click on the submission button to submit. The assignment will be scored, and you will receive a feedback.

**EXAMINATION**

Finally, the examination will help to test the cognitive domain. The test items will be mostly application, and evaluation test items that will lead to creation of new knowledge/idea.

**HOW TO GET THE MOST FROM THE COURSE?**

To get the most in this course, you:

- Need a personal laptop. The use of mobile phone only may not give you the desirable environment to work.
- Need regular and stable internet.
- Need to install the recommended software.
- Must work through the course step by step starting with the programme orientation.
- Must not plagiarise or impersonate. These are serious offences that could terminate your studentship. Plagiarism check will be used to run all your submissions.
- Must do all the assessments following given instructions.
- Must create time daily to attend to your study.

## **FACILITATION**

There will be two forms of facilitation – synchronous and asynchronous. The synchronous will be held through video conferencing according to weekly schedule. During the synchronous facilitation:

- a. There will be one hour of online real time contact per week making a total of 11 hours for eleven weeks of study time.
- b. At the end of each video conferencing, the video may be uploaded for view at your pace.
- c. You are to read the course material and do other assignments as may be given before video conferencing time.
- d. The facilitator will concentrate on main themes.
- e. The facilitator will take you through the course guide in the first lecture at the start date of facilitation

For the asynchronous facilitation, your facilitator will:

- Present the theme for the week.
- Direct and summarise forum discussions.
- Coordinate activities in the platform.
- Score and grade activities when need be.
- Support you to learn. In this regard personal mails may be sent.
- Send you instructional videos and audio lectures, and podcasts if need be.

Read all the comments and notes of your facilitator especially on your assignments, participate in forum discussions. This will give you opportunity to socialise with others in the course and build your skill for teamwork. You can raise any challenge encountered during your study. To gain the maximum benefit from course facilitation, prepare a list of questions before the synchronous session. You will learn a lot from participating actively in the discussions.

Finally, respond to the questionnaire. This will help RETRIDOL to know your areas of challenges and how to improve on them for the review of the course materials and lectures.

## **LEARNER SUPPORT**

You will receive the following support:

Technical Support: There will be contact number(s), email address and chatbot on the Learning Management System where you can chat or send message to get assistance and guidance any time during the course.

24/7 communication: You can send personal mail to your facilitator and the centre at any time of the day. You will receive answer to you mails within 24 hours. There is also opportunity for personal or group chats at any time of the day with those that are online.

You will receive guidance and feedback on your assessments, academic progress, and receive help to resolve challenges facing your stuides.


**MAIN  
COURSE**

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## **MODULE 1 THE GROWTH OF INFORMATION AND COMMUNICATION TECHNOLOGY IN ODL**

### **INTRODUCTION**

Open and distance learning (ODL) has evolved over time with the strategic impact of ICT on the system. As a student in open and distance learning institution, it becomes imperative for you to understand the evolution of ODL and the intervention of ICT in making learning more interactive and engaging, especially at the higher level of education. This module exposes you to the growth of information and communication technology in ODL. The module comprises three units as listed below:

Unit 1	The Evolution of ODL
Unit 2	Information and Communication Technology in ODL
Unit 3	The importance of media in ODL

### **UNIT 1 THE EVOLUTION OF ODL**

#### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 The Need for Open and Distance Learning
  - 3.2 ODL Generations
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

#### **1.0 INTRODUCTION**

Have you ever imagined a society with no opportunities for people to get formal education? What do you think will be the consequences? The need to make formal education readily available to different categories of people in the society has been advocated across the world. The reason is quite obvious. Education equips individuals with the requisite knowledge and competencies to function effectively in the society. Education contributes to the socio-economic growth of the nation, through improved productivity, creativity and innovations. Therefore, efforts are being made to ensure that different categories of people in the society have access to quality education, regardless of space and distance. This is where open and distance learning comes in. In this unit, I will like us to examine the

evolution of ODL, with a view to understanding the capabilities of this system of education in solving educational challenges. I hope you are ready, let's go.

## 2.0 OBJECTIVES

By the end of this unit, you will be able to:

- Describe open and distance learning
- Explain how ICT helps to bridge the gap between tutor and students
- Discuss the generations of ODL
- Highlight the strategic impacts of ICT in the evolution of ODL

## 3.0 MAIN CONTENT

### 3.1 The Need for Open and Distance Learning

The strategic importance of education in the development of any nation cannot be over-emphasised. If you look at different countries in the world, you will realize that governments at all levels are making efforts at expanding education opportunities, since no nation can develop beyond the quality of its education. With the pressure on the existing facilities in the conventional education system, countries in different parts of the globe are taking advantage of open and distance education to reach the growing population of people, who seek formal education. It is important to note that the growing population in many countries of the world, especially in the Sub-Sahara Africa, cannot be adequately catered for, by the conventional higher institutions as shown in figure 1.

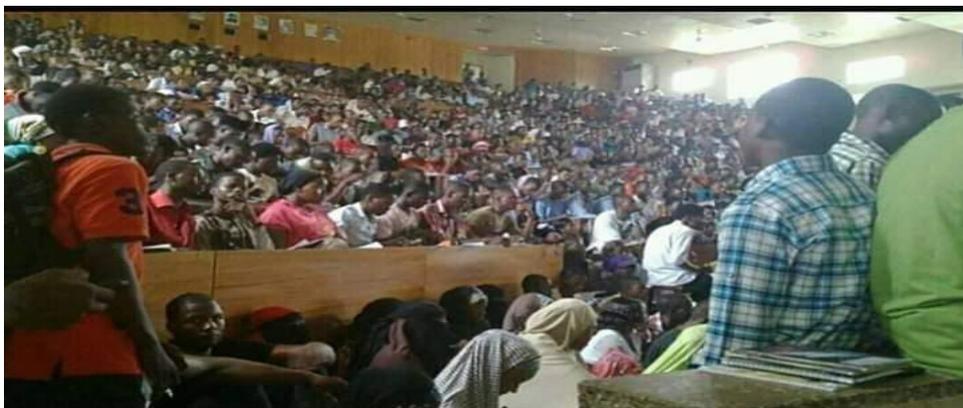


Figure 1: Pressure on the face-to-face classroom facilities

[https://www.nairaland.com/attachments/11683870\\_ezynaptwsaaacp2\\_jpeg\\_8261ee37fd4c307041c915f89d629f98](https://www.nairaland.com/attachments/11683870_ezynaptwsaaacp2_jpeg_8261ee37fd4c307041c915f89d629f98)

In many African countries, where there are limited resources to support the existing conventional universities, efforts are being made to expand access to educational opportunities through ODL. Open and distance learning can simply be defined as a mode of education that leverages the capabilities of ICT to bridge the instructional gaps among the key instructional elements. What we mean by the key instructional elements are teachers/tutors, students and learning resources. In the ODL environment, these key elements are physically separated. ICT is the only channel through which these elements are connected for instructional purposes. We will talk more about different definitions of ODL in the next sub-topic.

Can you attempt a definition of ODL in your own words? I know you can, so try it and come up with a fantastic definition.

### **3.2 ODL Generations**

Now that you have attempted the definition of open and distance learning, let us examine the concept of ODL so that you will understand the new instructional terrain that you have found yourselves. Open and distance learning simply means the teaching and learning arrangement in which the instructor and the learners are physically separated, and thus, rely on the capabilities of electronic devices and print media for instructional delivery process. Jegede, (2016) asserts that ODL is a cost-effective instructional setting, that provides educational opportunities to the individuals in the society regardless of time, location, pace and space. Open and distance learning can also be considered as the mode of education which occurs outside the mortar and brick instructional setting; and could be imparted without physical contact with the students. Let me inform you that this mode of education has been adopted for various level of education including primary, secondary, tertiary, vocational and non-formal education. It places much emphasis on instructional design, quality assurance and effective learners' support services. At the center of the whole process, is the pivotal role of information and communication technology (ICT) in ensuring that learners are able to get access to instructional content and interact with their teachers, notwithstanding the distance. These technological interventions define different generations of ODL across the world.

So, at this point, it is important that we examine the generations of ODL, with a view to analyzing the strategic roles of ICT in bridging the distance between students and their tutors.

Why is this important to you as a distance learner, you may ask?

The reason is quite obvious. You need to understand how the whole system started and the impact that technology has on it. This allows you to continually leverage the capabilities of ICT in interacting with your colleagues and tutors. Understanding these generations of ODL will also afford you the opportunity to project into the future and make appropriate decisions as critical stakeholders in ODL system of education.

First generation (1900–the 1950s): Open and distance learning practically started as Distance Education in the 18<sup>th</sup> Century as purely correspondence education. At different points in its evolution, ODL was referred to as, “Home Study”, “Off Campus Study”, “Distance Study”, “Independent Study”, “Distance Education”, “Distance Learning”, and “Telematic Study”. These transformations were due to the continued relevance of this system of education to expand educational opportunities within the society and the systematic impact of technology in ODL. At this stage, print was the medium of instruction between the students and their tutors, which involves the use of written text and recommended textbooks as indicated in figure 2.

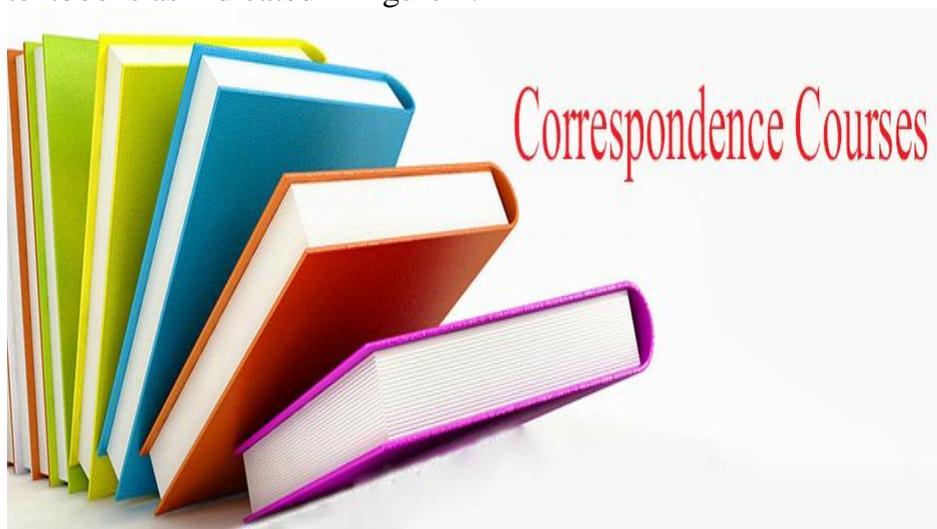


Figure 2: Correspondence education relied on text

<https://onesittingdegreehome.files.wordpress.com/2019/05/books1.jpg>

Students received instruction from their tutors through course materials mainly in text format. Although it is the oldest form of ODL system across the world, it is still being practice in different countries usually with modifications due to the influence of technology and the changing needs of the society.

This correspondence education has been largely considered as flexible and cost-effective. As a result of its heavy reliance on the print materials, ODL in this generation required a moderate amount of capital to establish and implement. This is why the model is still being practice in many developing countries in Sub-Sahara Africa, including Nigeria. This model was the first mode of distance learning ever practiced in Nigeria before

independence. A significant number of the early scholars in the country obtained their degrees through correspondence education model, especially before the establishment of the University College Ibadan in 1948 (Omolewa, 1982). In Nigeria, this system of education effectively produced the first generation of scholars and political elites like Eyo Ita, Davies, H.O., Alvan Ikoku, Obafemi Awolowo, Chinua Achebe, Wole Soyinka and so on. During this first generation of ODL, the impact of ICT was felt in line with the level of technological development at that time.

Second generation (1950s–60s): This was the generation that succeeded the correspondence education earlier discussed. What you need to understand is that, this generation witnessed a systematic increase in the use ICT in distance education. The print medium was supplemented with radio, television, audio technology as well as face-to-face interaction. Institutions of higher education across the world began to leverage the capabilities of broadcast media to reach different categories of students. You will remember that I earlier mentioned that the import of this unit is to understand the contribution of ICT in ODL across generations (Dede, 1996). . So, you will see that ICT really began to have visible impact on ODL during this period.

Do you agree with me? This will be examined fully in unit 2.

Third generation (1960s–1990s): The ODL continued to witness more ICT interventions during this third generation. Specifically, there was an introduction of telelearning models with the use of audio, television, and video conferencing as well as personal computers to reach the students. Distance learning institutions like the University of South Africa, (UNISA), the Open University of United Kingdom, (OUUK), Indira Gandhi National Open University, (IGNOU), began to dominate the ODL space, with a view to expanding educational opportunities across the world.

At this point, what could you observe as the major limitation of ODL system of education during this phase, even with the use of computers and broadcast media?

Fourth generation (1990s to date): From the first to the third generation of ODL, the emphasis was on how technology could be used to facilitate delivery of the content. In the fourth generation, the focus shifted to the use of ICT to ensure adequate feedback within the instructional system. This involved the introduction of technological tools that could support two-way communication between teacher and student.

Fifth generation: (1990s-date): This is the new generation of ODL that involves the introduction of interactive multimedia, internet and web-

based learning to support real-time teaching and learning as indicated in figure 3.



Figure 3: Interactive multimedia resources for ODL

[https://www.teachertoolkit.co.uk/wpcontent/uploads/2020/03/shutterstock\\_1078470932.jpg](https://www.teachertoolkit.co.uk/wpcontent/uploads/2020/03/shutterstock_1078470932.jpg)

This is influenced by the impact of ICT in education generally. The fifth generation of ODL involves the use of synchronous and asynchronous teaching, using assistive technologies and multimedia resources to engage distance learners and provide immediate feedback anytime, anywhere.

Discussion: Now that we have discussed the different generations of ODL, how will you categorise NOUN along these phases? What generation does the university belong and why?

**Assignment 1:** Which of the technologies/media do you think has contributed most to the development of ODL in the last three decades?

### SELF-ASSESSMENT EXERCISE

- i. Explain how ICT helps to bridge the gap between tutor and students.
- ii. What are the strategic roles of ICT in ODL generations?

## 4.0 CONCLUSION

The progress that has been made so far in the development of ODL can largely be attributed to making factors, especially the intervention of ICT/media. From the first generation of ODL, you will observe that the use of media has continued to make huge impact on the way distance learners access the content. The implication is that stakeholders in open and distance learning need to put in more effort at improving the technological facilities that will strengthen the interaction among the key elements of instruction.

## 5.0 SUMMARY

In this unit, you have been introduced to the evolution of open and distance learning and the strategic influence of ICT on the system. You have learnt the generations of ODL and you have been better equipped to rank different universities along these phases of development. The advancement in technology has continued to bridge the instructional gaps in the ODL space. In the next unit, we are going to expose you to the importance of information and communication technologies in open and distance learning.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Briefly discuss the concept of open and distance learning
2. How has technology helped to bridge the gap within the instructional process in ODL?
3. What is the significant feature of the third generation ODL?

## 7.0 REFERENCES/FURTHER READING

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## **UNIT 2 INFORMATION AND COMMUNICATION TECHNOLOGIES IN ODL**

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- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

In the last unit, we discussed the evolution of ODL across different generations. Specifically, one thing was obvious in our discussion. Can you identify that? Yes, you are right! The strategic intervention of ICT in expanding access to education through ODL. I believe you have observed the gradual introduction of diverse ICT tools across the 5 generations. In fact, the use of ICT defines the categorisation of ODL phases into various generations as we have in unit 1. To build on this understanding, this unit will expose you to the relationship between ODL and ICT. Let me tell you that technology is an integral component of ODL from the onset. Do you agree with me?

But why do you think ICT is critical to ODL system of education in this 21<sup>st</sup> Century? Please, think about this, you will be asked to submit your submission during online facilitation

### **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- explain the relationship between ICT and ODL
- describe the strategic roles of radio in ODL
- analyse the roles of computers in ODL

### **3.0 MAIN CONTENT**

#### **3.1 An Overview of the Roles of ICT in ODL**

From the first generation of ODL to the current generation, technological tools have changed both the view and practice of ODL across different countries of the world. The systematic introduction of ICT into ODL has attracted diverse categories of individuals in the society. For instance, you will observe that you and your colleagues in this class come from diverse backgrounds. However, technology provides a general platform like online facilitation, where all of you can meet and interact with your tutors. This is quite different from what was obtainable in the early generations of ODL. This implies that technologies like computers and internet have changed the practice and structure of ODL.

Computer technology makes texts, pictures and videos easily available such that 21<sup>st</sup> distance learners will be able to learn with ease. This has a great impact on the mode of presentation and interaction among the students and between students and their tutors.

In your own opinion, what do you think technology has contributed to the ODL system of education?

One important contribution of ICT to ODL is the ability to bridge the instructional gaps within the system. This has given impetus to the process and practice of ODL across the world. We will discuss this in details in the next sub-topic.

In the same vein, ICT improves the rate of interaction and collaboration within the system. With synchronous and asynchronous facilitation, students are able to interact with their tutors in different subject areas. For instance, in the recent time, the National Open University of Nigeria (NOUN) has institutionalized online facilitation as a learning platform to engage students, regardless of distance. Other distance learning institutions have also introduced this process to close the gap between students and the teachers. This strengthens flexibility and collaboration within the system (Hannah, 2004). You will learn more about these roles later in this module

#### **3.2 Information and Communication Technologies in ODL**

Open and distance learning relies largely on technology for design, development and delivery of instructional content. As you will notice that this course focuses on the design and development of ODL media resources, it becomes imperative for us to briefly look at different technologies that could be used to enhance instructional delivery in ODL.

This will be quite useful for you, as distance learners, to understand the capabilities of these technologies and how they can be used effectively within the system. Details about these technologies will be made available in the next modules.

I know you must have mentioned some tools, but let me tell you that the technologies we are talking about here are not limited to the sophisticated digital tools like computers, interactive whiteboards, authoring tools among others. The technologies also involve the traditional broadcast media tools that are still relevant in the society. Now, let us quickly go through these technologies.

Before we go further, do you think radio can still be considered to be relevant in today's school setting?

### **3.2.1 Radio**

We know many of you will think radio is an old and outdated technology that cannot be considered to be relevant in the 21<sup>st</sup> Century educational setting. However, even after many years of its existence, radio as a broadcast media, still plays strategic roles in expanding educational opportunities in different parts of the world. Its impact becomes more visible in the ODL setting where learners are separated from their tutors and study centers as we have in the NOUN learning space. This makes radio an indispensable tool in expanding educational opportunities, especially in the developing countries like Mali, Columbia, Nigeria, Mexico, Kenya, Nepal, Bangladesh, Nicaragua, Sri Lanka and other countries in sub-sahara Africa. In all these countries, radio has emerged as one of the most effective and cost-efficient tools in the massification of education in the society.

In the early 1930s, radio became a popular tool for education when the Open University of UK first made use of it as a medium for instructional delivery. The University affirmed that radio had a greater impact on the performance of weak students, who relied on radio as a supplementary learning tool (Vyas, Sharma, & Kumar, 2002; Hasan, 2018).

In distance learning, the use of high quality radio programme has been found to be successful for expanding access to quality distance education among all categories of people in the society. Radio has been considered as a perfect fit for ODL due to its capabilities to reach people in rural and urban areas, even during wars and other natural disasters (Ho & Thukral, 2009). These capabilities make radio to be effective in delivering the instructional content within ODL system of education. The COVID-19 Pandemic Era has exposed the need to employ multidimensional approach to instructional delivery. In this pandemic era, many institutions are

taking advantage of the powers of radio and television to reach students in different parts of the world, who are stuck in their homes due the restrictions in movement imposed by the governments to curb the spread of the virus. This implies that radio and television still remain viable tools to expand education opportunities in the 21<sup>st</sup> Century society.

What can you consider as the major limitation of radio in the education system?

### **3.2.2 Television**

Although radio has been recognized as critical tool to make educational opportunities available to different categories of people in the society, it lacks the capabilities for visual display of content. In this wise, the major limitation of radio in the education system can be corrected with the systematic adoption of television as an audio-visual instructional tool. According to Olumorin, Aderoju, & Onojah, (2018), television is a broadcast media meant to disseminate audio and video signals, to a wide range of audience in the society. This is what brings the concept of instructional television. Instructional television involves the use of television to enhance instructional process, whether in the conventional or ODL setting. It has been established that ODL has a lot of benefits to derive from instructional television, as this tool could be used to bridge the instructional gap between distance learners and their tutors. Educational television has been discovered to have profound influence on acquisition of speaking skills among young learners (Gocen & Okur, 2013). According to Gocen and Okur (2013) learners show positive disposition in learning what they see on television and this improves their learning outcomes in different subject areas. Over time Students who watched educational television perform better than their counterparts who were exposed to general entertainment shows on the television (Huston & Wright, 2014).

These studies are pointers to the fact that, if utilized effectively, television could be an important broadcast media to improve students' performance in different subject areas. Even in the 21<sup>st</sup> Century ODL setting, the power of television can still help to deliver content to different categories of learners within the system. In Nigeria, television station spread across all the 36 states and the Federal Capital Territory. Therefore, stakeholders in ODL can establish a working relationship between these media houses and distance learning institutions, with a view to delivering instructional content to the students across the country.

### 3.2.3 Computers

The digital revolution across the globe has totally affected all aspects of educational processes, especially at the higher education level, as students and teachers are increasingly dependent on technology to interact and exchange ideas.



Figure 4: Computers for instruction

The use of computers and the Internet is at its highest level as developing countries relying on digital devices to reach students, who are located in different geographical regions (Anderson, 2016; Smith & Anderson, 2016; Poushter, 2016). The versatility and capabilities of computer had made it more appropriate for ODL instructional processes. In the words of Jegede, (2016), computers are digital devices that have made the integration of technologies possible, which had resulted in the creation of new products with combined powers of digitised audio, video, image, animation and data. These combined powers of computers are now be used by distance learning institutions to package the content and facilitate seamless instructional delivery to the students. In most cases, computers are being used to create interactive learning content that could engage learners, who come from diverse background. To effectively utilize the powers of computers in creating learning resources, many ODL institutions create special units for this purpose. For instance, the National Open University of Nigeria, (NOUN) established the Directorate of Learning Content Management System to work with content experts in creating learning contents that are interactive and could assist in bridging the gaps between students and facilitators.

Remember that you, as distance learners, are separated from the facilitators and learning institution. As you read this course material, I am sure that all of you are spread over the country and beyond, and the versatility of computers can be used to engage you in instructional

content, even without teachers' presence. Computers can be used to develop multimedia contents that make learning real and connected to real life situation. This is the focus of this course. It will be all about the use of computers and other digital tools to create media resources for ODL setting. I will give more insight into this in module 4. That module will expose you to the steps to take in creating media resources for use in the ODL environment. I believe you need those skills as distance learners, don't you?

What do you think the world of ODL without the Internet would look like?

### **3.2.4 Internet**

Let us quickly look at the place of the internet in ODL setting. The Internet and Web-based technologies have generally become an effective platform for course development and delivery in the virtual learning environment. The internet technology has given impetus to the capabilities of computers to deliver instructional content across subject areas.

The internet provides unlimited access to information and distance learners now utilize internet tools to search for information to complement the content in the course materials.

One basic feature of the internet is its capabilities to improve interaction and collaboration among the instructional elements (tutor, students and learning resources). The increasing advancement in technological innovations has made it possible to overcome time and distance barriers within the ODL teaching and learning process. Cutting-edge technologies like internet and learning technologies facilitate effective implementation of open and distance learning to cater for diverse populations anytime, anywhere. Networked computers and the Internet create interactive and collaborative learning environment, where students can share opinions and exchange ideas. Internet tools like discussion forum, online chat, and online facilitation are now being used to build learning community, where students can interact with the tutors and receive immediate feedback.

These emerging technologies have created a new generation of ODL (fifth generation) which involves the use of voice mail, e-mail, teleconferencing and computer- based integrated telecommunications and multimedia technology. It has been established that these new educational technologies have enhanced the instructional development and delivery in ODL through the production of highly interactive self-paced learning packages for different categories of students. Internet technology is making it possible for distance learners to contribute to discussion forum

topic and participate in online quiz from anywhere. For instance, during online facilitation, the facilitators will engage you in real time teaching and also ask you to contribute to discussion forum topics. You don't need to come to the NOUN headquarters in Abuja participate in all these instructional activities. The power of the internet allows you to participate in instructional process from any part of the world. Thus, internet has made a significant impact on the operations of ODL across the world.

**Assignment 2:** Prepare a 500-word write-up providing justifications for the need to integrate all the aforementioned technologies in an ODL system.

### **SELF-ASSESSMENT EXERCISE**

- i. Explain the relationship between ICT and ODL
- ii. Describe the strategic roles of radio in ODL
- iii. Analyse the roles of computers in ODL

## **4.0 CONCLUSION**

Throughout the history of ODL across the world, ICT has continued to improve the mode of instructional design, development and delivery, especially at the higher level of education. It is important to note that open and distance learning institutions need to take advantage of different forms of technologies like radio, television and computers to bridge the instructional gaps and engage distance learners in teaching-learning process.

## **5.0 SUMMARY**

We have exposed you to different technologies that could be used to facilitate instruction in ODL. These include radio, television, computers and the internet. A combination of all these technologies will strengthen the instructional process to improve interaction, collaboration, motivation and engagement in the system. Distance learning institutions, therefore, need to examine the strengths and weaknesses of these technologies and combine them appropriately for effective ODL instructional process.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Why is radio still relevant in today's ODL setting?
2. Define instructional television
3. Describe the importance of the internet in ODL

## 7.0 REFERENCES/FURTHER READING

Hasan, K.M. (2018). Techniques of Educational Broadcasting in Distance Mode and Its Social Implication. *Sociology and Anthropology* 6(6): 557-562. DOI: 10.13189/sa.2018.060606

Olumorin, C. O., Aderoju, M. A., & Onojah, A. O. (2018). Students awareness and utilization of educational broadcasts to learn in Ogbomoso, Oyo State, Nigeria. *Turkish Online Journal of Distance Education-TOJDE* 19(3).

## **UNIT 3      IMPORTANCE OF MEDIA IN ODL**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Media in ODL
  - 3.2 The importance of media in ODL
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

In this unit, we are going to consider on media as devices/platforms/authoring tools that can combine different forms of technologies like text, video and audio to enhance instruction. It has been established in literature that these media are capable of engaging learners in instructional content, even without the presence of teachers.

### **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- define the concept of media in ODL
- identify different media that can be used in ODL
- analyse the importance of media in ODL

### **3.0 MAIN CONTENT**

#### **3.1 Media in ODL**

The open and distance learning is characterized by the physical separation between tutors and their students. If not properly structured, this separation could hinder the quality of education within the system due to lack of interaction and engagement. To bridge this gap, distance learning institutions are taking advantage of media to engage learners at a distance and make learning more realistic. According to Bates, (1991) medium is a symbol of communication and engagement that impacts knowledge on the students. Generally, media can be categorized as we have in the table below:

Media	Description
Print-based	These include text materials like self-instructional materials, textbooks and so on. This ODL713 course material is an example of a print-based ODL material.
Audio-based	These are radio, interactive radio, audio-conferencing and audiocassette.
Video-based	TV broadcast, instructional television, low-tech video and so on.
Computer/Internet-based	These include course materials in CD, instructional video, email and different tools on the learning management system (LMS).

Different media elements can be used to engage students in the classroom. The space occupied by media in instructional process becomes more crucial in ODL setting due to the inability of a student to involve in physical interaction with the tutor and other colleagues. So, media become strategic tools to ensure that learners are engaged in instructional content, even without teachers' physical presence. When media are used appropriately, the tutors can deliver instruction effectively to different categories of students within the learning space. Generally, media can be used for enrichment of the instructional content and for direct instruction:

- **Enrichment:** This is usually called indirect teaching, where a tutor can enhance the quality of instruction by adding media elements like pictures and videos. This may add to learners' understanding of different concept. This approach is quite useful within ODL setting to improve clarity and interest.
- **Instruction:** This is sometimes referred to as direct teaching, and it is aimed at conveying specific knowledge and competence at a distance.

Before we go further, why do you think media are integral components of 21<sup>st</sup> Century ODL?

Efforts are being made by distance learning institutions across the globe to bridge the gaps within the instructional process through different technological tools and media resources. What you will consider as simple media elements like pictures, graphics and voiceover can go a long way in engaging distance learners in the instructional content. Specifically, ODL comprises students from diverse backgrounds and

social statuses. At the early stage of distance education, many of the students were adults, who could not attend the conventional institution for one reason or the other. But, you will agree with me that this is not the case at the moment. Many youngsters are enrolling in ODL institutions due to the pressure on the existing conventional schools.

In Nigeria, for instance, millions of candidates seek admission to the conventional universities every year and these schools have limited resources to cater for the increasing demand. Thus, ODL institutions become the best alternative for these individuals in the society. This makes ODL a platform that accommodates diverse categories of students, both young and old. You need to note that these diverse students within the system have different learning styles and preferences. Integrating various media resources into an ODL course affords distance learners the opportunity to utilise media that are most appropriate to individual learning styles and preferences.

I know you will ask me, how?

Okay, for instance, for a distance learner who learns best by watching and practicing, an instructional video will be quite useful in such situation. Other students may prefer learning by listening to by reading, in which case audio will be a valuable instructional media. The youngsters, who are digital natives, might prefer to learn with multimedia resources like infographics, pictures, instructional videos and interactive web-based content. Figure 5 shows some multimedia resources that can be used to engage distance learners.



Figure 5: Using multimedia materials by distance learners

[https://thumbor.forbes.com/thumbor/fit\\_in/1200x0/filters%3Aformat%28jpg%29/https%3A%2F%2Fspecials-images.forbesimg.com%2Fimageserve%2F1127997656%2F0x0.jpg](https://thumbor.forbes.com/thumbor/fit_in/1200x0/filters%3Aformat%28jpg%29/https%3A%2F%2Fspecials-images.forbesimg.com%2Fimageserve%2F1127997656%2F0x0.jpg)

So, you can see that the diverse nature of students within the system necessitates the need to integrate media elements in ODL instructional content at different levels of education. Therefore, it becomes important

for you, as distance learner, to understand how to make use of media resources for effective engagement and interaction. We are going to discuss this better in module 4 So, what do you consider as the strategic roles of media in ODL system of education?

The importance of media in ODL

In more specific terms, media are important in ODL for the following reasons:

Media affords the tutor to cater for the diverse learning styles and preferences of distance learners;

They promote discussion and interaction, whether between tutor and learners, between learners and other learners, or between learners and learning resources;

To increase learners' sense of belonging by connecting them with their tutors and this makes teaching-learning process less impersonal;

Multimedia help to model behaviours that cannot be properly presented using only the print-based such as practical skills and learning other languages;

Media are quite appropriate for distance learners to demonstrate experimental situations in sciences and medicine, especially when the phenomena to be presented are large, expensive, inaccessible, or difficult to understand without visual representation;

They also have the capabilities to synthesise into a coherent whole, a wide range of information that would be voluminous in print format. So, pictures and videos can be used to complement the text to present information to different categories of students.

Discussion: In your area of specialization, discuss how multimedia elements can help you present some concepts that might not be adequately taught with only text-based materials

E-Portfolio: I want you to reflect on some of the media you have used for teaching-learning process and share your experience with the class on the appropriateness of these media to the students' learning styles

### **SELF-ASSESSMENT EXERCISE**

- i. Define the concept of media in ODL
- ii. Analyse the importance of media in ODL

## 4.0 CONCLUSION

Multimedia resources combine the capabilities of different media symbols like text, audio, graphics and videos to make learning real and interesting. These resources are quite appropriate to cater for the diverse learning styles and aspirations of distance learners. This is why ODL institutions need to take advantage of the affordances provided by these multimedia resources to package and deliver instructional content to the learners.

## 5.0 SUMMARY

The focus of this unit was the central roles of media in ODL. The importance of media in ODL was discussed to guide learners and institutions' management in taking decision concerning media selection and use. The heterogeneous nature of distance learners demands that institutions of higher learning prioritise the use of media as effective channels to convey information to the learners, regardless of time and distance.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the concept of media in ODL
2. Differentiate between print-based and audio-based instruction
3. Mention 3 roles of media in ODL

## 7.0 REFERENCES/FURTHER READING

- Dede, C. (1996). The Evolution of Distance Education: Emerging Technologies and Distributed Learning. *The American Journal of Distance Education*, 10 (2), 4-36.
- Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2012). *Teaching and learning at a distance: Foundations of distance education* (5th ed.). Allyn & Bacon: Pearson Education.
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## **MODULE 2      APPLICATION OF MEDIA TO ENGAGE DISTANCE LEARNERS**

### **INTRODUCTION**

In module 1, we discussed the growth of the use of technology in open and distance learning. In this module, we will go into details of how media elements can be used to engage students, who learn at a distance. You will agree with me that distance learners need the power of media to overcome the barrier of distance from their tutor. Also, the tutors are expected to take advantage of the capabilities of different media elements to engage students, who come from diverse backgrounds. As an individual, you have specific preferences for different media and this is applicable to all your colleagues in this programme. So, it is important you and your colleagues are engaged with multimedia resources like pictures, infographics, instructional videos and other media elements, with a view to ensuring that you are motivated to learn even without the presence of the tutors. These are the issues to be discussed in this module. It comprises 4 units listed below:

Unit 1	The Basic Characteristics of Distance Learners
Unit 2	Using Print-based Media to Engage Distance Learners
Unit 3	Using Instructional audio to Engage Distance Learners
Unit 4	Using Instructional Video to Engage Distance Learners

### **UNIT 1      THE      BASIC      CHARACTERISTICS      OF DISTANCE LEARNERS**

#### **CONTENTS**

1.0	Introduction
2.0	Objectives
3.0	Main Content
3.1	The Need to Understand Distance Learners' Characteristics
3.2	Characteristics of Distance Learners
3.2.1	Some Characteristics of Net Generation Students
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

#### **1.0      INTRODUCTION**

In the last unit, we discussed the importance of media in ODL instruction. It is important to note that the first step in design and developing content

for distance learners in learners' analysis. This is imperative because you need to understand the basic characteristics of your learners before selecting or developing media for them. Therefore, in this unit, we are going to give you more insights into why it is important to understand the characteristics of your learners, with a view to taking accurate decision in media selection and development processes.

## **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- describe the basic characteristics of distance learners
- discuss the need to understand learner's characteristics before selecting media for them
- list the characteristics of Net Generation students

## **3.0 MAIN CONTENT**

### **3.1 The Need to Understand Distance Learners' Characteristics**

Let us begin this unit by briefly examining the need to analyse the learners within the instructional space. According to the principle of instructional design, the first step to take in designing content for instructional purpose is the learners' analysis. Instructional designers give utmost importance to learners' analysis for effective teaching-learning process to take place. In the words of Tony Bates, probably nothing has changed so rapidly in the higher education learning space over the last 50 years than the students themselves (Bates, 2005).

In the face-to-face and ODL settings, lecturers/facilitators are expected to embark on learners' analysis to cater for the diverse categories of students within the learning space. It is important that you understand your learners before making attempt to design the content. This becomes more important in the ODL instructional space because your learners are largely coming from diverse backgrounds with different learning preferences and expectations. If your learners are learning from a distance, as you are doing now, then you need to consider their characteristics in designing the content as indicated in figure 6.



Figure 6: Distance learners with diverse characteristics

You need to understand that learners have different preferences when it concerns learning resources to be used for instructional purposes. Some students prefer to read text-based materials while some will like to watch videos to learn the content. ODL space provides opportunities for different categories of people to access formal education and these individuals come to the class with myriad of preferences and expectations. Therefore, it is important to utilize multimedia resources that will cater for the learning needs of various categories of individuals within the system. In designing and developing media for distance learners, these preferences should be considered. It is expected that media should be used to promote education inclusion in the ODL system. In other words, since you will not be there when you students interact with the content, it becomes imperative that you include media resources that will engage all categories of students within the learning space. Thus, before you think about integrating media resources into the online content, the first step is to examine the basic characteristics of the learners for whom you are developing the content.

Why is this more important in ODL today?

Some of you may ask this question. The reason is quite obvious. The preferences and learning styles of learners have drastically changed over the time. First you need to understand that both old and young people are increasingly taking advantage of ODL to access formal education across the globe. Unlike the distance learners in the early 50s and 60s, who were largely adults, the new ODL space comprises adults and youngsters from the Net generation. In the words of Simonson, Smaldino, Albright, & Zvacek (2012) the digital natives born between 1982 and 2005 have already started to form a new educational space, which cannot be restricted by the barriers of distance, time, or curricular mandates. As such, this Net generation of learners has started to dictate the structure of the instructional content across subject areas. This implies that a successful online tutor will consider the expectations and learning styles

of these individuals, when designing and developing media resources for instructional purposes.

### 3.2 Characteristics of Distance Learners

Distance learners have specific characteristics that should be considered when designing and developing content for them. These individuals are usually considered as self-directed learners, who prefer to learn at their own paces. In the early 1986, Cafferella & Cafferella published what they considered the basic competencies and characteristics of for self-directed distance learners. Some of the competencies include:

- The ability to diagnose your own learning needs in a more realistic way;
- The ability to translate needs into learning objectives, with a view to achieving those instructional objectives
- The ability to effectively relate to the facilitators or tutors within the instructional process;
- The ability to identify learning resources appropriate to different kinds of learning objectives;
- The ability to their initiatives to execute learning strategies;
- The ability to gain knowledge and skill from the resources utilized;
- The ability to collaborate with peers for learning purposes;

These characteristics were mentioned by the scholars more than 30 years ago. As a 21<sup>st</sup> Century distance learner, can you consider these characteristics as being appropriate to describe today's learners within ODL setting?

As you must have noticed, learners generally require more than these characteristics to survive in this digital age. In the ODL setting, many students now believe in smart technologies that would allow them share resources with other people across the world. Distance learners are now co-constructors of knowledge and engage in the entire learning process with their own control and ownership, since these individuals come from diverse backgrounds in the society. In other words, students in ODL setting need to manage their learning much more than the students in the face-to-face classroom and in such a way that they are often required to be more self-directed and to monitor their own thinking and action as they through online course materials (Moore & Kearsley, 2012). In this wise, the Net Generation students possess additional characteristics than the attributes of distance learners in the early 70s and 80s.

### 3.2.1 Some Characteristics of Net Generation Students

Gravitate toward group activity

They want to share knowledge and ideas with others

Are fascinated by new technologies

Believe in technologies that make them think and behave smart

Are racially and ethnically diverse

Are focused on grades and performance

Are busy with extracurricular activities

In this wise, it is important that you consider all these characteristics as you develop media resources for your students to learn at a distance. Taking note of these attributes allows you to cater for the diverse groups of learners within the learning space. So, a combination of pictures, videos, simulation, animation, infographics, radio and television will be appropriate for different categories of learners in the ODL system of education

### SELF-ASSESSMENT EXERCISE

- i. Briefly discuss the need to understand learners' characteristics within ODL setting
- ii. If you want select or develop media for distance learners, do you think all these characteristics are still worthy of consideration? If yes, why?

## 4.0 CONCLUSION

The idea about understanding distance learners' characteristics is to make adequate instructional decisions that will cater for their needs and expectations. The learners are coming from diverse socio-economic and cultural backgrounds including adults, young people, divorcees, prisoners, and even retirees. Understanding the expectations and learning styles of these individuals will help you take accurate decisions concerning media selection and development.

## 5.0 SUMMARY

So far, we have shown you the need to understand the characteristics of your learners before selecting media to teach them. We also explored the basic characteristics of distance learners that you need to consider as an online tutor/instructor. In the next unit, we are going to discuss the use of print-based media to engage distance learners in instructional process.

## 6.0 TUTOR-MARKED ASSIGNMENT

Why do you need to understand the characteristics of distance learners?  
Mention 4 characteristics of the Net Generation Students

## 7.0 REFERENCES/FURTHER READING

Jegede, O., & Fan, X. (1999). Attribution and mega-cognitive in distance and open learning: Comparative research on high score and low score. *China Distance Education*, 21, 26–31.

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## **UNIT 2 USING PRINT-BASED MEDIA TO ENGAGE DISTANCE LEARNERS**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Media and Technology
  - 3.2 Print-Based Media
    - 3.2.1 Characteristics of Print-Based Media
  - 3.3 Engaging Distance Learners with Print-Based Media
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

This unit focuses on the capabilities of print-based media to engage distance learners in teaching-learning activities. We will like to emphasise here that text-based materials still remain relevant in ODL, even with the advancement in technology. So, let us examine the affordances provided by these media and see how you can use them for instructional purposes.

### **2.0 OBJECTIVES**

By the end of the unit, you will be able to:

- differentiate between media and technology
- describe the print-based media
- explain the characteristics of print-based media
- discuss how distance learners can be engaged with print-based media

### **3.0 MAIN CONTENT**

#### **3.1 Media and technology**

The controversies surrounding the issues of media and technology have necessitated the need for you, as distance learners, to be able to understand the close relationship and interrelatedness between these two concepts. I know many of you believe that technology can be interchangeably used to mean media. This is what happens in many areas of human endeavours as people refer to all forms of media as technology. However, in the open

and distance learning setting, I will like us to examine the concepts more closely, with a view to identifying the line of demarcation within the instructional process. This will allow us to identify the strengths and weaknesses of these resources and be able to select them appropriately for learning purposes.

In a simple definition, technology can be referred to as the collection of tools and machines that human beings can use to solve problems in the society. In the education setting, educational technology is the systematic utilization of technology to enhance teaching-learning process. These digital tools are used by the teachers and students to facilitate the instructional process and engage learners in classroom activities. This makes technology an integral component of the teaching and learning process as learners learn better when instruction is aided by digital devices like computers, interactive whiteboards and computer-related software.

On the other hand, a medium is a channel or link that contains special symbols, format and representations, which help to convey meaning and knowledge within the instructional setting. In other words, media are symbols that convey detail information about different concepts, which can be used to enhance learning. Appropriate use of media makes learning to be more realistic and engaging to the students. Some media resources like blackboard, objects and so on might not even need sophisticated technology to function. Media and technology are closely related and work collaboratively to enhance learning. In the words of Bate (2016), media largely depend on technology to function effectively, but technology is only one component of media.

You will observe that many technological tools and software can also be regarded as media resources in teaching and learning process. For instance, computing can also be considered a medium because it involves some level of intervention, construction and interpretation and symbolic representation. Computing as a medium could incorporate items like animations, online social networking, using a search engine, and simulations. Thus, the creation of content to communicate with the learners and other can be considered as added features that turn a technology into a medium.

In most cases, when we judge the value of a technological tool, we need to look more closely at the ways in which it could be used to facilitate instruction. In essence, what I am saying is that our focus as experts in ODL should be more on media, which mostly represent the holistic use of diverse technologies within the instructional process.

### 3.2 Print-Based Media

There is a wide range of media to facilitate teaching and learning at all levels of education. The decision to choose a specific medium or combination of media for ODL learners will largely depend on the:

- overall teaching philosophy behind the concept;
- instructional requirements of the subject matter or concept;
- expected competencies to be developed in learners.
- Bearing these criteria in mind, you need to decide which media to be used to engage your students in online learning. The media range from print, audio, and video elements, which can be used separately or combined to achieve the previously stated intended learning outcomes.

#### **So, what are print-based media?**

Here, I want us look at the print-based media and how they can be used for ODL instruction. Print-based media are instructional content in text format to complement classroom instruction. These include textbooks, novels, text messages, magazines, newspapers, journal articles, essays, online asynchronous discussions forum posts and other forms of text, which could be used to convey information in conventional and ODL setting. Many ODL institutions across the world rely largely on text-based course materials to deliver instruction to the students. These texts are still very much relevant within the ODL learning space, even with the advancement in technology and innovation. There are many e-books on the internet that give basic information about different concept and they are therefore appropriate for distance learners at all levels of education. Some institutions now have their course materials on the internet for easy access by the students. For instance, you know that NOUN has an e-courseware, where you can download all the course materials and read at your convenience. Regardless of the mode of instructional delivery NOUN might adopt, these text-based materials still remain integral part of the system. Let me tell you one good thing about text-based material. These learning resources can accommodate other media elements like video links, pictures, infographics and instructional strategies like scenarios and case studies. This is why experts are advocating for a paradigm shift in the focus of text-based learning resources to include multimedia resources like pictures and video links. This will make text more relevant in the 21<sup>st</sup> Century distance learning environment. As you must have noticed, this course material has been enriched with appropriate pictures, videos and scenarios to make learning more realistic and engage different categories of students within the learning space. Unless ODL institutions and other stakeholders see a need to enrich text-based materials with these multimedia resources, it will become

practically impossible to cater for the diverse learning needs and aspirations of the students.

### **Characteristics of Print-Based Media**

Despite the advancement in technology and innovation across the world, text-based materials like newspaper, journal articles and course materials still play significant roles to convey information to the students. The media possess specific characteristics which make them appropriate for instructional purposes over time. These features are highlighted below:

- The key symbol systems in text are written language and still graphics which convey information to the students;
- Text is particularly good at presenting abstract concepts that do not require demonstration;
- This medium allows tutor/course writer to structure the information in a text a linear sequence that will ensure logical presentation of thought;
- The linear structure allows the coherent and sequential presentation that might not be possible with other media;
- Text is quite flexible as allows integration of different media resources like graphics, pictures and videos to convey meaning and facilitate learning.

**Assignment 3:** I want you to come up with other relevant characteristics of text-based media that make them unique within an ODL instructional setting.

### **3.3 Engaging Distance Learners with Print-Base Media**

Print-based media have been identified as useful tools to engage students in the classroom activities. In the face-to-face instruction, lecturers rely on these media to provide information on critical concepts that require higher order thinking. Students are easily provided with additional information by textbooks, journal articles and other texts. This implies that text-based media are used to support and complement classroom instruction at different levels of education.

In the ODL environment, text-based media are important tools to convey information to the students, who are physically separated from their tutors. One basic characteristic of these media is that they allow learners to learn at their own paces. This is exactly what distance learners need to participate actively in the instructional process. Distance learners require self-regulated learning materials that will allow them to learn at their own convenience. ODL institutions across the world are taking advantage of the capabilities provided text-based materials to present instructional

from the distance, by integrating multimedia resources like pictures, videos and scenarios or case studies. Text that is integrated with these multimedia resources is considered to be appropriate to engage diverse categories of learners within the ODL system of education.

Also, due to its capability to present abstract information, and evidence-based argument more logically, text is particularly useful for developing the higher order learning outcomes required to function effectively in the modern society. This is why ODL institutions are still making use of these media resources to engage learners across the society.

Discussion: What will you consider as the major limitations of text-based materials in engaging distance learners, who live in media saturated environment?

### **SELF-ASSESSMENT EXERCISE**

- i. Technology means the same thing as a medium. Do you agree?
- ii. What are the features you can use to identify print-based media?

## **4.0 CONCLUSION**

In spite of the advancement of technology across the globe, text-based materials are still integral parts of the ODL instructional process. It is important to note that you need to combine the capabilities of text-based materials to effectively engage 21<sup>st</sup> Century distance learners. Media like instructional video or television still require some components of text to produce the desired learning outcomes.

## **5.0 SUMMARY**

In this unit, we have discussed the basic characteristics of text-based media and made a distinction between media and technology. We also describe how these resources could be used to engage distance learners, despite the advancement in technology and innovation. It is therefore important that you take advantage of text-based materials while selecting media for your class.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Differentiate between media and technology
2. Define print-based media
3. Describe how print-based media can be used to engage distance learners

## 7.0 REFERENCES/FURTHER READING

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## **UNIT 3 USING INSTRUCTIONAL AUDIO TO ENGAGE DISTANCE LEARNERS**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 The Concept and Types of Instructional Audio
  - 3.2 Design and Development of Instructional Audio
  - 3.3 Creating Podcast for ODL Instruction using Audacity
  - 3.4 Using Instructional Audio to Engage Distance Learners
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

In the previous unit, we focused on the capabilities of text-based media in engaging distance learners. The major limitation of print text is that this important medium is a one-way communication channel and getting adequate feedback from the students might be very difficult. It offers limited opportunities for dialogue and active interaction between learners and their tutors. In this unit, I will like us to examine the capabilities of instructional audio to engage distance learners in teaching-learning process.

### **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- explain the concept of instructional audio
- describe the stages in the production of instructional audio
- demonstrate how to create a podcast for online instruction
- analyse how instructional audio can be used to engage distance learners

### **3.0 MAIN CONTENT**

#### **3.1 The Concept of Instructional Audio**

Why do you think it is impossible to totally rely on print text as an instructional material for this programme?

As we established earlier, print material is basically a one-way communication channel that could reduce that level of interaction among the critical instructional elements (tutor, students and learning materials). This limitation is more pronounced when the text is not enhanced with multimedia resources like infographics, pictures and video links. Therefore, distance learners might require the services of instructional audio to communicate more effectively with their tutors and colleagues. Audio-based instruction includes radio broadcast, Interactive Radio Instruction (IRI), podcasts. These resources give voice to the content that is presented in print format. The implication is that audio-based instruction allows learners to listen to the voice of their tutor and interact with them as well. Radio used to be one-way communication channel, where the students listened to the teachers without having the opportunity to respond and give feedback. However, with the advancement in telecommunication technology, students can now involve in audio-conferencing with the tutors and interact with their colleagues. The interactive radio instruction allows students to listen to instruction at a distance and interact with the tutor during instruction. This encourages interaction and collaboration within the system.

Do you think radio is still relevant for classroom instruction in this digital age?

Regardless of the recent advancement in telecommunication technology, instructional radio is still relevant across the world. This is one of the media that can reach different categories of people, even in the rural areas. This advancement in technology makes radio instruction still relevant with the development of interactive radio and podcast. Much has been said in literature of the advantages associated with the use of radio for instruction, especially in the ODL setting. For instance, phone-based audio conferencing affords multiple tutors and distance learners the opportunity to connect using either an audio-conferencing bridge system or external conferencing providers. One of the major instructional benefits of audio conferencing is that it allows tutors to communicate in real time and it is user friendly than other distance education communication platform like videoconferencing. Phones are a familiar medium requiring no or limited training. Audio conferencing has a long history in both instruction and teacher professional development.

According to John (2015), of all the electronic media, instructional audio is:

The most accessible to both teachers and students

The most affordable in terms of the costs of production, distribution and use  
Lastly, it is quite appropriate for a wide range of teaching and learning purposes

Considering the availability of resources and level of development of many developing countries around the world, instructional audio should still be part of the instructional process, especially in open and distance learning.

## **3.2 Design and Development of Instructional Audio**

### **3.2.1 Pre-Production Stage**

The focus here will be on the production of instructional radio for distance learners, later, I will discuss how to create a podcast. You might be wondering what you need to do at the pre-production stage. Remember that instructional audio is meant to deliver instruction to the students and therefore requires adequate pre-planning. At this stage, you need to consider the following:

**Examining the Curriculum:** This medium is meant to convey specific instructional content and therefore the content should be derived from the curriculum. You need to identify curriculum needs at the subject level. This will guide you on what the content will like and how to go about writing your script. The script should cover what curriculum specifies for the level of students you want to teach.

**Audience:** You need to determine who the audio is intended for. Are you writing the content for undergraduate or postgraduate students? This will involve adequate learners' analysis to determine the basic characteristics of your learners. This will guide you to package content with appropriate examples, learning activities and illustrations for the students.

**Objectives:** You need to specify from the onset, what you expect learners to achieve at the end of the instruction. This is quite important as the level of achievement will be measured by the instructional objectives.

**Content and structure:** You also need to determine what the content will look like and how the content will be logically and sequentially arranged.  
**Form and Format:** At the pre-production stage, you need to specify how the radio content will be integrated with other media and learning activities to engage distance learners. You need to determine if the content will be in form of podcast or instructional radio.

**Materials:** What will be involved in developing and producing the content and how the audio material is intended to be used by the students?

**Evaluation:** How will you evaluate the impact and effectiveness of the radio content? It is important to note that the evaluation should be based on the previously stated instructional objectives.

All these steps are critical components of the pre-production stage. This will ensure adequate preparation for an effective instructional radio that could engage distance learners. As a critical stakeholder in ODL, you need to consider these steps while planning instructional audio for your students.

What activities will you embark on during the development stage?

### **3.2.2 Stages in the Development and Production of an Instructional audio**

By development and production, we mean the process of transforming a set of ideas at the pre-production stage into a form that can be distributed to distance learners as radio programmes or podcast.

Depending on the type of audio material you are developing, this process can involve both subject specialists and audio producers in a wide range of activities:

Commenting on and editing other people's draft scripts and support materials: This involves wide consultations to gather experiences from other people and getting to know how they have gone about writing their instructional audio contents.

Rehearsing and recording scripted talks in a studio or on location: Basically, your audio script should have been distributed in advance to the recording team. This allows them to familiarise themselves with the content of the programme.

Actual recording: This involves the recording of the already prepared script in the studio.

Editing: Audio editing is partly a technical task requiring the skills of a producer or technician. But it is also an editorial task, involving decisions about the inclusion and exclusion of content, which are mainly the responsibility of subject specialists. The recorded content needs to be edited to minimize errors.

Three main reasons for editing include:

- To make sure that the content of the audio material is in line with the instructional objectives and curriculum
- To improve audibility and the clarity of communication
- To ensure that the audio material fits into the time-slot available to you, since it is an instructional content.

Airing or Hosting: The content can now be played on air or copied on storage devices like SD cards or CDs. The content can also be hosted on the internet in form of podcast. I will discuss this in details later.

Some Presentation Tips

- i. You should speak out at comfortable pace
- ii. You should aim for a smooth flow of words
- iii. Modulate your voice properly
- iv. Ensure correct pronunciation of words
- v. You should be calm and confident

### **3.3 Creating Podcast for ODL Instruction**

Here, I will like us to focus on the use of podcast to engage students at a distance. In the recent time, instructional content is now being presented in form of podcast. Participating in online classes can present a serious instructional challenge not only due to their reliance on specific pedagogical frameworks, but also because they require distance learners to have access to high-speed internet. Even to download videos of previous sessions or contribute to discussion forum posts, distance learners require good internet. However, this valuable resource is not readily available to all students, especially in a developing country like Nigeria. Thus, tutors in distance learning environment should be able to present instruction a variety of formats, with a view to promoting education inclusion for different categories of learners. You will agree with me that distance learners, who might not have access to high-speed Internet should also be catered for. At this point, I will like to suggest the use of podcast as one of the media resources that tutor could employ to engage learners.

Essentially, a podcast is simply an audio transcription of information that can be downloaded and played anywhere and anytime. Podcast is usually short and can easily be downloaded even without high-speed internet service. You should be able to record a short audio message that explains a particular concept and upload the content to a podcast hosting service. After hosting, your students from different geographical regions can go the platform and download the content. Generally, podcasts come in a format that is attractive to the 21<sup>st</sup> Century students, who live in media saturated environments. By being able to download a podcast on their mobile phones, distance learners are engaged with a medium that they already familiar with and makes it quite appropriate for ODL instructional space.

### 3.3.1 Using Audacity to Create ODL Podcast

Podcasts are recorded using audio software like audacity, uploaded to a hosting site and then downloaded by distance learners, who can even listen to the content while working on some other things. This makes podcast more user-friendly and convenient than video.

Before you go into recording, you need to write out the script that contains the content to be delivered. Ensure that the script is written in simple and clear language to make learning easy for students. To make recording easy for you, prepare the script in large font like 14 or 16 and should be double-spacing. Print out the script and read as if you are presenting the content in the class, while audacity records your voice. Audacity is an audio software that can be used on any operating system, including Windows, Mac or Linux. You can download it for free on the internet searching for audacity on your browser. After downloading it, follow these steps to create a podcast (a video will be provided for practical demonstration of these steps):

- 1.) Open Audacity. This takes you to the interface where you can record your content
- 2.) Click record at the top left and begin recording your script. When you are done, click the stop button.
- 3.) Listen to your podcast by clicking play.
- 4.) To edit out a section, simply click the track, highlight what you want to remove and click delete.
- 5.) Save your project.
- 6.) Click File and then click Export to export your audio recording for uploading. For Windows. export the content as an MP3 or WAV file.

### 3.3.2 How to Upload and Share

Now that you have recorded a podcast, you need to choose how to share the content with your students. If you're just creating a podcast for your students you can just create a Google Drive, Dropbox, or iCloud and then, export the episodes directly to these folders, where your students can listen to the content.

However, as an online tutor, you might need to share your podcasts online by uploading your episodes to a specific podcast hosting service. This will make it easier to share it on your website or on iTunes. There are many hosting sites that can do this effectively. You can try Podbean or Buzzsprout. Both offer free 2-5 hours plans for educators at different levels to upload their podcast content. At any point, you can easily upgrade your plans to the pro version which offers more possibilities to

reach your students. Once you registered with any of these hosts, you can then upload your audio content for distance learners to download and watch at their own pace. The platforms have the functionalities where you can embed an audio player in your website or class blog to share the podcasts. Sharing the podcast to iTunes becomes easy as those services will help you upload it with just the click of a button. After you have introduced podcasts in the online learning space and have your students actively engaged, you can instruct them create their own podcasts as well by following the steps demonstrated in the video below.

The links below will guide you on how to create podcast

<https://youtu.be/LnQiCVW7YCQ>

[https://youtu.be/GzaW\\_JNx7Y0](https://youtu.be/GzaW_JNx7Y0)

**Assignment 4:** Based on what you have watched, create a podcast that is suitable for ODL instruction

### **Instructional Benefits of Podcast in ODL**

It has been established that the attention span of students in this digital age is generally short, and they are faced with more distractions today than ever before. Podcast makes learning more convenient for distance learners, as they will be able to listen to instruction from the comfort of their homes and workplaces, even while doing other things like driving, jogging, sweeping and so on. This is in line with the principle of flexibility on which ODL stands.

- i. Students could listen to podcasts longer than video or other media as it allows them the freedom to multitask.
- ii. Distance learners with limited access to the internet can also participate in instructional process as podcast can be downloaded with low-speed internet, unlike videos and other media.
- iii. Finally, a podcast affords students to opportunity to picture what they're listening to and create their own visual interpretation of the concept.
- iv. E-Portfolio: How to you think podcast could be used to expand educational opportunities through ODL?

### 3.4 Using Instructional Audio to Engage Distance Learners

As you must have rightly observed, instructional audio remains a powerful medium to convey information to diverse categories of students within the ODL setting. Instructional audio include podcast, radio, interactive radio, audio conferencing among other tools. Five main roles of instructional audio are:

- News and information
- Motivation and mobilisation
- Tutorial support
- Resource material
- Direct teaching

Distance learning tutors could leverage on these 5 strategic roles of instructional audio to engage learners at a distance. Remember, your students are physically separated from you in terms of space and time. Thus, you require the power of instructional audio like podcast, radio, interactive radio, audio conferencing and so on to engage them in instructional process.

#### **News and information**

Instructional audio has the capabilities give distance learners up-to-date news and information concerning:

- appropriate learners' support available within the system
- opportunities and options available to them to make choices
- courses available, course materials, assignments and exams timetables
- the experience of fellow students and trainees
- issues of common interest and concern to all students
- admission requirement and registration process

#### **Motivation and mobilisation**

Basically, radio and other instructional audio convey human voice, so, they make learning personal and realistic. This engages learners in the instructional content. Instructional audio can, therefore, provide encouragement and support to distance learners at the appropriate time, especially:

- When they lack confidence to embark on a course of studies
- When they first start studying and are anxious about whether they can cope
- When they are facing their first assignment or examination

- When they are finding the work difficult and are tempted to give up
- By these prompt interventions, instructional audio can reduce the drop-out rate within the system and therefore improve course completion rate.

### **Tutorial support**

Instructional audio, especially radio can provide tutorial support on specific courses to assist students in difficult areas and how to prepare for TMAs and examinations. For instance, radio can:

- Help with study skills on how to organise time, make notes, prepare assignments, and execute other instructional tasks;
- Assist with key concepts, difficult ideas and new approaches;
- Provide additional illustrations, examples and explanations, alternative ways of applying knowledge and acquisition of appropriate skills;
- Provide adequate guidance and feedback on different instructional activities to help learners monitor their academic progress.

### **Resource material**

Instructional audio like radio, interactive radio instruction, audio-conferencing and podcast can offer listening and learning experiences that are not readily available through print media or face-to-face interaction in the conventional setting. For instance:

It can provide students the voices and views of other people across the world with particular experience and expertise.

It can take students to places and situations that they would not normally be able to visit and experience.

Radio drama can stimulate and excite students' imagination and therefore make learning realistic and connected to real-life situation

Radio can provide students with a range of learning resources, which students can analyse and evaluate, and this can propel reflection, discussion and collaboration.

### **Direct teaching**

Radio can also be used for direct teaching and sustains interaction between tutor and distance learners. Instructional audio can be used for direct teaching in the following circumstances:

- When you are dealing with distance learners with low literacy level, or who are just being migrated from the conventional education setting;
- When sound is strategic to the dissemination of a particular concept, as we have in the teaching of language or music;
- When teacher does not have the required visual material to teach a concept.

The use of radio for direct teaching has expanded educational opportunities in the countries like Nigeria, Mexico and Nicaragua. Some examples are: (1) Different instructional radio programmes on FRCN and other campus-based radios across Nigeria like NOUN radio in Lagos (2) Radio primaria in Mexico and (3) Radio Mathematics in Nicaragua. Direct classroom teaching by radio can be used to improve the quality of instruction and when we consider this, we need to talk about how radio has been used for massive education in Nigeria. For instance, radio message has enabled nomadic people to receive education while traveling from one place to another.

Discussion: Share your experience on the effectiveness of a particular radio programme that has helped in expanding educational opportunities.

### **SELF-ASSESSMENT EXERCISE**

- i. How will you describe instructional audio in your own words?
- ii. What is the difference between pre-production and production stages of instructional audio?
- iii. What are the benefits of podcast in ODL?

## **4.0 CONCLUSION**

Instructional audio like radio and podcast have the required capabilities to engage distance learners anywhere, anytime. Distance learners can listen to the podcast in their workplaces without the need to watch the content like video. This makes it appropriate for ODL setting to ensure flexibility in the system.

## **5.0 SUMMARY**

We have exposed you to the concept of instructional audio and how the media can be used to engage different categories of distance learners. The development of instructional audio involves critical stages like scriptwriting, rehearsal, searching for materials, recording and editing.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Define instructional radio
2. Describe the stages involved in instructional radio production
3. Distinguish between instructional radio and instructional television

## 7.0 REFERENCES/FURTHER READING

- Thomas, J. (2001). *Audio for Distance Education and Open Learning: A Practical Guide for Planners and Producers*. The Commonwealth of Learning and the International Extension College. ISBN: 1-895369-92-4.
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## **UNIT 4                    USING INSTRUCTIONAL VIDEO TO ENGAGE DISTANCE LEARNERS**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 The Strategic Roles of Videos in ODL
  - 3.2 Instructional Television in ODL
    - 3.2.1 Basic Functions of Instructional Television in ODL
  - 3.3 Production of Instructional Television Programme
  - 3.4 Engaging Distance Learners with Instructional Videos on Virtual Learning Environment (VLE)
  - 3.5 Creating Vodcast and Uploading to VLE
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The diverse characteristics of distance learners, coupled with the increasing advancement in technology, necessitated the need to integrate multimedia resources in the ODL content. The last unit exposed you to how instructional audio could be used to cater for the diverse learning styles and expectations of distance learners. In the unit, I will like us to consider the capabilities of instructional videos to engage learners at a distance. As a postgraduate student in open and distance learning institution, it is expected that you have the required knowledge and skills to produce video clips for instructional purpose. Remember, the videos you will produce are not meant for entertainment, rather, they are to be used teach specific instructional content. This requires systematic planning and development to meet the needs of your learners. For you to function effectively in the 21<sup>st</sup> Century ODL instructional space, you need some competencies on how to produce short instructional videos to engage your students. Thus, towards the end of the unit, I will give you an instructional video that will walk you through the steps in producing a video-on-demand podcast (Vodcast) and how you can upload your video on the virtual learning environment (VLE), especially MOODLE.

## 2.0 OBJECTIVES

By the end of this unit, you will be able to:

- describe the roles of videos in ODL instruction
- analyse the basic function of instructional television
- explain the stages involved in production of instructional television
- demonstrate how to create vodcast for ODL instruction

## 3.0 MAIN CONTENT

### 3.1 The strategic roles of videos in ODL

Can you engage 21<sup>st</sup> Century distance learners in instructional process without appropriate videos?

It has been established in literature that video engages learners in instructional content and makes learning connected to real-life situation. Video is a much richer medium than either text or audio, because in addition to its ability to offer text and sound, it can also display moving pictures. Thus while it can offer all the affordances of audio, and probably text, it also has unique pedagogical characteristics of its own (Bates, 1985; 2005; Koumi, 2006; Mayer, 2009). According to some reports, distance learners prefer instructional videos to other instructional media (Chang, 2004).

According to Bates (2016), video can be used to:

Demonstrate experiments, particularly:

where equipment or phenomena to be observed are expensive or unavailable, where resources are scarce, or unsuitable for student experimentation (e.g. live animals, human body parts) (click the link <https://youtu.be/dniCgjsGmv8> to see an example of the anatomy of the kidney).

- illustrate abstract principles through the use of specially constructed physical models;
- illustrate principles involving three-dimensional space;
- demonstrate changes over time through the use of animation or simulation (click the link <https://youtu.be/aYfGulDoKrg> to see an example of how rusting occurs in iron);
- bring students primary resource or case-study material, i.e. recording of naturally occurring events which, through editing and selection, demonstrate or illustrate principles covered elsewhere in a course;

- demonstrate ways in which abstract principles or concepts developed elsewhere in the course have been applied to real-world problems;
- synthesise a wide range of variables into a single recorded event, e.g. to suggest how real world problems can be resolved;
- demonstrate decision-making processes in an organization or institution
- demonstrate correct procedures in installing software (Click the link <https://youtu.be/9ZIFyGGniQU> to watch how to install Moodle);
- demonstrate methods or techniques of performance (e.g. mechanical skills such as stripping and reassembling a carburetor, sketching, drawing or painting techniques, or dance).

Now that you have watched the 3 instructional videos provided above, do you still think you can easily engage your learners without instructional videos?

What can you consider as the specific strengths of instructional videos within ODL instructional space?

The main strengths of video in ODL are as follows:

- linking concrete events and phenomena to abstract principles and vice versa;
- the ability of students to stop and start the video their own paces anywhere, anytime;
- providing alternative approaches that can help distance learners who are experiencing difficulties in learning abstract concepts;
- adding substantial interest to a course by linking it to real world issues;
- stimulating and sustaining students' interest in ODL content;
- good for developing some of the higher level intellectual skills and some of the more practical skills needed in a digital age;
- with use of low cost cameras and free editing software, online tutors can now produce videos at the cheapest cost.

### **3.2 Instructional Television in ODL**

Instructional television is a video-based instruction that combines the powers of sound, text and visual to engage different categories of learners. This is shown in figure 7. Instructional television is an emerging instructional medium used in many parts of the world to improve students' academic performance and to enable a teacher teach a large group of students at a distance (Mustapha & Haroun, 2017).



Figure 7: Instructional television combines text, audio and visual  
afronline.org

It brings into classroom experiences, what teachers cannot physically provide for the students. These include costly demonstration, complex experiments that are not within the reach of the institution. Educational television has been discovered to have profound effect on acquisition of language among young learners (Gocen & Okur, 2013). According to Gocen and Okur (2013) learners mimic what they see on television and as such remember more of the things they watch than the ones they learn in the classroom.

### 3.2.1 Basic Function of Instructional Television in ODL

In the open and distance learning, instructional television can be used to reach different categories of people in the society. One of television's most obvious characteristics is its visual display of content. Humans intuitively grasp the power of images to convey meaning and interpret content. This makes instructional television an important video-based medium to engage distance learners, who are physically separated from their tutors. According to Dike (2012) broadcast media like television as educational delivery tool possesses the capabilities to distribute signal to diverse learners who are located at different places at the same time. This makes it quite suitable for open and distance learning across the globe.

Adediran (2004) states the following as basic roles of instructional television in education:

**Socialization:** It helps to improve the rate of socialization among people in the society and this will encourage students to learn about their history, great personalities, ceremonies, dressing, cultural values and societal norms.

Religion: Television remains a viable platform to learn about the fundamentals of different religious beliefs and even at a distance, students will be able to get adequate information about their religions.

Core Subjects: Teachers can leverage the capabilities of instructional television to teach general courses that are compulsory for all students. In ODL, these large classes can be handled with instructional television Sex education: This platform can also be used to convey information about sex education, especially on how distance learners can protect themselves from unwanted pregnancy and diseases like HIV/AIDS and STDs.

Instructional television has been used to help teachers develop their professional skills. The defunct National Educational Technology Centre in Kaduna once designed a programme called “Audio Visual Aids for Teachers”. This indicates that instructional television can be used to build capacity of teachers and also give necessary information to distance learners concerning admission, registration and learners’ support.

Instructional television provides learners with access to knowledge and information in a more direct and concrete forms.

I believe you will agree with me that all these capabilities make instructional television quite appropriate for ODL instruction.

### **Production of Instructional Television Programme**

Instructional television is different from entertainment programme because it is meant for instructional purposes. Thus, there are systematic procedures to produce an acceptable instructional television programme. The stages involved in the production of instructional television are:

1. Pre-production Stage
2. Production and
3. Post-production. Let us look at them one at a time.

#### **3.3.1 Pre-Production Stage**

This is the planning stage before the actual production process. This may commence long before the studio activities. During this stage, the production crew including the producer and director work with the script writer to complete the script and to develop the overall production approach. All the crew members discussed in the previous unit are required here also. The following are the things to consider at this stage:  
Audience Characteristics

According to Zettl (2006), it is during this stage that the teacher needs to know what the audience needs to learn, do and feel. You also need to

make decision on the specific people needed to do the job such as content experts, the script writers, directors, crew and supporting staff. It can also be decided where to do the production most effectively, either in the studio or in the field.

### **Intended Learning Outcomes/Instructional Objectives**

You need to establish the objectives at the beginning of the process. The instructional objectives indicate the expected learning outcomes after participating in the television programme. These objectives guide you on what to include in your script as well. As you have learnt with the production of audio instruction, you need to do same here.

### **Scripting**

At this stage, the script writing is critical component as it has direct impact on the content. Therefore, the script you are going to write should be derived from the curriculum. You need to ask yourself, what are the things the curriculum requires my students to learn? This should form the basis for the scripting. A television script translates an idea into a detailed text that can act as guideline for real production. The script also contains important information on reproduction, production, and postproduction information (Zettl 2009, 32). So, the script should cover the required content, as specified by the curriculum.

### **Facilities and Materials**

You need to decide and select the materials like production equipment, properties and costumes needed for a production. There should be a formal request from appropriate quarters which contains information about date and time of rehearsals, recording sessions as well as all technical elements, such as cameras, microphones, lights, sets, costumes, makeup, graphics, video recorders, video and audio recording facilities, and other specific production equipment requirements.

## **3.3.2 Production**

Surprisingly, the time required for actually recording the instructional television programme shorter than the time spent organizing and planning it. The actual production involves shooting the video that could be live or recorded to be edited later.

**Live:** The live educational television programme involves real-time presentation of content by the teacher in a television station. It is the mostly used presentation form in educational television programs. It is used in five different ways: Direct Presenting (Straight Narration-Talk); Presentation with Visual Material Use; Presentation/Question/Answer; Interview; Table Discussion/Panel/ Discussion.

Recorded for Editing and Sharing: Instructional television programme could be recorded and saved for editing. This editing is done at the post-production stage. This recording can be broadcast on the television at a particular time that must have been communicated to the students, so that they will be part of the class.

### **3.3.3 Post-Production**

In post-production stage, three activities are bound to take place which include editing, evaluation/feedback and sharing. Editing involves correction regarding appropriate background music, colour, audio effect, transition or animation. The producer need always be available in case the director or the editor wants advice about a particularly sensitive editing decision (Zettl, 2006). The postproduction activities may take longer time than the actual production.

The rapid evolution of post-production technology has grown over the years. In this digital age, you need a level of competence in video editing that involves the use of computer software and other digital tools. The operational principle of nonlinear editing (NLE) is selecting video and audio data files and making the computer play them back in a specific sequence. All nonlinear editing is done by selecting and sequencing shots that have been transferred from camcorder to the computer hard drive of an editing system. In module 4, I will expose you to how you can use camtasia to edit videos for instructional purposes.

## **3.4 Engaging Distance Learners with Instructional Videos on Virtual Learning Environment (VLE)**

Instructional video in an e-learning system allows proactive and random access to video content. Evidence abound that video-based instructional materials are pedagogically superior to the traditional learning content when properly integrated into ODL instructional content. Instructional video is pedagogically superior in the sense that, this medium is quite appropriate for ODL instructional terrain and structure. You know that as a distance learner, you are physically separated from your tutor in terms of time and space. The opportunities provided by instructional video can bridge the gap within ODL instructional setting. When the qualities of the instructional video materials such as content, text, pace, images, and sound are appropriate and visible, online learners responded positively to the video-based instructional materials than text or instructional audio. Thus, the appropriate use of video-based content is likely to increase learners' motivation, interest, and development of competencies (Donkor, 2011).

The internet technologies provide new possibilities for delivering educational video more easily than ever before to distance learners across geographical locations. These new possibilities provide opportunities for learners with internet service to watch the instructional video and also interact with each other anywhere, anytime. Videos can be in different forms including instructional videos, video-conferencing, vodcast, low-tech videos, animation, simulation and screencasting. All these forms of videos can be used to engage learners, who learn at a distance.

I know you must have heard about virtual learning environment (VLE). This is an online platform that allows you to upload your learning content on the internet and interact with your students from any part of the world. It is a learning platform that gives you the opportunity to engage your students synchronously and asynchronously. Synchronous facilitation involves real-time interaction with the students on the VLE and gives them immediate feedback. Asynchronous facilitation allows you to come online at a particular time to engage students in discussion forum. These VLEs include Moodle, Blackboard, Canvass and so on. These VLEs are equipped with functionalities that allow you to upload learning resources like videos, pictures, graphics, podcast, vodcast and other multimedia contents. This provides opportunity for distance learners to come online and download the materials to use at their own pace.

Click this link to watch video on how to upload video to Moodle  
<https://youtu.be/GpCz-wq5uj0>

Here, we will like us to look at the Vodcast and how it can be created to engage distance learners.

Why is vodcast considered appropriate to engage learners at a distance?

### **3.5 Creating Vodcast (Video Podcast) to be Uploaded to VLE**

A vodcast (Video-On-Demand Podcast) is a video recording posted on the internet and can be downloaded to be used with a certain media device like a mobile or personal computer. Vod is an acronym for "video on demand". After recording, the vodcast can be uploaded on the VLEs like Moodle or Blackboard, so that students will be able to download and watch at their own pace. As an online tutor, there are concepts you might need to <sup>quickly</sup> demonstrate and made available to your students. Using Vodcast, you can demonstrate some concepts and upload to the internet, through the VLE. You can record your vodcast in PPT slides and screencast the content with the use Camtasia Steps to create Video-On-Demand Podcast

The following steps could be followed to prepare and upload the vodcast:

- Write the script
- Record the video, which you can do with low-cost cameras or even camera on your mobile phones
- Edit the video using authoring tool like Adobe Premiere, Movie maker or Camtasia
- Save and Publish
- Upload to the Youtube
- Upload to the VLE like Moodle
- Watch videos on how to create vodcast below  
<https://youtu.be/hmYrQ1JJUrc>  
<https://youtu.be/DmToZWQfWjU>

Discussion: Based on what you have watched, what can you consider as the benefits of vodcast in the digital ODL space?

### **SELF-ASSESSMENT EXERCISE**

- i. Describe the roles of video in ODL instruction
- ii. Explain central place of instructional objectives in determining the video content

## **4.0 CONCLUSION**

The affordances provided by videos can go a long way at enhancing instructional design, development and delivery within ODL setting. The internet technologies provide new possibilities for delivering educational video more easily than ever before to distance learners across geographical locations. These new possibilities provide opportunities for learners with internet service to watch the instructional video and also interact with each other anywhere, anytime. Videos can be in different forms including instructional videos, video-conferencing, vodcast, low-tech videos, animation, simulation and screencasting. All these forms of videos can be used to engage learners, who learn at a distance.

## **5.0 SUMMARY**

This unit has exposed you to the capabilities of different types of videos to enhance teaching-learning process, especially in open and distance learning environment. We have also discussed the stages involved in the production of instructional television and vodcast. It is expected that you are going to take full advantage of these media to make learning interesting and connected to real-life situation.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. What is instructional television?
2. Describe the stages involved in the production of instructional television
3. Explain the roles of instructional television in ODL

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**MODULE 3      COMPUTERS AND COMMUNICATION****NETWORKS IN ODL**

- Unit 1      The Roles of Computers in ODL
- Unit 2      Network Technologies in ODL
  - Dial-Up
  - ASDL
  - VSAT
  - Fiber
- Unit 3      Internet Technology and ODL

**INTRODUCTION**

With the advancement in technology and innovation across the world, computers continue to play strategic roles education sector and other areas of human endeavours. I think you will agree with me that these roles become more important when we consider the separation between tutors and their students in the ODL setting. In module 2, we have discussed the use of media to engage students, regardless of time and distance. In this module, we are going further to examine the place of computers and communication networks in ODL. As a distance learner and a potential online tutor, I am of the opinion that you need basic information on how computers and internet can work together to bridge the instructional gaps between distance learners and their tutors.

**UNIT 1      THE ROLES OF COMPUTERS IN ODL****CONTENTS**

- 1.0    Introduction
- 2.0    Objectives
- 3.0    Main Content
  - 3.1    The Roles of Computers in ODL
  - 3.2    The Need for Pedagogical and Appropriate Use of ICT in ODL
- 4.0    Conclusion
- 5.0    Summary
- 6.0    Tutor-Marked Assignment
- 7.0    References/Further Reading

**1.0    INTRODUCTION**

Many institutions are increasingly taking advantage of technologies to facilitate teaching-learning process as instructional activities are rapidly

becoming technology-based (Bello & Hamzat, 2020). In the ODL setting, computers are considered as important devices to package and deliver instructional content to diverse categories of learners. In this unit, I will like us to consider the strategic roles of computers, when it comes to teaching and learning in open and distance learning institutions across the world.

## **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- explain the roles of computers in ODL
- discuss the need for appropriate use of computers in ODL setting

## **3.0 MAIN CONTENT**

### **3.1 The Roles of Computers in ODL**

The information and communication technology-based media is very important for distance learners. In open and distance education different types of technologies and media are used to convey information to the learners. In the concept of new technology, distance learning provides multimedia- based education content to the student utilizing standard data networking and computer-related devices, including mobile phones. The main advantages of using technologies in distance education are cost effectiveness, independence of time and place, quality of education access resulting from the mass production of course materials, confronting the challenges associated with large classes, and providing huge educational resources to enhance learning.

The following can be considered as technologies which are still being used in ODL instruction:

Audio Materials: These include radio, interactive radio instruction, audio-conferencing and podcast

Video: Including Slides/Still Video, Instructional Television, CDs, Instructional videos and video-conferencing;

Computers: Stand-alone PC, Computer Conference, Laptop;

Network Technologies: Cable Network International, Satellite; and  
Multimedia Resources: DVD, Interactive whiteboard

Among all these technologies that had been used or are still being used in ODL, computer has been considered as the most versatile as it provides a viable platform for all other devices to operate. Many of these

technologies require computers to function effectively to convey information to distance learners. In the words of Jegede, (2016), computers are digital devices that have made the integration of technologies possible, and this has assisted in the creation of new products and resources with combined powers of digitised audio, video, image, animation, data and simulation. These combined powers of computers are now being used by distance learning institutions to package the content and facilitate seamless instructional delivery to the students. In most cases, computers are being used to create interactive learning content that could engage learners, who come from diverse background. To effectively utilize the powers of computers in creating learning resources, many ODL institutions create special units for this purpose. For instance, the National Open University of Nigeria, (NOUN) established the Directorate of Learning Content Management System to work with content experts in creating learning contents that are interactive and could assist in bridging the gaps between students and facilitators.

Remember that you, as distance learners, are separated from the facilitators and learning institution. As you read this course material, I am sure that all of you are spread over the country and beyond, and the versatility of computers can be used to engage you in instructional content, even without teachers' presence. Computers can be used to develop multimedia contents that make learning real and connected to real life situation. Computers have made the invention and integration of technologies possible resulting in new products which combine digitized audio, video, image, animation and data.

Is computer a means to an end or an end in itself?

### **3.2 The Need for Pedagogical and Appropriate Use of Computers/ICT in ODL**

Distance learning institutions are increasingly depending on ICT to bridge the instructional gaps between institutions and the students. Apparently, the capabilities of computers and ICT in general provide opportunities for learners to interact with their tutors, irrespective of spatial and temporal barriers. The 21<sup>st</sup> Century students live in media-saturated environment.

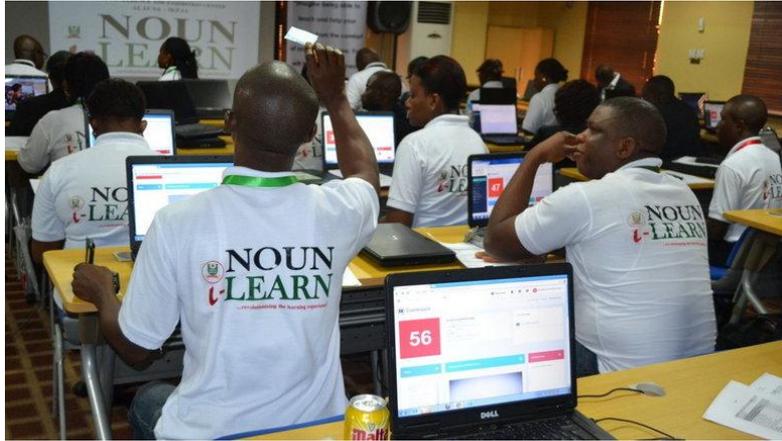


Figure 8: Distance learners rely on technology

So, computer allows them to learn with multimedia resources that they are familiar with. This will engage students in instructional content. Basically, ICT is meant to enhance instructional delivery at a distance either synchronously or asynchronously.

However, it is important to note that computer is just a means to an end, not an end in itself. In other words, ICT generally and computer specifically are supposed to be used pedagogically to facilitate instructional delivery in ODL system. Bates (1995) believes that without a strategic platform for capacity building in the utilisation of ICT in ODL the instructional benefits to be derived will continue to be at the minimal level. In open and distance learning, the effective use of ICT is expected to be directed at a specific purpose, chart a definite path to realise the goal, and must be pedagogically deployed to cater for the peculiar characteristics of the system. The issue goes beyond the use of devices and software packages, it incorporates appropriateness of the technology to the system, appropriateness to the students' learning styles, technical competence and capacity for the staff, cost effectiveness, readiness to be familiar and use the new learning environment, and consideration about the social and cultural milieu of the learning ecosystem. Do you know why we need to consider all these issues? Moving faculty members from face-to-face setting to ODL environment requires a paradigm shift in the methodology and functions. Even the existing faculty members in distance learning institutions are now faced with challenges of using new technologies to engage distance learners. This new environment imposes additional responsibilities on the teachers, as they need to consider the change in the learning platforms and adjust their styles accordingly. Therefore, it is not the use of computers in ODL that is important, it is the appropriate use of these devices to cater for the peculiar characteristics of the learners and the instructional setting.

**Scenario:** Realising the fact that many of his students in the classroom are digital natives, who live in media-saturated environment, Prof. Akanbi, a Professor of Psychology, decided to engage his students with the use of technology. Since he has been handling the course for over 30years, he copied his old lesson note to PowerPoint for classroom presentation. As you can imagine, the PPT was literally text-based. To his greatest surprise, he realized that the class was characterized with low levels of interaction and engagement. But I thought this would motivate my students to learn, the disturbed Prof. Akanbi said after the class. He decided to seek help from experts in educational technology and instructional design on how best to use technology to engage different categories of students. If you are contacted at this point, what professional advice will you offer, especially on how to use technology pedagogically?

Discussion: Based on the scenario, suggest a way out for Prof. Akanbi. Share your opinion on the discussion forum during online facilitation. Your online facilitator will inform you accordingly, when you are expected to do this.

### **SELF-ASSESSMENT EXERCISE**

- i. Why is computer considered as the most versatile among all the technologies used for ODL instruction?
- ii. What can you consider as the rationale for appropriate use of technology in ODL?

## **4.0 CONCLUSION**

It is not enough to have different forms of technologies at your disposal, what is important is the way you utilize these resources to enhance teaching-learning process. As you are thinking of using technology/media to engage distance learners or learn at a distance, there is a need to consider how these devices could be used to suit diverse learning needs of the learners as well as the peculiar characteristics of ODL setting.

## **5.0 SUMMARY**

In this unit, we have discussed the critical roles of computers in ODL instruction. This was meant to equip you with requisite knowledge on the basic capabilities of computers and it can be used for instruction. In the last part of the unit, we also exposed you the need for appropriate use of ICT/computers to ensure that the diverse learning needs of distance learners are met during instruction.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. What makes computers strategic among all the technologies used in ODL?
2. Explain the need to understand the pedagogical use of technology in ODL setting

## 7.0 REFERENCES/FURTHER READING

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## **UNIT 2 NETWORK TECHNOLOGIES IN ODL**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 The Concept of Network Technology
  - 3.2 Types of Network Technologies
    - Dial-Up
    - ASDL
    - VSAT
    - Fiber
  - 3.3 Importance of Network Technologies in ODL
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

In the last unit, we discussed the strategic roles of computers in ODL and how tutors can effectively utilize them to engage learners. In this unit, I will expose you to the concept of network technologies and how these technologies could help to realize the goals of ODL across the globe.

### **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- explain network technologies
- describe the types of network technologies
- discuss the importance of network technologies in ODL

### **3.0 MAIN CONTENT**

#### **3.1 The Concept of Network Technology**

The 21<sup>st</sup> Century ODL system depends largely on the appropriate use of technologies to enhance instructional delivery. I have told you in the last units that the distance between distance learners and their tutors remains a crucial barrier within the instructional process. However, the advancement in technology has bridged this gap as many learning institutions are rapidly taking advantage of modern technologies to promote information sharing, collaboration and interaction through network technology.

Networking simply means the process of connecting computers electronically to ensure that users are able to share information and exchange ideas. This includes sharing of resources like applications, files, printers and other important software that could facilitate exchange of information. Data security, efficiency, and cost effectiveness can be seen as the main advantages of networking, especially within teaching-learning process. Basically, network technology comprises hardware components like computer, switches, routers, hubs and other important digital devices which form the network architecture.

Globally, the affordances provided by the network technology are rapidly producing a large educational community, where tutors and distance learners can access and share information. This system provides you as a distance learner with the opportunity to access valuable learning materials and exchange ideas with your colleagues across different geographical locations. In essence, network technologies allow students to access information anywhere, anytime. This makes the technologies to be appropriate for ODL setting. In the modern world, no distance learning institutions can operate efficiently without the use of effective network technologies.

### **Types of Network Technologies**

Cutting-edge network technologies have the capabilities to expand opportunities reach distance learners anywhere, anytime. The network technologies that can be used in ODL include:

**Dial-up Connection:** A dial-up has been considered as one of the lowest-cost connections to the Internet with the use of a single standard phone line. This connection is usually established using a modem that should be connected to an active phone line as depicted in figure 9. The telephone line will be connected to the modem in your computer and you will insert the other end into the phone jack to access the internet on your computer.

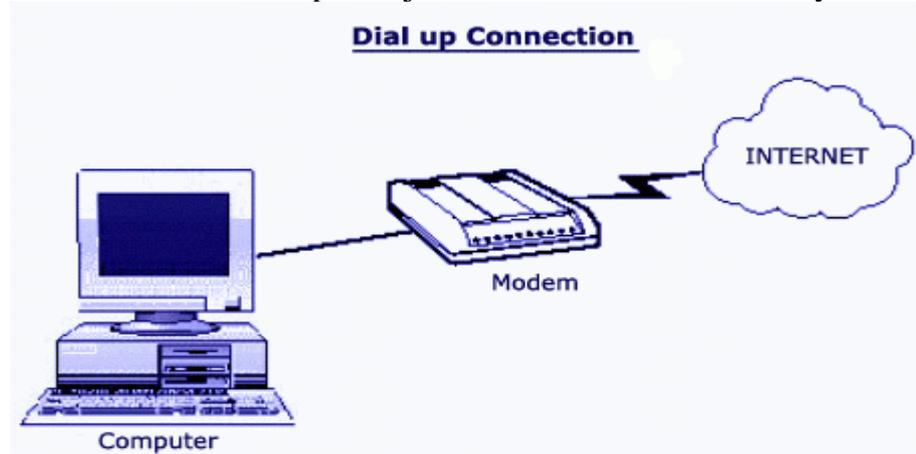


Figure 9: Dial-up Connection

[https://4.bp.blogspot.com/-VAebjycMWzU/T-ineXKfcvI/AAAAAAAAAhY/c6wWzIXf\\_P4/s1600/Dialup+Connection.gif](https://4.bp.blogspot.com/-VAebjycMWzU/T-ineXKfcvI/AAAAAAAAAhY/c6wWzIXf_P4/s1600/Dialup+Connection.gif)

This connection can provide Internet access to a single computer and also, if you use software on a server, you can share the internet with networked computers. This is quite helpful in ODL as it makes internet much affordable for different categories of learners.

Very small aperture terminals (VSATs): This is a two-way ground station network device that primarily transmits and receives data from the satellites. When combined with geosynchronous satellites, this technology can be used for interactive voice and data transmission. ODL institutions can take advantage of this network technology to exchange information and exchange data within the system.

Digital subscriber line (DSL): This technology is of wide bandwidth than allows transmission of data with good speed. It can be used in the metropolis where copper wire is already installed, but its range is usually limited to about 1 km from a telephone exchange.

Optical fiber: ODL institutions can also make use of this network to bridge the instructional gaps between distance learners and their tutors.

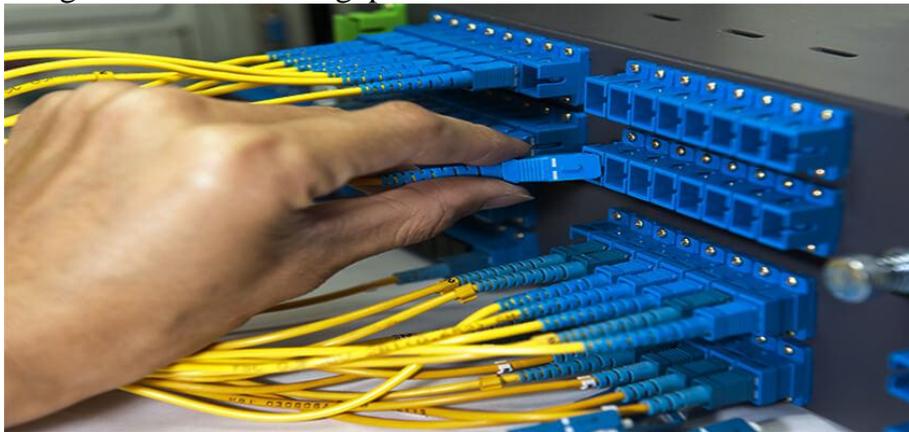


Figure 10: Optical Fiber Connection

<https://www.chemtronics.com/Content/Images/uploaded/fiberinstall2.jpg>

The is shown in figure 10. The main advantage of optical fiber is its huge bandwidth, which can be used for online facilitation that requires high speed Internet services. You need to note that online facilitation is now at the heart of ODL system as it allows synchronous and asynchronous interaction between tutors and students.

Can computers function maximally in ODL without the Internet?

### 3.3 The Importance of Network Technologies in ODL

ODL system requires the capabilities of different forms of technologies to bridge the distance between students and tutors within the instructional process. This is why distance learning institutions are increasingly investing in technology-based resources to engage students in instructional content, regardless of distance. Network technologies give distance learners the opportunity to exchange information to promote meaningful interaction between students and tutors (Bachmaier, 2011; Thoms & Eryilmaz, 2014). Network technology plays strategic roles in open and distance learning to meet the learning requirements and expectations of diverse categories of learners within the system. It is difficult to achieve seamless connection within the system without effective network technology.

With the limited resources for education system in most developing countries, including Nigeria, efficient network technologies allow for sharing of information and data at affordable rate. For instance, NOUN has operational nodes across the country, which include more than 80 study centers and the institutional headquarters in Abuja. The institution takes advantage of network technologies to share resources and transmit information across the centers and the headquarters. This makes network technologies more strategic to the operation of many distance learning institutions across the globe.

**Assignment 5:** Describe how network technologies have contributed to the realization of NOUN mandates

#### SELF-ASSESSMENT EXERCISE

- i. Distinguish between dial-up connection and VSAT
- ii. Describe the importance of network technologies in ODL

### 4.0 CONCLUSION

Network technologies are critical components of ODL across the world. The ODL setting benefits maximally from these technologies through sharing of resources for instructional activities.

### 5.0 SUMMARY

This unit focused on the network technologies that could assist ODL institutions in sharing resources and devices. This will enhance

instructional delivery and dissemination of information within the system. The specific roles of network technologies in ODL were also discussed.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Briefly explain the concept of network technology
2. Differentiate between dial-up and DSL network technologies
3. Highlight the roles of network technology in ODL

## 7.0 REFERENCES/ FURTHER READING

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## **UNIT 3 INTERNET TECHNOLOGY IN ODL**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 The Concept of Internet Technology in ODL
  - 3.2 Entrenching the Characteristics of ODL through Internet/Satellite Technology
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

In this unit, we will like us to look at the issues surrounding internet technology in ODL. Specifically, we will explain how internet could help entrench the basic features of ODL across the world. You will agree with me that open and distance learning institutions are increasingly relying on the power of internet technology to disseminate information to students concerning application, registration, online facilitation and graduation processes. Therefore, you need to have basic knowledge on the concept of internet technology and how it can help in the realization of NOUN mandates.

### **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- explain the concept of internet technology in ODL
- discuss how internet technology could entrench the characteristics of ODL

### **3.0 MAIN CONTENT**

#### **3.1 The Concept of Internet Technology in ODL**

The advent of internet technologies has dramatically changed the way information is being disseminated in teaching-learning process. Today, synchronous and asynchronous communications have been made possible with the use of internet-based tools like e-mail, satellite connections, and LMS. These tools provide educators with opportunities to interact with students, who learn at a distance. In the modern learning environment, the success of ODL depends largely on the effective use of internet and

satellite technologies, which promote information sharing and exchange of ideas. The versatility of computers can only be manifested in effective ODL through the internet services.

When compared with other ODL media, the Internet stands out as a veritable medium to enhance instructional delivery. The Internet can be used as an effective instructional platform to deliver virtual courses. This can be made possible due to its universal coverage, global accessibility, user-friendly interface, affordable connection, rich and interactive media environment for effective collaboration and interaction.

What do you think internet has done to the operations of NOUN?

In different regions of the world, internet and satellite technologies are contributing immensely to the growth of ODL in terms of expanding access and improving interaction between students and their tutors. The open and distance education in Nigeria is not left out of this revolution, as many distance learning institutions are taking advantage of the power of the Internet to break distance barrier and improve interaction within the system. You will agree with me that no distance learning institution can function effectively in this digital age without adequate internet facilities. For instance, the National Open University of Nigeria (NOUN) recently started online facilitation to improve the quality of instruction and interaction within the process. This involves the use of learning management system to deliver instruction, regardless of distance. The institution would find it difficult to move into this phase of instructional delivery without leveraging the powers of internet technology.

Apparently, Internet-based ODL offers great possibilities in expanding access to education. In a developing country like Nigeria, internet technology allows distance learning institutions to expand education opportunities to the diverse categories of students. Rashid (2001) believes that with internet technology:

Tutors and learners can work together remotely from anywhere;  
A community of learners can be built, which will accommodate all categories of individuals in the society;

Students can have access to scholars in universities and research laboratories across the world.

### **3.2 Entrenching the Characteristics of ODL through Internet/Satellite Technology**

Open and distance learning institutions are primarily established to achieve specific objectives. These objectives are usually the mandates of the institutions. You need to note that the mandates are derived from the basic characteristics of ODL and internet/satellite technology could help in deepening the characteristics within an ODL institution. So, I will like us to discuss how internet technologies have helped in the entrenchment of the core characteristics of ODL, with NOUN as a case study:

#### **Openness**

One of the main characteristics of open and distance learning institutions across the world is to unlock educational opportunities for different categories of people in the society. ODL opens up access to formal education for both young and old, especially those who could not access the brick and mortar school setting. In the ODL system, it is expected that educational resources remain open as well as methods and delivery platforms. This is one of the core mandates of NOUN. However, it becomes increasingly difficult to deliver on these mandates without effective internet services. Internet allows distance learners to navigate the stages of education system from application, registration, learners' support online facilitation and finally graduation. So, internet is the lifeline of a functional ODL system in this digital age.

#### **Flexibility**

Another important feature of ODL is flexibility. This involves the ability to make learning readily available in such a way that learning requirement and expectations of different categories of students are adequately met. ODL institutions are expected to structure their programmes, such that a student is able to study at his/her own pace. In essence, distance learners are generally responsible for their own learning progress as they are able to study anywhere, anytime. The new motto of NOUN "study at any place, at your own pace" gives credence to this basic characteristic of ODL. To effectively deliver on this key mandate, internet is expected to play pivotal roles. Internet provides access to diverse learning materials that could be downloaded and studied at any pace. For instance, the internet service allows distance learners to visit NOUN courseware and download course materials for all registered courses. Each student determines when and how to study these materials and this engenders flexibility in the system.

#### **The popularity**

The popularity of ODL has continued to grow over the years as individuals are taking advantage of the system to get educated. With the increasing pressure on the existing traditional system and limited

resources in the developing countries of the world, ODL provides opportunity for the people, who cannot be absorbed in the brick and mortar instructional setting. This has been made possible with the affordances provided by the internet to cater for a large volume of students coming into the system.

### **Sharing of learning resources**

Distance learners are physically separated from the learning institutions and their tutors. These students require learning resources like course materials and up-to-date information concerning the programme. Therefore, the onus lies on the ODL institutions to ensure that learning resources and other necessary information get to all students, regardless of distance. The internet technologies have the required functionalities to convey information and resources from the institution to distance learners and also facilitate feedback. Students can log on to the NOUN portal to get adequate information concerning application, registration, learners' support and so on. They can also get appropriate learning resources and rich media content during online facilitation.

These and other basic characteristics can easily be entrenched with the systematic utilization of internet resources by the open and distance learning institutions across the world.

Discussion: Think of other ways the internet can assist ODL institutions across the globe to deliver on their mandates. Your response will be posted on discussion forum during online facilitation.

### **SELF-ASSESSMENT EXERCISE**

- i. How has internet technology changed the instructional landscape of ODL?
- ii. In what ways has internet technology helped ODL institutions deliver on their mandates?

## **4.0 CONCLUSION**

Internet technology provides opportunities for ODL institutions to connect students with their tutors as well as learning materials. This has helped in the realization of the objectives of ODL in different regions of the world. Thus, no efforts should be spared at providing adequate facilities that will promote effective use of internet technology in the system. Distance learning institutions are expected to have internet technology policies that will guide effective use of these resources to promote interaction and sharing of resources.

## 5.0 SUMMARY

We have exposed you to the concept of internet technology as a critical component of ODL infrastructure. The unit also focused on the ways internet technology could help ODL institutions deliver on their mandates and provide effective instruction to the students.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Define internet technology
2. List the ODL attributes that could be entrenched through internet technology

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## **MODULE 4      DEVELOPMENT OF MEDIA IN ODL**

- Unit 1      Shift in Distance Learners Characteristics and the Need for Media
- Unit 2      Selection of Appropriate Media for ODL
- Unit 3      Creating ODL Media Resources through screencasting, repurposing of existing PPT slides, and low-tech video recording

### **INTRODUCTION**

The just concluded module exposed you to the affordances of computers and internet technologies and how ODL system can take advantage of these technologies to engage distance learners. In this module, we will discuss the development of media resources to facilitate ODL teaching-learning process. As a distance learner and probably an online tutor, you are expected to possess some competencies in the area of media selection and creation of media with authoring tools. These are the issues we are going to address in this module.

### **UNIT 1      PARADIGM SHIFT IN DISTANCE LEARNERS CHARACTERISTICS AND THE NEED FOR MEDIA**

#### **CONTENTS**

- 1.0    Introduction
- 2.0    Objectives
- 3.0    Main Content
  - 3.1    The Shift in Distance Learners' Characteristics and the Need for Media
  - 3.2    The Core Elements to consider in Media Selection
- 4.0    Conclusion
- 5.0    Summary
- 6.0    Tutor-Marked Assignment
- 7.0    References/Further Reading

#### **1.0    INTRODUCTION**

At the early stage distance education, the adults in the society formed the core of the students' population as the system provided second chance for individuals, who missed out in the traditional education setting. In the recent time, the population of distance learners across the world has continued to grow with the young and old in the society taking advantage of ODL to access formal education. This implies that the changing

characteristics of distance learners now need to be considered in the media selection process. This unit focuses on the selection of appropriate media to cater for the changing needs and learning styles of distance learners.

## 2.0 OBJECTIVES

By the end of this unit, you will be able to:

- highlight the changing characteristics of distance learners
- justify the need to use media in ODL instruction
- analyse the core elements to be considered in media selection
- prepare a media selection plan in your area of specialisation

## 3.0 MAIN CONTENT

In the recent time, have you noticed any change in the demographic composition of distance learners in the country?

### 3.1 The Shift in Distance Learners' Characteristics and the Need for Media

Here, we will like us to examine the paradigm shift in the population composition of distance learners over the years. You will recall that at the beginning of distance education, it was a platform for adults, who were unable to be part of formal education system as youngsters due to several reasons. ODL gave second change to these individuals to access formal education at a distance. As we discussed in module 1, unit 1, this first generation of distance learners learnt through correspondence education. The system heavily relied on text-based materials to convey instructional content. As primitive as this could sound, the learning resources were considered to be appropriate for these individuals, based on the country's level of educational, social and technological development. That was why the system was able to produce the first generation of scholars and political elites like Herbert Macaulay, Obafemi Awolowo among others.

Moving forward, with the high rate of enrollment in the higher education system and pressure on the existing facilities, the traditional education setting cannot accommodate large population of students seeking admission every year. Therefore, open and distance learning becomes the best alternative to access formal education across the world, especially in the developing countries like Nigeria, South Africa, Botswana, Tanzania, among other Africa countries. This implies that the students' population in ODL institutions now combines different categories of individuals, both youngsters and adults. A survey conducted by the Directorate of Learning Content Management System, National Open University of

Nigeria, indicates that more than 53% of our students' population are between 19-30 years.

So, what is the implication of this report on media selection, development and use in ODL?

This has serious implication for media selection, development and utilization in ODL instructional setting. A successful online tutor in NOUN is the one, who considers this demographic information and uses it as a guide in selecting appropriate media for the students. Online instructors and tutors now have the responsibilities to ensure that instructional content is structured, such that it caters for the peculiar characteristics of these Net Generation university students, who live in media-saturated environment. Many of these young people were born around the time the computer was introduced into different aspects of human endeavours.

This was well-encapsulated in the words of Yildiz & Scharaldi, (2015) that the learners in the digital age grow up with the ability to learn, innovate, create, recreate, share information and exchange ideas at their own pace, based on their specific learning needs, learning styles, motivations, and expectations.

### **3.1.1 Characteristics of Net Generation Students**

They have innate abilities to connect with visual representation of content.

Maybe due to their competence with games, the Net Generation students can integrate the virtual and physical worlds make meaning out of the combination.

Inductive discovery: Many of them basically learn better through discovery than by being told everything.

They are able to quickly shift their attention from a task that is not interesting to a more interesting task, especially in the instructional setting.

Fast response time: Since they interact quickly with materials, they appreciate rapid responses and feedbacks, especially from their tutors while interacting with learning resources.

Taking a critical look at the characteristics above, you will discover that there has been a shift in the generation of distance learners over the years. Therefore, it becomes imperative that online instructors and tutors consider these realities in their media selection and development. In the

modern ODL system, tutors are faced with the challenges of selecting media that will cater for the diverse and heterogeneous characteristics of distance learners. As an online tutor, you need to consider the fact that your class composition includes digital natives and digital immigrants and therefore you are expected to select media that will cater for the peculiarities of these diverse categories of individuals. Unless you understand these characteristics, it will be difficult to engage your students in instructional content.

#### The Core Elements to consider in Media Selection

As an online tutor or instructor, there are key elements you need to consider in selecting media to be used for your class. This is quite important, so that you will be able to cater for the diverse learning needs of your learners. Literature has shown that three core elements are important when deciding what media to use for instruction. These are:

- instructional content;
- structure of the content;
- skills/competencies to be acquired.

Let us briefly discuss these elements.

#### **The instructional content**

You need to understand that various types of media contain different symbol systems like text, sound, still pictures, moving images, graphics, infographics and the likes. This indicates that different media have the capabilities to convey various instructional contents to the students (Salomon, 1979). We emphasized in module 2 that media like radio, television and instructional videos convey specific information and can be used for different purposes. It is important that you consider this fact while selecting media for instruction.

#### **Why is this important?**

Using inappropriate media for the content makes learning extremely difficult for learners, especially those who learn at a distance. You students who are physically separated from you are already battling with the challenge of isolation. You don't have to compound their problems by selecting inappropriate media to teach a particular concept. For instance, a topic like "Installation of Moodle" cannot be presented with radio instruction. The appropriate media could be an instructional video that takes students through the steps involved in Moodle installation. You might need to do a screencast of the steps, so that students will be able to follow as demonstrated in the video.

**Content structure**

Some media like text, radio or face-to-face teaching usually present content in linear or sequential form. Computers can handle non-linear presentation that involves branching and interactivity. Subject matter like humanities and languages can easily be structured in linear format, which can be presented on radio or text, although some might require more than linear presentation. However, science-related disciplines basically require symbolical representation and interactivity which might require more than radio instruction. Experiments and laboratory tasks require interactive media like instructional video, animation and simulation. So, you need to consider the structure of the content before deciding which model to use for media selection.

**The development of skills**

It is important for you to note that media differ in their capacities to develop competencies of students in different subject areas. Some media are best used to develop students' knowledge at the comprehension or understanding levels, according to the Bloom's Taxonomy. So, a medium like instructional radio could suffice. However, if you want your students to demonstrate and evaluate at the end of class/unit, you might need to go a step further by integrating media like instructional television, animation and simulation. So, as you are developing media for distance learners, you need to determine the types of skills you want them to acquire after going through the course unit. This will determine the kind of activities and learning resources like video links, animation, pictures, scenarios and other resources to be integrated in the content.

To ensure that the required skills are adequately catered for while selecting or developing media, you have to go back to the previously stated intended learning outcomes/instructional objectives. These learning outcomes specify what you expect your learners to achieve at the end of instruction. This will guide accordingly on the media to be integrated into the content.

**Assignment 6:** Pick a concept you want to teach in your area of specialization. Prepare a table with three columns containing the sub-topics, media and reasons for choice of media/technologies. You will be asked to submit this during online facilitation

## SELF-ASSESSMENT EXERCISE

- i. What is the implication of the change in students' demographic composition for media selection?
- ii. Why do you think online tutors need to examine the core elements of the content before selecting media?

## 4.0 CONCLUSION

The ODL space now contains adults and youngsters who could not access formal education in the existing face-to-face setting. This is increasingly making the learning space to be more heterogeneous than what was obtainable some years ago. Thus, for online tutors to be successful in this 21<sup>st</sup> Century ODL environment there is a need to consider the characteristics all categories of learners, with a view to catering for their specific learning needs and expectations.

## 5.0 SUMMARY

In this unit, we have discussed the change in the characteristics of distance learners over the years. We have justified the need to consider these characteristics in selecting and utilizing technology for instruction. We specifically highlighted the characteristics of the Net Generation students. This will guide you in media selection and development processes.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Justify the need to media in ODL instruction
2. Explain the changing characteristics of distance learners
3. Describe the core instructional elements to be considered in media selection

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## **UNIT 2      SELECTION OF APPROPRIATE MEDIA FOR ODL**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Selection of Appropriate Media for ODL Instruction
  - 3.2 SECTIONS Model
    - 3.2.1 Students
    - 3.2.2 Ease of Use
    - 3.2.3 Cost
    - 3.2.4 Teaching Functions
    - 3.2.5 Interaction
    - 3.2.6 Organisation
    - 3.2.7 Networking
    - 3.2.8 Security and Privacy
  - 3.3 The Roles of Instructional Designers in Media Selection
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

Selection of appropriate media is a systematic process that of identifying the strengths and weaknesses of different media and factors that can enhance their full functionalities. This last unit focused on the core elements to be considered in selecting media. In this unit, I will like us to discuss a universally tested model for media selection. Prof. Bates propounded SECTIONS model to guide teachers, tutors and instructors on the selection of appropriate media for instructional purposes. You are going to use this model to come up with a media selection plan in your subject area.

### **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- describe different components of the SECTIONS model
- prepare a media selection plan, based on the SECTIONS model

### **3.0 MAIN CONTENT**

#### **3.1 Selection of Appropriate Media for ODL Instruction**

Appropriate media selection remains a critical component of an effective ODL instruction. In the face-to-face classroom setting, a teacher can make up for a wrong media selection with his physical presence in the class. However, teachers are not physically present in the class with the students in open and distance learning. Therefore, you are expected to prioritise appropriateness in the selection of media, with a view to ensuring that learning becomes realistic and interesting to your students.

Different media have different affordances and you are expected to consider these functionalities before selecting them for instruction. One of the fundamental roles of an online tutor is to determine the best match between media and intended learning outcomes. This requires systematic guide, based on the research findings, observations and scholars' opinions. A model is therefore requiring to guide the selection process in order to ensure that intended learning outcomes are achieved at the end of instruction.

A model for technology/media selection and application should have the following characteristics:

- it is expected to work effectively in a wide variety of learning contexts and applications;
- it should allow appropriate decision-making at institutional and instructional levels;
- it will cater for the peculiar characteristics of diverse group of learners within the instructional setting
- it is devoid of ambiguity and cost-effective;
- it will accommodate new developments in technology and the dynamic nature of the society.

Based on these characteristics, I will like us to focus our discussion of the Bates' SECTIONS model as it conforms with the aforementioned parameters. We are going to use this model as the basis for media selection in ODL.

#### **3.2 SECTIONS Model**

The Bate's SECTIONS model is based on research, has been tested to be reliable and applicable in the education setting. SECTIONS stands for:

- S - Students
- E - Ease of use
- C - Cost

- T - Teaching functions, including pedagogical affordances of media
- I - Interaction
- O - Organizational issues
- N - Networking
- S - Security and privacy

Now, let us talk about these components one after the other and see how workable this model can be in selecting media for your students.

Students: The first criterion in the SECTIONS model is students. According to Bates, you need to consider two main issues concerning students when choosing media for instruction:

### **Student Demographics**

This is an important issue to be considered when selecting media for instructional purposes. The increasing rate of enrollment, especially in open and distance learning institutions, has resulted to growing diversity among students' population. As we mentioned earlier, ODL now comprises different categories of students ranging from adults, young people, prisoners, people in the workforce and retirees. This has serious implication for effective media selection. You need to study the composition of students' population, so that you will be able to select media that cater for all the categories of individuals in the class. For instance, if majority of your students are young people below 30 years, then, you should be able to package your instruction with multimedia that motivate them to learn.

### **Access**

In selecting media for instruction, you need to consider how your students will access the content from anywhere. No matter how wonderfully prepared a medium can be, its impact on teaching-learning process will not be felt if students don't have access to use it. Thus, as you are coming up with media for your class, think about the issue of accessibility to ensure full utilization. For instance, when you prepare an instructional video that teaches students how to titrate in a chemistry laboratory, not all distance learners will be able to learn from the content if it is only presented on CDs or DVDs. Therefore, you might need to explore the possibilities offered by LMS to upload the video and make it easily accessible to all students, regardless of distance. For example, NOUN has a Moodle platform where facilitators can easily upload their instructional videos and other media for students to access and probably download. In essence, there must be reasons for selecting a particular media for instruction. Accessibility should form one of the reasons for selecting media for instruction. High level of accessibility makes media appropriate for instructional purposes.

**Ease of use**

Remember, we mentioned in the past that technology is not an end in itself, it is just a means to an end. Therefore, any media you want to select should be user-friendly and requires little effort to use. It is important that distance learners do not have to spend a great deal of efforts and time on learning how to utilize a medium or navigate an instructional platform. Teachers and instructors will likely adopt and utilize media that are easy to use and can be quickly understood than media that are complex to use.

Some of the questions you might ask at this point are:

1. What is the level of effort to be put in by students and even yourself, in using the media?
2. What is the level of reliability of these media in meeting the needs of the students and the instructional process?
3. How easy is it to maintain and up-grade the media/technology when necessary?
4. Do you have the required technical competence to operate and use the media?
5. Do you and your students have technical support in case you have any challenge?
6. What are the risks associated with using these technologies or media?

When you have successfully answered these questions, then, you can go on to select media based on the feedback.

**Cost**

Several cost implications need to be considered in selecting media. The tutor needs to consider the cost of producing the media and other costs like maintenance cost, overhead cost and delivery cost. If your students will need a specific device to access the content, then, you need to consider the cost of such device. For instance, if your students will need smart phones to access the media, you should consider students from rural areas and others from low-income homes.

At the institutional level, cost is of great importance in determining which media to use for open and distance learning. For instance, at a point, NOUN needed to consider the cost and effectiveness of face-to-face facilitation versus online facilitation. This informed the decision of the management to adopt online facilitation, being a cost-effective medium for instructional delivery when compared to face-to-face facilitation.

**Teaching functions, especially pedagogical affordances of media**

This is another critical component of the SECTIONS model. Identifying appropriate media that will deliver effective teaching is an important requirement of teachers and online tutors, and a very complex challenge. This is why the services of instructional designers and media professionals are required. Tutors can work with instructional designers to decide which media can be deployed to facilitate teaching of a particular concept. It is important that you examine the affordances provided by the media and how will these capabilities assist you in teaching the topics you intend to teach.

Most teachers and instructors would put the effectiveness of a medium for teaching and learning as the first criterion. If the technology is not educationally effective, why would you use it? However, if a student cannot access or use a technology, there will be no learning from that technology, no matter how it is designed.

Thus when considering media from a strictly teaching perspective, the following questions need to be considered:

1. What content do I need to cover during instruction?
2. What are the intended learning outcomes, especially the skills to be acquired?
3. What instructional strategies do I need to adopt?
5. What are the pedagogical characteristics of selected media and how will these media facilitate the realization of the intended learning outcomes?

**Interaction**

You need also to consider how media enable interaction and engage distance learners in instructional content. It is imperative that you select media that encourage interaction and engagement. There are different patterns of interaction within the instructional setting and these include: student-teacher interaction, student-student interaction, student-material interaction and student-interface interaction as can be seen in figure 11.

You need to select media that promote all these patterns of interaction.



Figure 11: Interaction among distance learners

Textbooks might include activities that will engage students and therefore promote interaction. For instance, you will discover that I have embedded some activities and in-text questions in this course material, these are meant to encourage interaction with the content. Some tools on the LMS like online discussion forum and online chat encourage on-going dialogue among students and therefore promote active interaction in ODL.

### **Organisational issues**

According to Bates (1985), one of the critical issues that could influence the selection of media by teachers and instructors is the way distance learning institutions structure teaching activities; the level of existing instructional and technology services and; the level of media and technology support institution provides.

Distance learning institutions have existing policies regarding the use of media and technology and these could influence, to a large extent, your selection of media for instruction. The extent to which an institution allows media use will determine how you select media for your students. In some cases, distance learning institution might need to re-organise the existing structure to introduce a media/technology. It might also require procurement of supporting facilities and training of staff. So, your institution's readiness to do all these will determine how you will select media for instruction.

Some questions you might need to consider include:

1. What level of support can you get from your institution in choosing media for teaching?
2. Will your institution provide adequate funding for updates, upgrades and licenses?
3. What is the level of existing facilities that could help in media use, rather than starting from the scratch?

### **Networking**

We now live in a global village that is interconnected, where people can share information and exchange ideas. Your students need to interact and collaborate with other experts and colleagues from different parts of the world. Thus, networking is a critical issue to consider while selecting media. You need to determine how a medium will afford your students the opportunity to network beyond a course, and interact with others such as subject experts and other relevant people in the learning community. For instance, the LMS like Moodle, which is password protected, usually allows your students to communicate network safely and share information.

### **Security and privacy**

Protection of your students and institution's data should be at the core of the media selection process. As a distance learner, we know you will like an online platform/technology that protects your identity and data. As an online tutor/instructor, you need to consider the capability of the media to protect you and your students from external influence and harassment. For instance, on LMS, your students should be able to contribute to discussion forum on different issues without being harassed by politicians and people in the position of authority. That is why LMS like Moodle provides password protected access to registered students and authorized instructors.

## **3.3 The Roles of Instructional Designers in Media Selection**

Selecting appropriate media for instruction is a complex process that involves subject experts, content developers, content editors and instructional designers. The roles of instructional designers remain strategic in the selection and creation of media. There is an intrinsic link between instructional design and selection of appropriate media for instruction, especially within the open and distance learning system. An instructional designer is an expert in instructional design, whose job it is to analyse learning needs and goals and develop of a functional delivery system to cater for the diverse students' learning needs.



*Figure 12: Dr. Lukman Bello is an instructional designer with DLCMS, NOUN. He works with other experts to make the content more interactive and engaging*

In open and distance learning, some of the roles of instructional designer include:

- determine what the distance learners need to study at a particular through learning needs analysis or training needs analysis;
- develop intended learning outcomes based on the curriculum and students' learning needs;
- assist subject experts in analyzing and selecting appropriate media/technology to facilitate instruction;  
Work with the subject experts to learning activities that will be appropriate to achieve intended learning outcomes
- decide how learning will be assessed at the end of the course;

From the information above, you will discover that content experts are expected to work with instructional designer in media selection process. The instructional designer has the main responsibilities to analyse the basic characteristics of the media and determine if these media have the capabilities to cater for the diverse learning needs and expectations of the students. Therefore, considering the increasing diversity and the heterogeneous nature of distance learners in this digital age, the roles of instructional designers in media selection and use become quite imperative. ODL institutions are expected to setup instructional design unit, where instructional designers will be able to work with content experts to develop appropriate and engaging content for distance learners. For example, the National Open University of Nigeria has a unit for

instructional design, domiciled in the Directorate of Learning Content Management System. The unit works with subject experts, content developers, learning technologists and other experts to ensure that the instructional contents become more interactive and engaging.

**Assignment 7:** Pick a topic in your area of specialization. Prepare, in tabular form, a media selection plan, based on the Bates' SECTIONS Model. This will be submitted during online facilitation

## SELF-ASSESSMENT EXERCISE

It is paramount to select appropriate media for distance learners, discuss. Why is it necessary to anchor media selection on a particular model?

## 4.0 CONCLUSION

A model provides a workable framework for effective selection of media in ODL. As an online tutor/facilitator, you are expected to be familiar with selection model that will guide you in selecting appropriate media for your students. This makes media selection more systematic and organized, with could enhance the effectiveness of media/technology on students' learning outcomes.

## 5.0 SUMMARY

We have discussed the need to make appropriate selection of media for distance learners, considering the nature of their characteristics and instructional setting. We are of the opinion that The Bates' SECTIONS model will be a viable framework for appropriate media selection in the system and should be adopted by the stakeholders in the ODL system of education.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the need to select appropriate media for ODL instruction
2. List the components of the Bates' SECTIONS model
3. What are the roles of instructional designers in media selection?

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## **UNIT 3      CREATING ODL MEDIA RESOURCES THROUGH REPURPOSING OF EXISTING PPT SLIDES AND SCREENCASTING**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 The Need for Content Creation in ODL
  - 3.2 Creating ODL Resources through Repurposing of Existing PPT Slides
  - 3.3 Creating ODL Resources through Screencasting
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

In this unit, we present some tools and steps as a way of guiding you to create instructional content/media that will be most appropriate for your own context. There are diverse resources and tools that you can use to create content for distance learners. So what we want to do is give you the basic knowledge and competence regarding media creation and you can subsequently use these tools to create content in your subject's areas.

### **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- explain the need for content creation in ODL
- demonstrate how to create ODL media from the existing slides
- demonstrate how to create ODL media through screencasting

### **3.0 MAIN CONTENT**

#### **3.1 The Need for Content Creation in ODL**

We intend to give some justifications for creating media to enhance ODL instruction. As an expert in ODL environment, it is expected that you possess some knowledge and skills on how to create media, possibly from scratch or through repurposing of the existing resources.

But why do you need to create media for distance learners, when there are many of these resources online?

The structure of open and distance learning environment involves physical separation between you and your students. These students are from different backgrounds with diverse learning styles. Creating appropriate media will allow you to engage different categories of learners within the instructional process. Although many online videos and pictures can easily be downloaded for use, you might need to create some of these resources as well. The reason is quite obvious. After proper analysis of your learners at the preparatory stage of the instruction, creating media by yourself allows you to cater for the specific needs and expectations of your learners. Sometimes, you find it difficult to get online learning resources that will be appropriate for diverse characteristics of your learners. So, you might need to work on the existing resources by repurposing them to meet the needs of your learners. In most cases, you might need to create media from scratch to cater for the specific characteristics of your learners. We will like to emphasise that repurposing and building from scratch give you the required freedom to structure the media elements the way you like and according to the learning needs of your learners. There are so many technologies available online for content creation and we are going to give insights into some of these tools and how you can use them for media creation.

### **3.2 Creating ODL Resources through Repurposing of Existing PPT Slides**

We will like to expose you to the way you can create your content from the existing the existing resources. As an online tutor, you should be creative enough to repurpose existing learning materials with some enhancements to engage your learners. You can use different tools to achieve this. PowerPoint has functionalities to achieving such purpose. This involves adding voiceover to the existing slides to cater for diverse different categories of learners in the class. We have emphasized from the beginning of this course that distance learners come various backgrounds with diverse learning needs and aspirations. Thus, an efficient online tutor is the one that considers these heterogeneous natures of the learners and caters for them accordingly. Repurposing the existing PPT allows your learners to watch the content at their own pace. This fits well with ODL instruction which emphasizes flexibility and self-regulation. Learner can choose when to begin listening to the content or may decide to read the content of the slide first. Also, a visually-impaired learner using a screen-reading program has the opportunity to listen to the text and the audio clip. It, therefore, implies that this process promotes education inclusion in ODL content development and delivery.

### How to Repurpose Existing Slides

You can follow these steps to repurpose your slides:

Prepare a PowerPoint for the content

Add appropriate pictures and graphics to the slides

Prepare a short script for voice narration

Record your slides and explain the content

Save your project

Click the link: <https://youtu.be/3uk4CU7uobM> to watch the video on how to repurpose your existing slides to engage learners in instructional process

**Assignment 8:** As demonstrated in the video you just watched, list the steps involved in repurposing existing slide for instruction. After this, follow the steps to repurpose existing slides on a particular topic and produce the video for instruction.

### 3.3 Creating ODL Resources through Screencasting

As we mentioned earlier, there are many ways to create content/media for ODL instruction. Screencasting is another viable method to create content that will engage learners, who learn at a distance. Screencasting is a way of recording your computer screen, with a voice narration. It is a flexible process that allows you to talk to your computer screen and record your demonstration and the voice. It is ideal for demonstrate a procedure or process that cannot be explained with text, although you might still integrate text into the narration. Screencasting is content specific as you will be able to explain the concept in a way that suits the needs of your learners. The learners can stop, rewind and replay the video anytime as they desire. Screencasting can be used, for instance, to demonstrate “How to perform multiple regression on SPSS”. Using this tool, you will be able to walk your students through step-by-step procedure on your computer screen and record your voice while explain the steps. Free screencasting tools on the internet, as well as free trials of paid-for tools, although they may be limited in terms functionalities and the length of recording. Camtasia and articulate storyline are examples of paid-for authoring tools which offer a free trial up to 30 days.

#### Tips to Effective Screencasting

Since screencasting include audio and visual components, it can quickly accumulate into heavy files that might be difficult for distance learners to download. So, you may can make lives easier for your students by producing a number of short clips that can be downloaded more quickly. You may also need to prepare a short script and storyboard to serve as guides as you record the content.

## How to Screencast a Content

You can follow these steps to screencast your content:

How to make a screencast in 6 easy steps:

- Decide the screencasting tool use. We recommend Camtasia or Adobe Presenter
- Prepare your script and storyboard
- Research your presentation
- Record your screen as you demonstrate and talk
- Edit your recording
- Save, publish and share your screencast. You may have to upload to the LMS for students to download.

[Click here to watch a video on how to screencast your content](#)

**Assignment 9:** As demonstrated in the video you just watched, list the steps involved in screencasting. After this, follow the steps to produce a screencast on a particular topic and produce the video for instruction.

## SELF-ASSESSMENT EXERCISE

- i. There are many online media for instruction, why do you need to create some of these resources?
- ii. What are the steps to follow in repurposing existing PPT?

## 4.0 CONCLUSION

This unit is not meant to make you a professional in video production. However, as a stakeholder in the modern ODL space, we want you to be equipped with basic competencies regarding creation of media resources to engage your students. This allows you to cater for the diverse learning needs of your students and therefore, you become more relevant in the system.

## 5.0 SUMMARY

In this unit, we have discussed the need for you to create some of the media content to be used for the class. We also demonstrated the steps to follow in creating media through repurposing of existing slides and screencasting. It is expected that you utilize the competencies acquired from the instructional videos to improve the quality of your content.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Explain the need to create content for ODL instruction
2. Describe the process of repurposing existing media in content creation

## **7.0 REFERENCES/FURTHER READING**

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## **MODULE 5      QUALITY ASSURANCE IN ODL MEDIA RESOURCES**

### **INTRODUCTION**

Introduce the module and state the units under the module.

Unit 1	Issues of Quality Assurance in ODL Media Resources
Unit 2	Searching for Media under Creative Commons Licences

### **UNIT 1      ISSUES OF QUALITY ASSURANCE IN ODL MEDIA**

#### **CONTENTS**

1.0	Introduction
2.0	Objectives
3.0	Main Content
	3.1 Quality Assurance in ODL Media
	3.2 Copyright Issues in ODL Media
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

#### **1.0 INTRODUCTION**

The last unit focused on the creation of media with the use of authoring tools to engage different categories of learners. In this unit, we are going to expose you to the issue of quality as it concerns media selection and development in open and distance learning. This is to allow you select and create appropriate media that cater for the needs of your learners.

#### **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- Analyse issues regarding quality assurance in ODL media
- Explain the issues of copyright in ODL media

### **3.0 MAIN CONTENT**

#### **3.1 The Need for ODL Media to be Quality Assured**

Teaching in open and distance learning environment is quite different from teaching in the face-to-face setting. We are going to emphasise here that there are many instructional lapses that can be covered with teacher's presence in the face-to-face teaching-learning process. Note that the principle of education development requires that all elements in instructional process should be of high quality, whether online or face-to-face. However, as a lecturer in the traditional setting, if you select or use a poor quality media in the classroom, you can make up for the deficiency while you physically teach your students. You can easily offer more explanation and clear misconceptions regarding the concept.

On the contrary, teaching in ODL is different as your students are meant to study at their own pace, possibly without your presence. Although the advancement in technology is increasingly bridging the gap in the system as you can now interact with your students during online facilitation, the flexibility in the system allows your students to learn the content without your presence. So, any issues with quality will affect the quality of learning within the system. All the media to be used for ODL should be quality assured because the content is meant to be domiciled on the internet. Apparently, web-based content is for the consumption of the global community and the issue of quality needs to be prioritized. It is important to note that the issue of quality in ODL has persisted over the years as some faculty members still believe instruction in this system is inferior to face-to-face instruction (Jaschik & Lederman, 2018).

As a result of these misconceptions about the quality of ODL, scholars are consistently advocating for the need to ensure standard best practices in all aspects of the system ranging from learning resources, learners' support and delivery modes. This implies that the media, through which information is being conveyed to the learners, should be of standard quality. Quality assurance is defined by the International Organization for Standardisation (2005) as a component of quality management with a focus on ensuring that basic quality requirements are being fulfilled within the organizational structure. It is a systematic management and evaluation of procedures used to ensure achievement of quality outputs from a system.

This indicates that the selection and development of media should be in line with global best practices. The media to be used in ODL should be self-explanatory, educative, informative and engaging due to lack of teachers' physical presence in the system. Good enough, different media like pictures, instructional videos, instructional radio, instructional

television, online facilitation and computers have the capabilities to make up for the lack of teachers' physical presence. However, the processes of selection, design and development of these media are expected to be quality assured, to clear misconceptions about quality of the instruction.

Therefore, as stakeholders in ODL, we want to emphasise that the issue of quality of media used in ODL should be given utmost priority, as the processes of selection, design and development of these learning resources will have multiplier effect on the quality of output. Lee & Dziuban (2002) consider that the overall success of ODL depends largely on the quality of learning materials integrated in the instruction.

### **3.2 Copyright Issues in ODL Media**

As a way of assuring quality in media selection and development, you need to understand issues that have to do with copyright, so as to protect your integrity and the reputation of your institution. When media like image, video, graphics or textbook are produced, the owners of such works may place certain legal restrictions that specify when, how and where to use the materials. This is known as copyright, and it applies automatically to all works in all aspects of human endeavours. This is usually denoted online by copyright notice © as you must have observed in several cases. Copyright is a serious issue to be considered in media selection and use whether traditional or online setting. Although, there is a provision of fair usage doctrine if media are used for educational purposes, copyright is still a huge determinant in media use for instructional delivery.

In both traditional and online teaching, the principles of fairness and quality demand that you seek permission from the author of a learning resource before using it for classroom instruction, whether the owner is aware of the usage or not. What we have observed over time is that, in the face-to-face classroom setting, faculty members may use media under restriction without seeking permission from the author and get away with the act. The reason is quite obvious. The author of such media may not be aware of the illegal usage since it occurs within the confine of brick and mortar classroom setting. Although this is not the right thing to do, it may not cause any problem for you and your institution reputation.

However, ODL content is usually domiciled on the internet, which makes it accessible by many people across the world, including the rights owners. The media in ODL like instructional videos, pictures and graphics are uploaded on the LMS or OER which indicate that they can easily be accessed. This makes it a risky adventure, to use media in ODL without permission from the rights owners. Our advice is that you find

out the status of the media you want to use for ODL instruction and act accordingly.

So, what happens if I can't get permission to restricted media?

Of course, there are learning resources that could be used freely under creative common licences. We are going to discuss this in the next unit.

### **SELF-ASSESSMENT EXERCISE**

- i. Justify the need for the ODL media to be assured
- ii. Why do you have to consider copyright issues while selecting media?

## **4.0 CONCLUSION**

The lack of teachers' physical presence in ODL setting makes it more important to prioritise the issue of quality in media selection. Since you might not be there when your students will interact with the content, it is expected that the right quality is maintained in terms of media to be selected. This is not to say that quality media are not necessary in the face-to-face instruction. Every aspect of learning, whether traditional or online, requires quality materials for effective realization of learning outcomes.

## **5.0 SUMMARY**

We have exposed you to the concept of quality assurance and the need to consider copyright issues in media selection. This is to protect your integrity and the reputation of your institution.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Describe the concept of quality assurance in ODL media selection
2. Why do you think media selection in ODL needs to be quality assured
3. What is copyright agreement?

## 7.0 REFERENCES/FURTHER READING

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## **UNIT 2      SEARCHING FOR MEDIA UNDER CREATIVE COMMON LICENCES**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Searching for Media under Creative Common Licences
  - 3.2 Building a Repository of Local Media
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

As we mentioned at the end of the previous unit, not having access to media under copyright should not be the end of road for you in the media selection process. In this unit, we will expose you to the steps you can follow to get media under creative common licences. This will reduce the fear of using media under copyright protection.

### **2.0 OBJECTIVES**

By the end of this unit, you will be able to:

- Explain the concept of creative common licences
- Demonstrate how to search for media under creative common licences

### **3.0 MAIN CONTENT**

#### **3.1 Searching for Media under Creative Common Licences**

As we have mentioned earlier, the strategic role of media in ODL cannot be over-emphasised, but searching for these resources should be done in accordance with the world best practices. From experience, I we want to tell you that getting permission to use media from the rights owners might not be as easy as you think. In most cases, it takes a long time for such request to be granted. However, you should not be stuck there. Creative common licence gives you the opportunity to use media under a safe condition.

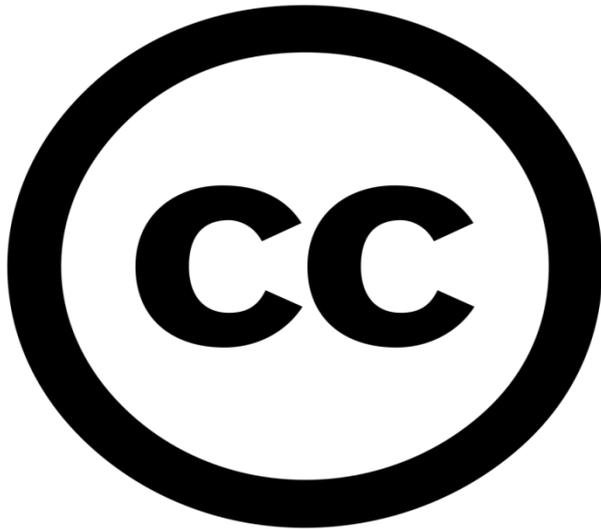


Figure 13: Creative common licences logo

Creative common licence usually denoted as “CC” as shown in figure 13, is an agreement that specifies the freedom of users to utilise online resources for different purposes.

You can follow the following steps to search for pictures under this licence:

- Do a Google search of the topic;
- From the top bar menus, click on images;
- Click on “settings” and then “advanced search”;
- Scroll to the last item “usage rights” and pick “creative commons licences” from the scroll down menu.

Click this link to watch the video on how you can search for pictures on Google and videos on YouTube

<https://youtu.be/s5bYAsAiEjY>

Also, making your media available for others to use under creative commons is quite simple. Click this link to learn more on how to share media under this agreement.

<https://creativecommons.org/choose/>

### **3.2 Building a Repository of Local Media**

The safest option for you to get media for ODL instruction is to come up with your own repository of media like pictures, videos, infographics among others. By this approach, you are in total control of the media content and you can adjust the media elements like text and pictures to suit the diverse needs of your learners. A medium, as it were, becomes more relevant in instructional process, if learners are able to connect with it. Based on our experience, we will like to recommend that you

sometimes build your own repository of media due to the following reasons:

It is not advisable to rely solely on foreign multimedia resources as some of them might not support the principle of contextualization of learning; Sometimes, using foreign pictures/videos can widen the instructional gaps between learners and tutors and

Using your own local media might give you the freedom to adjust the content to cater for the learning styles of your learners.

With the increasing availability of low-cost and user-friendly digital devices, taking pictures and recording low-tech video should form an integral part of your media creation drive. You will be surprised that your mobile phones are suitable enough to take pictures and record videos for instruction. By this, you will be in total control of your media content as you prepare instruction for ODL setting. You may follow these steps to build your repository:

Create a folder on your computer where you keep the media resources for a project

- Take pictures that are relevant to the project
- Convert the picture to acceptable format like JPEG
- Use the media accordingly, when needed
- You can also share your local media with other people around the world by uploading them to Open Educational Resources (OERs)
- Watch the video below to guide you on how to share your media on OER repositories.

<https://youtu.be/sehDoe6a8-Q>

### **SELF-ASSESSMENT EXERCISE**

- i. What major advantage does creative common licence has in media selection process?
- ii. Justify the need to build your repository

## **4.0 CONCLUSION**

It is expected that you take advantage of the opportunities provided by creative common licence to search and download media for classroom instruction. This sounds very easy to do, but you must not rely solely on these media. Try as you can to build your repository of local media and share with the learning community. By this, you are contributing the growth of knowledge globally by helping other use your media for instructional activities.

## 5.0 SUMMARY

In this last unit, we have discussed the steps involved in searching for materials under creative common licences. We have also explained the need to build your repository of local media, instead of relying solely on online media for your class. This will protect you from the embarrassment in utilizing media under copyright restrictions.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the concept of creative common licences
2. Discuss the need to build local repository

**Final Note:** It is important to inform you that this course material is not intended to give you all the information and resources needed to develop ODL media resources. However, we hope it guides you to explore other relevant learning resources to bring you up-to-speed in this area. So, do not rely solely on this material, you are expected to interact, collaborate and share relevant learning resources amongst yourselves.

WE WISH YOU THE BEST

## 7.0 REFERENCES/FURTHER READING

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