

# Chapter 4

## Components and Attributes of Open and Distance Learning Interactive Courseware

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### Learning Outcomes

Upon completion of studying this Chapter, you should be able to:

- i Explain the concept of open and distance learning
- ii Define and describe the features of distance learning courseware
- iii State the components of a courseware
- iv Explain why interactivity of courseware is essential
- v State the attributes of an interactive courseware
- vi Explain the concept of mixed-media format of courseware
- vii State the roles of experts involved in courseware development

### Introduction

It is imperative to state that open distance learning programmes are now valued globally simply because they are considered comparable in terms of quality to conventional school programmes. The most important material that takes care of absence of the teacher in distance learning programme is the Courseware. Therefore, the need to understand the basic features of open distance learning courseware cannot be over-emphasized.

## **What is Open and Distance Learning?**

Open and Distance Learning (ODL) is regarded as education and training programme in which learning resources (the central feature of the learning experience) are used to reach learners who are physically separated from the educational provider rather than face-to-face instructional session. It is a broad term for the use of media and technology process and products to provide or enhance learning. It is regarded as a viable means of providing quality education access to learners who take full responsibilities of their learning process (Calvert, 2006).

## **Meaning and Components of ODL Courseware**

Courseware, as a word, is a combination of two words "course" and "software". It is regarded as a computerized learning material developed by experts involved in open distance learning for learners to acquire knowledge in a particular academic body of knowledge or discipline. It is usually presented using conversational tone and intended to be studied by a learner instead of attending regular classes where teachers or lecturers impart knowledge.

Courseware are usually organized in Modules and Study Units. A Module is made up of topics of interrelated ideas organized into Study Units. A Study Unit is regarded as a portion of the entire courseware to be studied at a specified period of time by a learner. For example, courseware of a subject may comprise 12 study units indicating that a learner is to spend 12 weeks studying the courseware. In this case, it is expected that for a learner to complete the entire courseware, a week should be devoted to studying the content of a Unit. Arrangement of a study Unit varies from institution to institution based on in-house style. However, major components of a Study Unit are as follows:

**Introduction:** This is one of the access devices that guide learners to understand the structure of a study unit. Introduction should be carefully crafted and must generate interest and motivation in the learner to want to read further. It should include what was learnt in the previous unit that will benefit the learner as he / she goes through the present unit. A good introduction should provide an overview of the main issues to be discussed in the unit. Sometimes, whenever it is necessary, an introduction tells the learner what he/she should do or use in order to gain maximum benefit from reading a unit. An introduction should be comprehensive enough but it should be of a reasonable length, not too short or too long.

**Learning Outcome** comprises what the learner should be able to do after studying the contents of a Study Unit. Active and measurable verbs should be used while stating the learning outcomes. Every study unit should have an adequate number of learning objectives and such will determine the content of the subject matter to be covered and the exercises/activities to be included. Taxonomies of educational objectives (cognitive, affective and psychomotor domains) should serve as sources for deriving learning outcomes. Behavioural objectives/outcomes, learning objectives, performance objectives/outcomes are sometimes used to refer to learning outcomes

**Main Content** is regarded as the core of a study unit. It contains the main material, activity or information that learners will study in order to attain the stated learning outcomes. Main content presents information in form of topic in manageable learning chunks organized in sections and sub-sections and each section contains at least one idea leading to the attainment of an objective stated. For the stated learning outcomes to be attained, the main content to be studied must be adequate and organized in understandable form using conversational tone.

**Formative Questions:** Usually presented at various intervals within sections and sub-sections of the main content of a study unit, formative questions provide learners the opportunity to check their progress when they are studying and also serve as a means of reinforcing what students have learnt. They are sometimes called in-text questions, self-check questions, self-assessment exercises/questions and quizzes.

**Illustrations, Graphics, Examples:** These usually serve as aids and supportive activities that enhance learners' understanding of the learning chunks presented in the main content. Graphic visuals, animations (for electronic ware), diagrams, pictures, examples help learners to understand abstract and difficult concepts better and also help in remembrance or recall of what is learnt. They should be adequately provided in a study unit.

**Summary:** Key points and facts presented in the study unit especially under the main content are sequentially itemized at the end of the study unit for the purpose of re-emphasizing their importance.

**Reference Books/Links:** These are details of cited works, and locations/sources of additional information that are not presented in a study unit but that are considered important, relevant and that can aid learners' understanding of the content presented in a study unit presented at the end.

## Structure of ODL Courseware (FUT Minna ODL In-House Style)

### Study Unit Title

#### 1.0 Introduction

#### 2.0 Learning Objectives/Outcomes

#### 3.0 Main Body/Content

##### 3.1 Sub topic

*Learning content, activities, examples, diagrams*

*Self-Assessment Questions*

##### 3.2 Sub topic

*Learning content, activities, examples, diagrams*

*Self-Assessment Questions*

##### 3.3 Sub topic

*Learning content, activities, examples, diagrams*

*Self-Assessment Questions*

#### 4.0 Conclusion

#### 5.0 Summary

#### 6.0 Tutor-Marked Assignment

#### 7.0 References/Further Reading

### Interactivity of ODL Courseware

Interaction among learners, with learning content and with facilitators/tutors is essential and crucial for successful usage of ODL courseware and important for the learning process (Falode, 2014). In the context of courseware materials for open distance learning, interactivity refers to the extent to which learners can be actively involved in modifying the form and content of their knowledge via mediated environment in real time. A major characteristic of interactivity is the ability of the individual learner to make use of the course material in whatever meaningful and suitable way for his own learning needs. Interactivity allows the learner to control the experience of studying the material by being able to determine, the order, process, period and pace of using the learning materials.

ODL courseware is regarded to be interactive if the following four forms of interaction are made possible during the use of the courseware:

- (i) **Interaction between the Learner and the Content:** for example, Self-Assessment Questions (SAQ), In-Text Exercises.
- (ii) **Interaction between the Learner and the Instructor:** for example, submission of Assignments and provision of Feedback.
- (ii) **Interaction between the Learner and other Learners:** for example, using social media platforms, chat rooms, video and teleconferencing.
- (iv) **Learner-Learning Interface Interaction:** This online presentation introduces a fourth type of interaction between the learner and the learning interface, e.g. Learning Management System (LMS).

### **Attributes of an Interactive Courseware**

The following are the major attributes of an interactive ODL courseware:

- i Learning contents and activities are available in mixed media format
- ii Clear statement of achievable learning objectives
- iii Adequate learning content comprehensively written in conversational tone and learner-friendly style
- iv Content spiced with appropriate illustrations, examples
- v Evidence of team approach to material development
- vi Presence of appropriate and adequate in-text questions (self-assessment exercises)
- vii Representation of concepts with relevant images/graphics, and animations
- viii For calculations, step-by-step procedures are explained and well spelt out
- ix Contents are free of copyright culpability
- x Courseware reviewed at regular intervals.

### **Mixed-Media Format for ODL Courseware**

Learning contents and activities for ODL programme should be developed in mixed-media format. That is, there should be downloadable format (PDF, Mp3),

Learning Management System supported format (Online), audio format (CD), Video format (VCD, DVD) among others. These identified formats can easily be accessible using audio, audio-visual, computer and other telecommunication technologies in learning settings. When courseware is developed in a mixed-media format, there will be greater flexibility and accessibility in the way and manner learners make use of such.

### **Team Approach to Courseware Development**

Developing an interactive learning effective courseware requires team approach. The individual that will provide the learning content, may not be the one to arrange the contents in learnable formats. Also, the individual that will ensure the text is free from grammatical errors may not be the one to produce the graphics or integrate the content in the learning management system. Hence, the development of a good courseware requires the collaborative efforts of subject matter experts (subject teachers), instructional systems designer (instructional technology experts), computer programmers, media experts, computer graphic artists, language editor among others.

### **Conclusion**

The success of any open and distance learning programme lies on the interactivity of the courseware. Such should be carefully planned, developed and produced in mixed-media format.

### **Exercises**

1. What are the components of a good courseware?
2. Explain the rationale for preparing learning materials in mixed-media format.

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## References

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