

GUIDE FOR DEVELOPING COURSE MATERIALS FOR INDEPENDENT LEARNING



Centre for virtual Learning
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ABBREVIATIONS AND ACRONYMS

CD-ROM	Compact Disc, Read-Only-Memory
CVL	Centre For Virtual Learning
TE	Technical Expert
IEEE	Institute of Electrical and Electronics Engineers
ICT	Information and Communication Technology
ID	Instructional Designer
ISO	International Organization for Standardization
HTML	Hyper Text Mark-up Language
HTTP	Hypertext Transfer Protocol
LCMS	Learning Content Management System
LMS	Learning Management System
LAN/WAN	Local Area Networks/Wide Area Networks
Los	Learning Outcomes
ODeL	Open Distant Electronic Learning
PHEA	Partnership for Higher Education in Africa
Q&A	Question and Answer
SME	Subject Matter Expert
TCP/IP	Transmission Control Protocol/Internet Protocol
UDSM	University of Dar Es Salaam
TV	Television

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1. INTRODUCTION

1.1. PURPOSE OF THE GUIDE

This guide is designed to assist instructors, course developers and instructional designers to walk through the planning and design steps when designing a new course for independent learning. The course might either be a pure course, convectional course enhanced with technology or blended distance learning course. The focus of the guide is to enable course developers to create quality material for independent learners. Thus, the guide, among other things, includes recommended steps for creating course content, course assessment and suitable format that support constructivism in order to have meaningful contexts for indepenent learners that include authentic assessment activities. In addition, it describes minimum standards and best practices for quality e-learning course designing.

1.2. INDEPENDENT LEARNING – WHAT AND WHY?

1.2.1. WHAT IS INDEPENDENT LEARNING?

Independent learning, often referred to as self-directed learning, involves students taking the initiative in recognising learning requirements and undertaking activities to meet them (Holec,1981). However, it may sound as if most of learning initiatives are expected on the students. This does not mean that instrucotrs don't play an important part. Teachers are expected to help learning to take place by actions for example, providing learners with resource materials; whetting learners appetites to learn; providing learners with chances to test out their learning; giving learners feedback on their progress; and helping learners to make sense of what they have learned. That is why learning of this nature is normally referred to as Supported Independent Learning



When students learn from learning resource materials, whether in libraries, learning resource rooms, or at home, most of their learning is done independently, at their own

It is the aim of this guide therefore to provide a resource for instructors to develop course contents which can be used by an independent learner more effectively. The course material aiming an independent learner should be designed in such a way that when students learn from such learning materials, they are essentially learning at their own pace and in their own ways from materials specially prepared to activate their want to learn, giving them the chance to learn by doing, and providing them with feedback on their efforts. When students learn from such aspect, they can still be regarded as learning independently as they are not then dependent on the presence of tutors.

1.2.2. WHY INDEPENDENT LEARNING?

Independent learning skills and resources are highly required in this era for several reasons including the fact that:

- (i) Post-Secondary School education depends largely on students being able to work independently
- (ii) Independent learning cultivates the potential for self-motivated, resourceful and creative future workers
- (iii) Independent Learning strategies encourage students to engage in the learning process actively by promoting intrinsic motivation towards learning, rather than extrinsic, and by helping students to see the value in learning
- (iv) Independent Learning helps cater for the needs of individuals in a differentiated curriculum

In addition, asking people further questions about where and when they learn (Race, 1994) reveals that most people consider they learn best if learning is at their own pace; at times and places of their own choosing; often with other people around, especially fellow-learners and when they feel in control of their learning.

2. COURSE DESIGN

The principles of designing course for flexible or independent learning are similar to those for designing a course for face-to-face teaching. Two differences, however, distinguish independent learning course development from face-to-face learning:

- i. First is the fact that, independent implies self-direction and autonomous learning for the student. Therefore, in order to be learner-centred the course developer needs to make the course flexible enough to suit and adapt to individual needs. The course developer should consider all aspects of student learning and should use as many of the modes for course delivery as are consistent with the aims and outcomes of the course.

- ii. Second a range of electronic and communication tools should be available to facilitate learning for an independent learner because of the separation of teacher and learner in space and/or time during at least a majority of each instructional process.

2.1. STEPS FOR COURSE DESIGN

Therefore, In order to have effective course designed for independent learning, it is important to have well-considered selection and use of available learning resources with pedagogical design consideration and use of educational media to unite teacher and learner for instructional delivery. More importantly, to achieve this, a systematic design approach is needed with various steps or considerations for course developers to address. These steps are:

- a. Identifying and knowing the learner (*discussed in section 2.1*).
- b. Determining the goals and course objectives (*discussed in section 2.2*).
- c. Determining mode of assessment (*explained in section 2.3*)
- d. Preparing course content (*discussed in section 2.4*)
- e. Evaluating the created content (*discussed in chapter four (4)*)

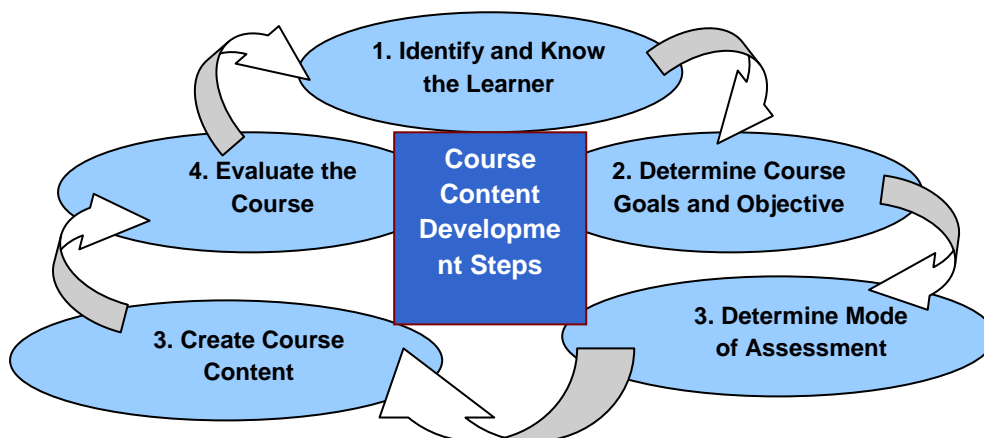


Figure 1: Steps for designing course for independent learning

2.2. IDENTIFYING AND KNOWING THE LEARNER

The development of effective course begins with consideration of the learner and his or her learning environment. It is necessary to identify the target learners and the contexts/environments in which they will be learning. The identification is based on general characteristics such

as the specific entry competencies in terms of knowledge, skills, and attitudes about the expected course. It is also better to consider the learners based on the learning style whether it is a full online learning situations or conventional distance learning. It important to observe on the following learner characteristics:

- a. The **academic background** of the learner, previous academic experience or exposure to the topic, and his/her school or grade level.
- b. **Personal or social characteristics:** Age, attitude, work experience, how the content of the instruction relates to his/her life.
- c. **Characteristics of the non-conventional learner:** Culturally diverse learners, primary language, learners with disabilities.
- d. **Learning styles**, the existing conditions necessary for an individual to learn.
- e. **Motivation** of the learner: the student seeking grades, credit, self-improvement, salary or status advancement.

2.3. DETERMINING THE GOALS AND LEARNING OBJECTIVES

2.3.1. WHAT IS ALL ABOUT COURSE GOALS AND LEARNING OBJECTIVES?

Course goals are broad statements of what the students will be able to do when they have completed the course while learning objectives describe a more specific statement about what the learner will be able to do or do better as a result of taking the course. Designing of the course materials begins, therefore, with the creation of course goals and specific learning objectives.

2.3.1.1. DETERMINING COURSE GOALS

As you begin the process of determining course goals, consider the following specific questions:

- a. What should the student **KNOW** upon completion of the course?
- b. What should the student **BE ABLE TO DO** upon completion of the course?
- c. What should the student **EXPERIENCE** upon completion of the course?

Since course goals are broad statements that communicate the overall purpose and serve as criteria for selecting the curricular components, words or phrases like "appreciates", "values" or "introduction to the language of..." can be used. See the following examples.

Example:

Course goal: Students will learn common strategies in developing course materials for independent learning.

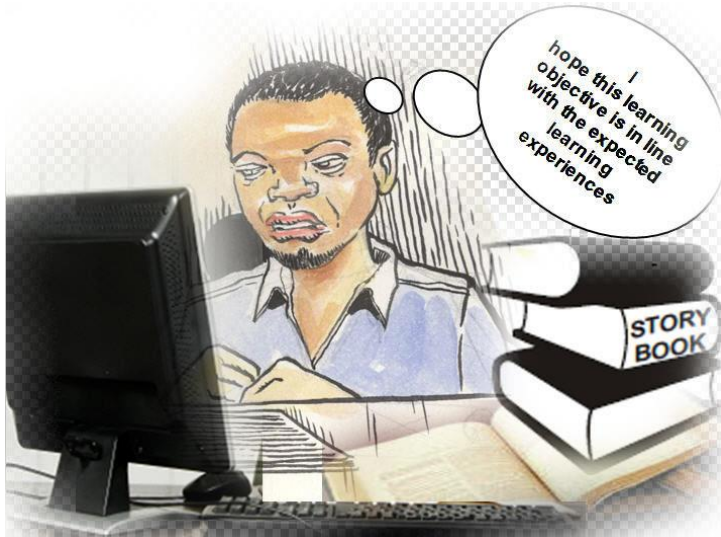
The following examples of stems can also be used

- Students will gain a greater appreciation
- Students will be introduced to
- Students will understand

For more assistance with selecting words for writing course goals, Bloom's Taxonomy may be helpful [Anderson and Krathwohl, 2001]. (See Appendix A: Examples of Words to Write Goals).

2.3.1.2. ARE LEARNING OBJECTIVES IMPORTANT?

Once the general goal of the course is defined, it is important to derive the specific learning objectives of the course from the broad goals. Objectives are student performances of the concepts described in the course goals. They are often referred to as 'learning outcomes' because they define more specifically what skills students will be able to demonstrate after the learning session. Clearly defined, learning objectives are useful for instructors, instructional designers and students in order to:



- a. Select and design instructional content, materials or methods and have a sound basis by which performance can be measured;
- b. Give designers and instructors an objective method to determine how successful the course

has been in terms of imparting to students appropriate skills and intended knowledge;

- c. Provide students with the means to organize their efforts toward accomplishing the desired behaviours since objectives are stated at the beginning of the course.
- d. Give students a road map for course contents, course expectations, and the evaluation of their knowledge and skills. If students have that road map, they are more likely to learn (and, have fewer complaints about your course.)

2.3.1.3. HOW DO I CREATE LEARNING OBJECTIVES?

Course objectives are derived from the course goals and designed to be assessable (i.e., things we can grade). The necessary steps to create objectives are to breakdown the course goal into subcomponents and rewriting these sub components into measurable units.

a) Break down the Course Goal into Subcomponents

From the general course goal ask yourself what the specific knowledge, skills, and attitudes you expect the students to have at the end of the course are. See the following example.

Example;

By the end of this course, students should be able to:

- a. **Knowledge objectives** - analyze, classify, compare, define, describe, give examples of, identify, list, solve...
- b. **Skills objectives** - adjust, assemble, demonstrate, locate, maintain, measure, modify, operate, use...
- c. **Attitude objectives** - assess, challenge, choose, criticize, defend, evaluate, formulate, justify, persuade, recommend...

b) REWRITE SUBCOMPONENTS INTO LEARNING OBJECTIVES

Objectives should be linked to one concept. Both trainers and students must be able to determine if the objective has been achieved. According to Mager (1984), the ideal learning objective has three parts:

- a. **A measurable verb** - Objective must be specific, observable and measurable action verbs in communicating learning outcomes. Action verbs indicate, in concrete terms, what students will be able to do, for example: "Recognize," "Express," "Demonstrate," "Compare," "Evaluate," etc. Avoid vague phrases such as: "Know," "Understand," and "Is aware of," as they do not clearly communicate what will be measured and are open to a wide range of interpretations.
- b. **Performance** - Objectives must state what a learner is expected to do in order to demonstrate mastery of the subject matter as per objectives.
- c. **Criterion** - Objectives must describe the criterion of acceptable performance by describing how well the learner must perform in order to be considered acceptable.

Ideally, the elements of a measurable objective comprise **WHO** will do **WHAT** and **HOW (HOW WELL)** by **WHEN**. Thus, a statement of objectives may be stated. See an example.

Example:

Specific learning objectives: At the completion of the course, students will be able to:

- Compare and contrast independent learning and face to face learning
- Design an appropriate course content for an independent learning course modules

Bloom's taxonomy [Anderson and Krathwohl, 2001], is a great tool that can be used to create objectives (See Appendix B).

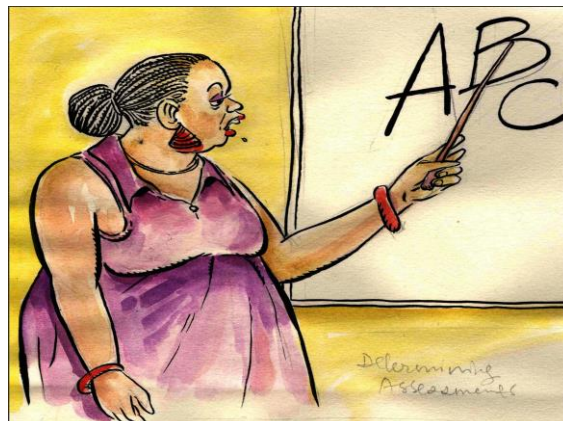
Summary: Create SMART (Specific, Measurable, Achievable, Relevant, Timely) learning outcomes; Goals are broad, generalized statements about what is to be learned. Think of them as a target to be reached or "hit". Learning objectives are specific, measurable, short-term, observable

student behaviours. Objectives should always focus on the students, not the instructor; Objectives should address outcomes, not learning processes; each objective should focus on only one idea; Objectives should measure specific behaviours. Try to avoid using vague verbs such as 'understands' and 'knows.'

2.4. DETERMINING ASSESSMENTS

2.4.1. ASSESSMENT OPTIONS

Assessment refers to a process that provides information about the achievement or progress of students in the course. In practice, the best time to start thinking about assessments is before you begin developing your content, so you can know in advance what kind of things to plan for and incorporate into your course. Assessments should focus to allow students to demonstrate what they know or can do. The assessment strategies designed should also be able to test the knowledge, concepts, student attributes, processes, methodologies etc. They should allow students to demonstrate what they know or can do and measure the extent to which they have achieved the objectives of the course.



The assessment strategies should allow students to demonstrate what they know or can do and measures the extent to which they have achieved the objectives of the course.

Assessment is often divided into formative and summative categories.

- i. **Summative assessment** - In an educational setting, summative assessment is generally carried out at the end of a course. It is typically used to assign students a course grade. Similarly for the course intended for independent learning, a summative assessment should be designed to assess the students' level of understanding at the end of the course which is normally a final exam. Summative end-of-course evaluations should give indications of general learning satisfaction and whether the course has achieved its objectives or not.
- ii. **Formative assessment** - In an educational setting, formative assessment, also referred to as educative assessment, is used to aid learning and is generally carried out throughout a course, but normally are not used in the grade point

average of the student. Types of formative assessment include self-assessment activities that allow students to recall or comprehend knowledge. Examples include multiple choice, matching, or true/false exercises and diagnostic tests that enable the teacher to assess how students are performing and how well the particular lesson plan is working also can be used in almost any subject to assess the level of proficiency, comprehension and mastery of information. It is helpful to inform the students that this is a diagnostic tool that will not be graded but will be used to help them see their strong and weak areas in a subject. Informing the students reduces test anxiety and produces more accurate diagnostic results. In practice, these activities can be implemented either immediately following particular module segments or at the end of each module. Well-designed self-assessment activities give feedback that will help the learner find out why he or she answered incorrectly (instead of merely giving the correct answer)

2.4.2. ASSESSMENT PLANNING

For each assessment task, you will need to prepare a detailed statement of assessment procedures for your students including timing, type of assessment, criteria for assessment, marking guide, and the relationship between assessments and course learning outcomes.

In planning and refining assessment tasks for your course, here are a few questions to help you think through this process:

- a. What assessment tasks will establish whether or not students have achieved the learning outcomes for my course?
- b. What opportunities are there for students to have input into assessment tasks e.g. assessment weightings, criteria, choice of topic?
- c. What sort of assessment items will allow students to show their understanding of the course as a whole rather than just how many facts they can remember?
- d. What sort of feedback will I provide on assessment to help my students learn and improve in subsequent tasks?
- e. How might I use peer or self assessment to encourage students to become critical of their own work?

Table 2: Sample assessment plan

GOALS	OBJECTIVES	ACTIVITY/TASK	WEIGHTING	MARKING GUIDE
Goal 1	Learning Objective 1	Multiple choice questions	0%	N/A
	Learning Objective 2	Multiple choice questions	0%	N/A
	Learning Objective 1,	Paper Project	30%	Needed

	2 and 3			
Goal 2	Learning Objective 1	Essay questions	40%	Needed
	Learning Objective 2			
Goal 1 and Goal 2		Project	35%	Needed

2.4.3. ASSESSMENT FEEDBACK PLANNING

Students need feedback on how their independent learning is going. Often, this feedback can be built into the learning resource materials from which they are learning, as responses to the activities they engage in as they learn. It is imperative for students to assess the adequacy of their responses to assessment exercises in order:

- i. To know **how** the right answers was reached
- ii. To have enough information on their **own performance**, particularly where they may have gone wrong
- iii. To have a clear **picture** of what they should do next; in what order

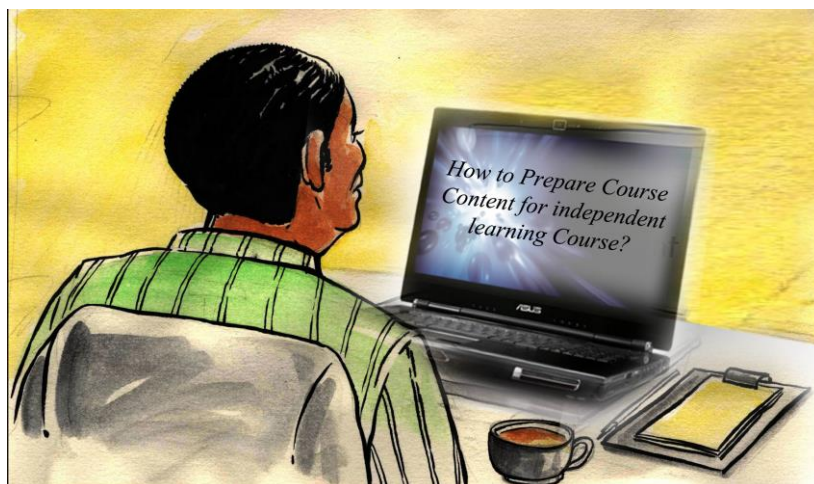
In fact feedback helps to provide students with confidence in assessing their own performance and thus becoming more **self-directed** in their learning. In this regard, assessment planning should consider planning on how a learner will get feedback on various assessment activities/tasks.

***Summary:** Assessing student progress regularly should be planned in advance as part and parcel of good course design; Assessment strategies have to focus on established ways to measure learner progress by reference to stated learning objectives and should be consistent with the course activities and resources.*

2.5. DEVELOPING COURSE CONTENT AND LEARNING ACTIVITIES

2.5.1. PREPARING COURSE CONTENT

The term content here refers to the information that the student is expected to learn in order to fulfil the course objectives.



The content preparation step is one of the most times consuming step, but also the most important step for SMEs to provide the learning content to students

Content can be presented in deferent forms such as through text, pictures and/or sound. In an e-learning environment for example, content can be presented through Web-based text, graphics, animations, video clips or video-recordings, sound clips or audio-recordings.

In practice, the content preparation step is one of the most times consuming step due to the fact that, different forms of content presentations such as text, audio and video needs proper thoughts on where, when and how to use them for instruction. Further more the authenticity of external resources such as those found on internet and copyright issues add more complexities in the process as discussed in section 2.4.4. Course creators need to have resources that will assist them in creation of course content as discussed in section 5.3. The subsequent subsections describes on the depth, breath, organization of content and best use of images, videos and animations.

2.5.1.1. DETERMINE BREADTH, DEPTH AND ORGANIZATION

As you consider course content, think carefully about how materials can most effectively be presented to facilitate the type(s) of learning you have chosen. Many questions come immediately to mind:

- a. *What should I cover, and what can I leave out?*
- b. *How will my students' best learn each piece of content?*

- c. *How will I know if they've mastered the learning objectives? Is there a logical sequence to the course topics?*
- d. *Is it necessary for students to work through the topics in a linear fashion? Is there a "suggested" path?*
- e. *If I don't have students work through the content in a linear fashion, how will the topics be presented?*
- f. *Is there a logical way to group the course topics?*
- g. *How does the course time frame map against the number of topic groupings?*

Having considered the learning goals for your course, the approaches you want to take and the content you plan to cover is better to organize your course contents into modules as explained in section 2.4.3.

2.5.1.2. BEST PRACTICE IN PRESENTING DIFFERENT FORMS OF COURSE CONTENT

The following are some important suggestion to consider when preparing course content such as text, graphics, audio, video and animations:

a) Use of Text

Traditionally, much of the information in a course are likely to be is text based. In such case therefore, you need to choose the depth and text to be used in the course with considerations due the fact that, long sections of text are more easily read in print rather than on screen. The important issue to consider as you prepare text based content is whether you expect students to go through the content in a particular sequence, i.e. does the student need to learn topic A before learning about topic B, C, and D? If the sequence of the content is important, you need to ensure the content is organized appropriately and include instructions to the students on how they need to go through it. If the content organization does not require a particular structure, consider including references or links between different sections or modules that allow the student to go through the course by following the relationships between the content sections; also text can be used to give more explanations to students where other forms such as images or sound are used.

b) Use of Graphics/Images

Some concepts are better represented by drawings, pictures, diagrams, or other static visual images. A good picture is worth a thousand words and can enhance the presentation of text-based content. Students may, however, need supporting textual information to tell them what is important in the picture or graphic.

The following are things to consider when you take into account using images/pictures in the course.

- a. The larger the graphic, the longer it will take for that page to load.
- b. Graphics may appear differently on student computers due to differences in monitor size, limitations in computer video hardware, computer configuration and depending on which browser they are using. For example, a graphic that fits perfectly in the screen of your computer may not appear in only one screen in another computer. for instance one of the reason why Netscape Navigator and Microsoft Explorer version 4.0 or higher are a minimum recommended computer requirement is that earlier versions of these browsers may not display some graphics accurately..
- c. Choose images that support the course content. Use images to illustrate or demonstrate concepts that are difficult to grasp through text alone. Avoid using images for purely aesthetic reasons; rather, use images that are directly related to learning outcomes. Figures with supporting text, labels, and arrows can quickly communicate important information, while charts and graphs are very useful for conveying statistical or historical information.
- d. Use or create images that are appealing, easy to understand, and adequately labelled. If you include an image, explain what it is, why it is important, and how it relates to what you are teaching students. Include labels and captions.
- e. Always obtain the copyright holder's permission to use the image in your course. You also need to include the source information below the image.

c) Use of Sound and Video

Sound and video elements can also enhance your course material by reducing the text of explaining some concepts. The following are things to take into account when you consider using video and audio in your course.

- a. Choose videos that align with your learning outcomes. Video segments that do not help students achieve the learning outcomes detract from the learning process. Use shorter clips to keep students engaged. Avoid using video just to fill space or have a media element in the module or course.
- b. Use interactive video to engage students. Add an extra level of engagement by allowing for opportunities where the video can stop and give more information or commentary on specific segments with the use of pop ups.
- c. Always obtain the copyright holder's permission to use the video in your course. Unless you are linking to a video that is hosted on another site, you have to obtain permission to embed it into your course.
- d. Provide a text version of the audio recording. This is necessary for students with hearing impairments or for those without speakers on their computers.
- e. Use high quality audio. Poor quality audio (low volume, monotone voice, background noise, distortion, etc.) will frustrate students and discourage them from listening. Use professional recording facilities and equipment.
- f. Use shorter clips to keep students engaged and make sure that the segments fit with the learning outcomes of the course/modules.

- g. The larger the video or sound clip, the longer it will take for the page to load. High quality video or sound recordings (clearer images or sound, that play smoothly) take longer to load than poorer quality ones. Although larger and longer recordings are possible to present on the Web, currently, video clips that are only a minute or two long and no larger than approximately 2 inches by 3 inches are reasonably accessible by students with the minimum recommended computer requirements. With these limitations, you need to consider carefully what you want to present in a video or sound clip.

Animations

In education, animations focus to fulfil a *cognitive* function. In this role, animations are intended to support students' cognitive processes that ultimately result in them understanding the subject matter. Other advocates for animation promote its potential benefits for information processing. Animations do not require the learner to perform mental manipulations of the display material because the depicted situation's dynamics are available to be 'read off' directly. A learner's processing resources can thus be devoted to the central task of understanding the content rather than being diverted to generating and running an internal dynamic mental model from a static external representation. For learners who otherwise lack the capacity to carry out the necessary cognitive processes on the basis of a static depiction alone, animation can have an *enabling* effect. However, animation can also benefit learners who already possess the necessary capacity but who could process the information more readily if its dynamic aspects were presented explicitly. In this case, animation is described as having a *facilitative* effect (Schnotz & Rasch, in press).

***Summary:** The course content has to be sequenced and structured to enable learners to achieve the stated goals. It is advisable to Chunk or group information to help students learn the content. Use learning modules to "drive" students through the course. Instructional content materials should be sufficiently comprehensive to achieve announced objectives and learning outcomes. Materials, other than standard textbook resources produced by recognized publishers, could be used by the instructor as they seem suitable for the online environment. Moreover, in instructional design, the purpose of multimedia isn't just to incorporate multiple media, insert cool effects, or add complexity (which can detract from learning). It is highly recommended to use each medium to its advantage and to combine media so that the potential learning is greater and more effective than using single elements alone.*

2.5.2. LEARNING ACTIVITIES

The term, learning activities, is used here to indicate any activities that assist students in learning the course content. Learning activities are expected to be the tasks and exercises which assist students in making meaning from the content of a course.

2.5.2.1. PURPOSE OF LEARNING ACTIVITIES

Before developing a learning activity, you must determine its purpose. This will help you decide the appropriate type of activity to create. Forsyth, Jolliffe & Stevens (1999) list four activity purposes:

- Passing on information
- Show examples or illustrations of the new information and how it works
- Give the learners experience by working through an example of the information at work
- Place the learners in hands-on situations and require them to demonstrate their abilities with the new information

These four purposes range from passive to active learning situations, vary in the number of learners that might participate in related activities, and suggest different roles for instructor involvement. You will find that considering these factors, as well as your learners' characteristics and your expected learning outcomes, will lead you to develop specific activities that cover all the bases.

1. Plan for the types of learning activities to take place

Once you have determined its purpose, you must choose the appropriate type of learning activity to create. It is better as you create the learning activity to make it interactive; it could be between student to student (i.e. discussion activity), students to resources (i.e. simulation) or student to instructor (i.e. online chat). Once you have decided the kind of an activity, think about the details of how you will use this activity.

Example 1 (*student to student interaction*)

If as an instructor, you want students to take part in a discussion, what exactly are they meant to do?

- Explore a topic in a general way?
- Pool information gathered from various sources?
- Reach a conclusion or consensus?
- Problems solve?

Furthermore, create group activities, etc. Encourage peer-to-peer feedback by including opportunities for students to review each others' work using tools such as wikis, blogs, online sharing applications, etc. Receiving such feedback throughout the course enables students to evaluate and self-adjust their performance.

Example 2 (*student to resource interaction*)

As an instructor, you may want students to take part in interactive activities that help to explain concepts and involve the student with hands-on learning. This may include all forms of drag and drop questions (one to one correlation, many

to one correlation) as well as interactive ordering of graphics or text, and finally, simulations; i.e. Computer-based simulations allow students to go through a process and see the results of their actions. In some cases, like chemistry, it may even be preferable to have students practice virtually, as results can be explosive, smelly, or otherwise undesirable. In other cases, like medicine, it may allow students to perform an activity without resources that are difficult to obtain, such as a cadaver or live human patient.

Example 3 (student to instructor interaction)

As an instructor, you have to create activities that require feedback from both the instructor as well as students. This is especially useful for higher-order learning, which requires learners to analyze, synthesize, or evaluate concepts. Activities that allow for instructor feedback include discussion board questions and assignments such as online presentations and reflection papers.

Note: When preparing activities, consider that research indicates that adults digest information most effectively when working on their own problem solving, performing practical exercises or while training others. Adults remember 20% of what they hear, 40% of what they see and hear, 80% of what they see, hear, say and do. Training is least effective when received in a passive way during lectures and presentations, while applying the knowledge in practice and in training others increases the effectiveness of digested information

[Adapted from Dufresne, Leonard and Gerace [1995]]

Summary: Rich learning activities would provide an experience to lead students to achieve the desired new understanding and knowledge. Therefore, it is better to plan for activities that introduce concepts, apply concepts, reinforce and extend concepts; here are a few questions to help you think through as you develop learning activities for your students:

- a. Do the learning activities relate to the learning goals or outcomes?
 - b. Do I have a variety of learning activities that can be done on or off the computer?
 - c. Are my instructions for each activity clear?
 - d. Have I included examples or suggestions to direct students how to complete the activities?
-

ii. Copyright issues

Copyright considerations while creating course materials is very important though sometimes ignored. Most content available in textbooks, journals, articles and web sites are subject to copyright protections. This includes articles contained within web pages, the graphics and any video or sound files. Therefore, the same basic principles that anything original automatically obtains copyright protection, and that infringement occurs when someone copies all, or a substantial part of that material, without

permission equally apply as they do for more traditional media. It is, therefore, absolutely imperative that you always check to see if there is a copyright notice. Yes, fair use policies will cover copyrighted material for educational use, but there are restrictions. It is good to review those restrictions. In addition, refer to the UDSM Intellectual Property policy (2008) for issues pertaining to ownership and right and obligations of authors.

3. THE CONCEPTUAL COURSE MAP

In order to ensure and maintain consistency in designing and organising a course, Subject Matter Experts (SME's) and other course developers are requested to use a common course template which has a predefined design structure here referred to as a conceptual map. It is a hierarchical organization of content and main topics in a course comprising all the necessary components based on the course syllabus. Regardless of the type of course, the conceptual map will help not only the students to easily locate course items but also it will be used by the instructor, SME or course developer as a checklist to ensure that all the necessary information within the course have been included as explained in section 3.1 and 3.2.

b. COURSE ELEMENTS

Course elements includes all issues that need to be included in the course as adopted from the UDSM course development guide for blended learning (2004). The following course elements are necessary to promote course consistency.

- I. Course Title
- II. Course Code
- III. Instructor(s) Introduction
- IV. Course Overview
- V. Course Outcomes/Objectives
- VI. Pre-requisites
- VII. Course assessment and Grading options
- VIII. Learning Resources
- IX. Course calendar

These elements are detailed hereunder;

i. Course Title / Course Code

It is imperative for each course to have a title and a unique code for unique course identification. Bellow is an example

<p>Course Title: DEVELOPING AN ONLINE COURSE</p> <p>Course Code: DO 100</p>

ii. Instructor(s) Introduction

It is also important for the course to hold specific information about the instructors, teaching assistants, or any other person involved in the course. The information includes Name, Office location, contact hrs, a brief introductory statement to students. Below is an example

I am Mr. Jonas Saganda, Assistant Lecturer in the Centre for Virtual Learning Teaching at the University of Dar es Salaam.

Contacts:

- CVL, Room No. 300(4)
- Phone: Direct: 0222410089
- Phone: Extension: 2446
- Email: saganda@udsm.ac.tz

iii. Course Overview

Brief explanation about the course is very important for a student to have general expectations of the course.

Example of course overview:

Developing an Online Course is designed for professionals who want to create courses for the web. The course is based on current practices of instructional design and is broken up into three parts: the concept phase, the design and definition phase, and the production phase. In the concept phase we will conduct a review of other courses and teaching models, define course goals and learning objective, write the course outline as well as the pedagogical approach, in the production stage we develop one module of instruction and then test the module.

iv. Course Outcomes/Objectives

To determine the learning outcomes for your course as discussed in section 2.2.

Example of course objectives:

At the end of the course, you will be able to:

- Implement the steps involved in the process of planning a distance learning course.
- Define course goals and objectives.
- Write a course outline.
- Define the target audience.
- Define prerequisite skills.

2.2.2. Pre-requisites

Course pre requisites are very important as they help the student to know the pre course requirements. All assumptions about the learner should be clearly communicated to student.

Example of Course Pre-requisites

The student will need the following prerequisite skills:

- Expert in the course they will be teaching
- Fluent in computer and Internet skills.
- Basic knowledge of how to upload a Web page is a plus
- How to make Web pages and
- Basic experience using graphics software.

v. Course assessment and Grading options

List the key course assignments and expectations and clarify how those assessments will be weighted in determining the final grade as shown in table 3. All course assessment items should be identified prior to course delivery. Refer section 2.3 for more assessment issues.

Table 3: Assessment plan

WEEK NO	ASSESSMENT	MARKS (%)	REMARKS
7	Assignment 1	15	Assessment based on content covered in weeks 1-6
13	Assignment 2	20	Assessment based on content covered in week 7 -12
	Participation	5	Active participation in the discussion
16-17	Examination	60	
	Total	100	

vi. Learning Resources

Learning resources are an important component in designing a course for flexible learning. Importantly, well-considered selection and use of resources will contribute to achieving the educational purposes.

1. Defining and Identifying a Variety of Learning Resources

Learning resources are the many things that contain unit content and that help learners to acquire skills or knowledge. They include textbooks, journals, CD-ROMs, videos, audio tapes, learning guides, broadcast television and radio segments, selected websites, images and PowerPoint slides. Resources may simply contain unit content. If so, academic staff will still need to assist students to construct meaning from them by means of well designed, interactive learning activities.

2. Principles of Valid Resource Selection

Given the vast range and quantity of learning resources available, the challenge is to select those which are most likely to enhance learning. Essentially, what needs to be borne in mind is why the teacher is doing something, his/her purpose - in other words, the learning outcomes of that particular unit. The resources should contribute towards achieving the outcomes of the unit. It is often tempting to include a vast number of resources but in learning resource selection the aim should be to provide only key resources. Too many may be overwhelming for students.

Generally, Instructor should identify all resources and references for the course. Because you are not in a face to face environment, you are advised to provide interesting readings for your students. You can do this in a variety of ways: Internet links to current material, write your own mini lectures, even assign journal articles or books for reference. Make sure the readings are current, concise, and interesting so the student will eagerly read them. If text books are used, pages should be identified and scanned. The issue of copyright should be examined in this area.

c. CONCEPTUAL MODULE/TOPIC ORGANIZATION

The course content should be organized in Modules/Lessons and learning units with the relevant Learning activities for students to build concepts and engagement in a co-operative and collaborative learning.

- a. Ensure your main headings and subheadings to allow students to easily find content they are looking for.

- b. Break the material into manageable chunks. Each block of content should be one to one- and-a-half screens in length in order to prevent students from scrolling excessively.
- c. Address students as 'you.' Contrary to the standard tone used in textbooks or journals, online courses work best when written in a conversational style. Include and involve your students by writing in an active first person voice. Addressing students directly will help them feel more included and involved, making them less likely to skip the activities you provide.
- d. Be concise and clear in your writing style. Reading online is tiring for the eyes and 25% slower than reading on paper. Therefore, avoid flowery language and overuse of jargon. Be sure to define terms and acronyms and avoid lengthy sentences.

i. Deferent Approaches in Presenting Course Map (Calendar)

There are myriad ways to which you can consider to present content and organize learning activities for online delivery such as:

1. Using an Activities Approach

The *activity-centered* approach is where instructors may decide to build their course around an activity-based table. There is an example below. Since activities are designed to be completed in a timed manner during the semester of study, the week of their delivery is included in the table. Hrs (in the table 4) is the hours we expect the student to spend on this activity and its associated learning. At the completion of the plan the total hours must meet the allowance for delivery of the course.

The assessment column can include summative components (those for which marks are awarded) and formative ones (those that do not carry any marks). The students need to be informed when assessment components are to be completed so that they understand these requirements at the outset of the course. When the activities-based table is completed a learning-outcomes table will need to be completed. The Learning Outcomes (Los) in the activities-based table can be filled in from index items in a learning outcome-based table as shown below.

Table 4: Conceptual Map - Activity Based

Week	Topic	Activities	Hrs	LO	Summative Assessment/ Strategies/Timelines

2. Using a Learning Outcomes Approach

The *learning outcome-centered* approach is where instructors may decide to build their course around a learning outcome-based table. In this table the concern is not with the delivery timing, but concentrate more on what the students are expected to achieve – what they can do at the end of the course that they couldn't at the start. You will note that there are indexed learning outcomes (LOs) such as 1.1 in Topic 1 and sub outcomes such as 1.1.1. The level of detail in the sub outcomes will be based on a case-by-case need. In the learning outcomes-based table we list the resources that the student will need to meet the learning outcomes. Verification is the assessment we will use to show that the student has met the learning outcome objective (exams, quizzes, discussion groups, laboratory reports, assignments....) – that is, the method we use to verify the learning has been completed satisfactorily. When the learning outcome-based table is completed an activities-based table must be developed. Activities/Experiences in the learning outcome table can be filled in from the activities table.

Thus, table 5 shows that conceptual map based on learning outcomes. The sample conceptual map recommended for all UDSM is shown in Appendix C as adopted from document “*Guidelines for designing and delivering online courses - 2004*”.

Table 5: Conceptual Map – Learning based Outcome

Index	Outcome	Activities/Experience	Time	Verification	Resources
<i>Topic/Module 1</i>					
1.1					
1.1.1					
1.1.2					
1.1.3					
1.2					
1.3					
<i>Topic/Module 2</i>					
2.1					
2.2					
2.2.1					
2.2.2					
2.3					

Summary: *When developing a course for either independent learning or distance delivery, based on the goals and objectives, all information should be delivered in such small and easily manageable learning bites here referred to as modules or learning units. By organizing content into discrete, meaningful chunks of information, students can make better use of their time spent on course content and can more easily track which sections they have already covered Linking the learning objectives for each module to the objectives or outcomes for the entire course shows the student how each module fits into the overall course. It is advised to structure the course modules to fit into 15 weeks which cover one semester as per UDSM regulations*

4. EVALUATING DEVELOPED COURSE CONTENT MATERIALS

Evaluation is a positive step that can provide feedback on the effectiveness of your course. This can be peer evaluation, trials or other approaches designed to ensure that potential problems are addressed well before the course is offered. Thus, methods and procedures for formative and summative course evaluation should be carefully planned in the course development and design process.

5. PLAN AND CONDUCT FORMATIVE EVALUATION

Formative evaluation, evaluation that occurs from feedback while the instruction is in progress, provides data for revising and improving the instructional materials that were used and those that are yet to be used. In this case, overall evaluation strategies should include the formative evaluation that will take place during the development phase. It is important to remember that sometimes the plans that look so good on paper actually fail in practice. When possible, test instructional materials with one or a small group of students to determine how students use the materials, how much assistance they need, etc. Considering the teaching methods implemented and the course materials provided are students learning what they should be?

6. PLAN AND CONDUCT SUMMATIVE EVALUATION

Summative evaluation, evaluation that occurs at the end of the instructional effort (unit, course, etc.), provides data on the effectiveness of the instructional effort as a whole. In this case, plans for summative evaluation, which will take place as the first students experience the learning environment, should also be outlined. Such evaluation, which normally includes both teachers and learners, is through interviews, focus group discussions and questionnaires. This is the evaluation that provides information on how the whole instructional unit enabled the learner to achieve the objectives that were established at the outset; the focus for summative evaluation could be on course relevancy, learner attitudes toward delivery methods, or the instructor's teaching style and effectiveness.

7. USE A COURSE DEVELOPMENT EVALUATION RUBRIC

Appendix D provides A Course Development Evaluation Rubric. Generally, this rubric provides a means for an instructor to self-assess course(s) based on the pre-set expectations. Furthermore, the rubric provides a means for supporting instructor's evaluation means in the developmental process for online course design and delivery as part of commitment to high quality course development. Specifically, it makes public key criteria that instructors can use in developing, revising and judging their own work and it focuses on whether;

- a. The overall design of the course is made clear to the student at the beginning of the course (*Appendix D1*).
- b. Learning objectives are clearly stated and explained. They assist students in focusing their effort in the course (*Appendix D2*).

- c. Assessment strategies use established ways to measure effective learning, evaluate student progress by reference to stated learning objectives, and is designed to be Integral to the learning process (*Appendix D3*).
- d. Instructional materials are sufficiently comprehensive to achieve stated course objectives and learning outcomes and are prepared by qualified persons competent in their fields (*Appendix D4*).
- e. Meaningful interaction between the instructor and students, among students, and between students and course materials is employed to motivate students and foster intellectual commitment and personal development (*Appendix D5*).
- f. Course navigation and the technology employed in the course foster student engagement and ensure access to instructional materials and resources (*Appendix D6*).
- g. The course facilitates student access to institutional services essential to student success (*Appendix D7*).
- h. Course components are accessible to all students as intended (*Appendix D8*).

8. SUPPORT AND RESOURCES

It is always best for the Subject Matter Experts/instructors to work with other colleagues in the development of course materials, particularly to work with instructional designer and technical experts for the purpose on enhancing the process of material creation and realizing envisage objectives to independent learners as explained in section 5.1 and 5.2. The support from other experts and peers is not enough if educational resources such as books are not available. Section 5.3 explains how course creators can obtain resources to assist hi/her in the process.

9. INSTRUCTIONAL SUPPORT



Subject Matter Experts and Instructional Designers should always work together in the process of course materials development.

The role of instructional designer in this case is to help the instructional development process by applying a systematic methodology based on instructional theory to create sound content for learning. Basically, instructional design focuses on what the instruction should be like, including look, feel, organization and functionality. In later stage the SME and Instructional designer need to work closely with technical experts or multimedia producers for incorporating graphics, audio, video and animations that would assist independent learners to grasp concepts as anticipated.

Subject Matter Experts/instructors at the University of Dar es Salaam will get this support from the Centre for Virtual Learning (CVL). Specifically the Instructional Design Unit (IDU) within the centre is responsible for assisting SME's and course creators in content development process. Thus, course creators should work closely with the centre for the purpose of achieving the desired objective.

10. TECHNICAL SUPPORT

Course creation requires the integration of various forms of content such as text graphics audio, video and animations. This integration requires some technical skills which includes but not limited to working with multimedia software. It is not necessary for content creators and Subject Matter experts to become Technical Experts. These experts need to have necessary skills in order to assist course creators in content creation.

Subject Matter Experts/instructors at the University of Dar es Salaam will also get this support from the Centre for Virtual Learning (CVL). Specifically the Multimedia Laboratory Unit (MLU) within the centre is responsible for assisting SME's and course creators to integrate multimedia elements in the content. Thus, course creators should work closely with the centre for the purpose of achieving the desired objective.

11. RESOURCES

The process of creating educational content requires the use of many resources and references. This includes books, papers, articles, journals and other unpublished materials from other SME's that addresses the learning objectives of the course. These resources simplify the load and assist in creating of high quality materials due to diversities in ideologies and content presentation styles from different authors. Some of these resources will assist in text creation while some for audio, sound and video.



The biggest challenge is availability of resources that are relevant to the syllabus under consideration. This should be overcome by the use of different resources that are available from different sources. These sources include the use library and internet in search of books, journals and articles. In addition, course creators are encouraged to use Open Educational Resources (OER's). These are teaching, learning and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or repurposing by others. Open educational resources

include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials or techniques used to support access to knowledge.



Thus, Course creators should to the following to obtain resource;

- i. Visit the university main library and the departmental libraries to find relevant books, journals and papers.
- ii. Visit educational websites and find relevant text, images, videos and animations. Proper selection of content form the website is emphasized as the web had many garbage. Furthermore, copyright statements need to be clearly identified and adhered to.

12. CONCLUSIONS

This guide has described the tailor made process for designing a course for independent learning to be used by instructors at the University of Dar es Salaam. Generally as per this guide, the most important aspect of designing course Materials for independent learners starts by making a need analysis and having enough clues regarding the audience you anticipate attending to. With learners in mind it is then important to make clear the goals and learning outcomes (objectives) you want your students to achieve as a result of their learning experience. Following this, assignments learning activities and the course materials have to be clear and in line with the learning objectives. In essence, a successful development of content demands a thorough understanding of content, process of instructional strategies, content organization, learning outcome assessment and learner needs..

13. GLOSARY

Assessment: The process used to systematically evaluate a learner's skill or knowledge level.

Bloom's Taxonomy: A classification of behaviours and learning developed by Benjamin Bloom and others. Organized into three domains of learning: cognitive (or intellectual), affective (or emotional/attitudinal), and psychomotor (or physical, motor).

Chat: Real-time text-based communication in a virtual environment. Chat can be used in e-learning for student questions, instructor feedback, or even group discussion.

Content: Information captured digitally and imparted to learners. Formats for e-learning content include text, audio, video, animation, simulation, and more.

Course design: the process of planning the content, pedagogy and assessment in individual courses.

Courseware: Any type of instructional or educational course delivered via a software program or over the Internet.

Delivery: Any method of transferring content to learners, including instructor-led training, Web-based training, CD-ROM, books, and more.

Distance learning: Any educational or learning process or system in which the teacher and instructor are separated geographically or in time from his or her students; or in which students are separated from other students or educational resources..

E-learning (electronic learning): Term covering a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via Internet,

intranet/extranet (LAN/WAN), audio- and videotape, satellite broadcast, interactive TV, CD-ROM, and more.

Evaluation: Any systematic method for gathering information about the impact and effectiveness of a learning offering. Results of the measurements can be used to improve the offering, determine whether the learning objectives have been achieved, and assess the value of the offering to the organization.

Formative assessment: Process used by teachers to determine how to adjust instruction in response to student needs, and by students to adjust learning strategies. Formative assessments are used to inform and adjust instruction and are not used to evaluate student progress for a grade.

Instructional designer (ID): An individual who applies a systematic methodology based on instructional theory to create content for learning.

Instructional Goals: Brief statements describing the terminal tasks learners will perform as a result of the training.

Instructional Design: Instructional design refers to the systematic process of translating principles of teaching and learning into plans for instructional materials and activities.

Instructional Strategies: Means by which the content and skills are transferred from the training delivery system to the learner. Examples include: demonstrations, role plays, hands-on activities, practice, simulations, discussion, lecture, illustrated diagrams, step-by-step review; self-study exercises, reviews, on-the-job training, practice with coaching, video demonstrations, examples, etc. Often organized by these categories: pre-instructional activities, content presentations, learner practice, feedback, and closure

Instructional Systems Design: The name given to the process of creating instruction in order to close a performance gap that is due to a lack of knowledge and skills.

Instructor's Manual: Collection of written materials given to instructors to facilitate use of instructional materials. Includes an overview of materials, tests with answers, and relevant supplementary information

Internet-based training: Training delivered primarily by TCP/IP network technologies such as email, newsgroups, proprietary applications, and so forth. Although the term is often used synonymously with Web-based training, Internet-based training is not necessarily delivered over the World Wide Web, and may not use the HTTP and HTML technologies that make Web-based training possible.

Learning Activities: Cognitive experiences that help learners perceive, process, rehearse, store, and transfer new knowledge or skills

Learning objective: A statement establishing a measurable behavioural outcome, used as an advanced organizer to indicate how the learner's acquisition of skills and knowledge is being measured

LMS (Learning Management System): Software that automates the administration of training. The LMS registers users, tracks courses in a catalogue, records data from learners; and provides reports to management. An LMS is typically designed to handle courses by multiple publishers and providers. It usually doesn't include its own authoring capabilities; instead, it focuses on managing courses created by a variety of other sources.

Module: Instructional package with a single integrated theme that provides the information needed to develop mastery of specified knowledge and skills, and serves as one component of a total course or curriculum.

Multimedia: Encompasses interactive text, images, sound, and colour. Multimedia can be anything from a simple PowerPoint slide show to a complex interactive simulation.

Online learning: Learning delivered by Web-based or Internet-based technologies

Rubric: Scoring guide composed of set criteria and related levels of proficiency that is used to evaluate a student's performance, product or project.

Self-assessment: The process by which the learner determines his or her personal level of knowledge and skills.

Self-paced learning: An offering in which the learner determines the pace and timing of content delivery.

SME (subject matter expert): An individual who is recognized as having proficient knowledge about and skills in a particular topic or subject area.

Subject Matter Expert (SME): Person responsible for the accuracy of facts, concepts, and other instructional content.

Summative assessment: Assessments that are employed mainly to assess cumulative student learning at a particular point in time (e.g., unit tests, finals, the Connecticut Mastery Test, the Connecticut Academic Performance Test).

Template: A predefined set of tools or forms that establishes the structure and settings necessary to quickly create content.

Tutorial: Step-by-step instructions presented through computer or Web-based technology, designed to teach a user how to complete a particular action.

24/7: Twenty-four hours a day, seven days a week. In e-learning, used to describe the hours of operation of a virtual classroom or how often technical support should be available for online students and instructors

Usability: The measure of how effectively, efficiently, and easily a person can navigate an interface, find information on it, and achieve his or her goals.

14. APPENDICES

Appendix A: Examples of Words to Write Goals (Anderson and Krathwohl, 2001)

<i>Adjectives:</i>	Appropriate	Beneficial	Correct	Knowledgeable
	Proper	Suitable		
<i>Nouns:</i>	Appreciation	Aptness	Awareness	Introduction
	Knowledge	Respect	Understanding	
<i>Verbs:</i>	Appreciates	Apprehend	Apprize	Approach
	Aware	Cherish	Enhance	Enjoy
	Esteem	Introduce	Know	Perceive
	Possess	Recognize	Respect	Understand
	Value			

Appendix B: Bloom's Taxonomy: A Tool to Write Objectives (Anderson and Krathwohl, 2001)

Bloom's Cognitive Level	Student Performance	Words to Use in Objectives	Sample Behaviours
Knowledge	Recalling facts, terms, concepts, definitions, principles	Define, list, state, identify, label, name.	The student will define the 6 levels of Bloom's taxonomy of the cognitive domain.
Comprehension	Explaining or interpreting the meaning of information	Explain, predict, interpret, infer, summarize, convert, translate, give examples of, account for, and paraphrase.	The student will explain the purpose of Bloom's taxonomy of the cognitive domain.
Application	Using a concept or principle to solve a problem	Apply, solve, show, make use of, modify, demonstrate, compute	The student will write an instructional objective for each level of Bloom's taxonomy.

Order of Thinking Increases ↓

Analysis	Breaking material down into its component parts to see interrelationships/hierarchy of ideas	Differentiate, compare/contrast, distinguish, how does ___ relate to ___? Why does ___ work?	The student will compare and contrast the cognitive and affective domains.
Synthesis*	Producing something new or original from component parts	Design, construct, develop, formulate, create, hypothesize, invent	The student will design a classification scheme for writing educational objectives that combines the cognitive, affective, and psychomotor domains.
	<i>*These activities require time for thought, production and feedback.</i>		
Evaluation	Making a judgment based on established criteria	Judge, recommend, critique, justify, evaluate, appraise	The student will judge the effectiveness of writing objectives using Bloom's taxonomy.

Appendix C: A Sample Course Calendar

(Appendix C: is largely adapted, with permission, from a related Document; the Guideline for designing and delivering online courses (2004)

WEEK	LESSON	ACTIVITIES
1	Module 1 Educational media and technology L/Unit 1: Definition of key terms L/Unit 2: Types of educational media	Activity: 1.1: Reflections on examples Activity:1.2: Categorization of media
2 - 5	L/Unit 3: Historical Development L/Unit 4: Educational Technology in the classroom today	Activity: 1.3: Reflections on media used

6-10	Module 2 Effective communication L/Unit 5: Theories of communication L/Unit 6: Shannon and Lasswell's Communication models	Activity: 2.1: Describing a model
11	L/unit 7: Schramm and Berlos' communication models. L/Unit 8: Advantages & Disadvantages of comm. models	Activity:2.2: Relating comm. model with classroom teaching
12 = 15	Module 3 Use of an overhead projector (OHP) L/Unit 9: Physical characteristics, Setting up and operating OHP	Activity: 3.1: Locating parts of OHP

Appendix D: A Course Development Evaluation Rubric

This is a Quality Matters Rubric 2010, for ODeL Course Development. The purpose of this rubric is to provide feedback to the instructor on the design of a newly developed or takeover course, and to provide a tool for recommending that the course is ready to go live. *(Adapted from the 2003 - 2006 (public domain) versions of the Quality Matters™ online course design rubric, developed by Maryland Online found online at http://www.ipfw.edu/celt/technology/documents/qualitymatters_rubric.doc)*

Appendix D1: Course Overview and Introduction

General Review Standard: The overall design of the course is made clear to the student at the beginning of the course.

Specific Review Standards:	Possible Points	Total Points	Comments
a. Instructions make clear how to get started and where to find various course components.	3		
b. A statement introduces the student to the purpose of the course and to its components; in the case of a hybrid	3		

course, the statement clarifies the relationship between the face-to-face and online components.			
c. Etiquette expectations (sometimes called “netiquette”) for online discussions, email, and other forms of communication are stated clearly.	1		
d. The self-introduction by the instructor is appropriate and available online.	1		
e. Students are asked to introduce themselves to the class.	1		
f. Minimum student preparation, and, if applicable, prerequisite knowledge in the discipline are clearly stated.	1		
g. Minimum technical skills expected of the student are clearly stated.	1		

Appendix D2: Learning Objectives (Competencies)

General Review Standard: Learning objectives are clearly stated and explained. They assist students in focusing their effort in the course.

Specific Review Standards:	Possible Points	Total Points	Comments
a. The course learning objectives describe outcomes that are measurable.	3		
b. The module/unit learning objectives describe outcomes that are measurable and consistent with the course-level objectives.	3		
c. All learning objectives are stated clearly and written from the students’ perspective.	3		
d. Instructions to students on how to meet the learning objectives are adequate and stated clearly.	3		

e. The learning objectives are appropriately designed for the level of the course.	2		
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Appendix D3: Assessment and Measurement

General Review Standard: Assessment strategies use established ways to measure effective learning, evaluate student progress by reference to stated learning objectives, and is designed to be Integral to the learning process.

Specific Review Standards:	Possible Points	Total Points	Comments
a. The types of assessments selected measure the stated learning objectives and are consistent with course activities and resources.	3		
b. The course grading policy is stated clearly.	3		
c. Specific and descriptive criteria are provided for the evaluation of students' work and participation.	3		
d. The assessment instruments selected are sequenced, varied, and appropriate to the content being assessed.	2		
e. "Self-check" or practice assignments are provided, with timely feedback to students.	2		

Appendix D4: Resources and Materials

General Review Standard: Instructional materials are sufficiently comprehensive to achieve stated course objectives and learning outcomes and are prepared by qualified persons competent in their fields.

Specific Review Standards:	Possible Points	Total Points	Comments

a. The instructional materials contribute to the achievement of the stated course and module/unit learning objectives.	3		
b. The relationship between the instructional materials and the learning activities is clearly explained to the student.	3		
c. The instructional materials have sufficient breadth, depth, and currency for the student to learn the subject.	2		
d. All resources and materials used in the course are appropriately cited.	1		

APPENDIX D4: LEARNER ENGAGEMENT

General Review Standard: Meaningful interaction between the instructor and students, among students, and between students and course materials is employed to motivate students and foster intellectual commitment and personal development.

Specific Review Standards:	Possible Points	Total Points	Comments
a. The learning activities promote the achievement of the stated learning objectives. (Note: in some institutions learning objectives may be called learning outcomes.)	3		
b. Learning activities foster instructor-student, content-student, and if appropriate to the course, student-student interaction.	3		
c. Clear standards are set for instructor responsiveness and availability (turn-around time for email, grade	2		

posting, etc.)			
d. The requirements for student interaction are clearly articulated.	2		

Appendix D5: Course Technology

General Review Standard: Course navigation and the technology employed in the course foster student engagement and ensure access to instructional materials and resources.

Specific Review Standards:	Possible Points	Total Points	Comments
a. The tools and media support the learning objectives, and are appropriately chosen to deliver the content of the course.	3		
b. The tools and media support student engagement and guide the student to become an active learner.	3		
c. Navigation throughout the online components of the course is logical, consistent, and efficient.	3		
d. Students have ready access to the technologies required in the course.	2		
e. The course components are compatible with current standards for delivery modes.	1		
f. Instructions on how to access resources at a distance are sufficient and easy to understand.	1		
g. The course design takes full advantage of available tools and media.	1		

Appendix D6: Learner Support

General Review Standard: The course facilitates student access to institutional services essential to student success.

Specific Review Standards:	Possible	Total	Comment
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	e Points	Points	s
a. The course instructions articulate or link to a clear description of the technical support offered.	2		
b. Course instructions articulate or link to an explanation of how the institution's academic support system can assist the student in effectively using the resources provided.	2		
c. Course instructions articulate or link to an explanation of how the institution's student support services can help students reach their educational goals.	1		
d. Course instructions answer basic questions related to research, writing, technology, etc., or link to tutorials or other resources that provide the information.	1		

APPENDIX D7: ACCESSIBILITY

General Review Standard: The face-to-face and online course components are accessible to all students.

Specific Review Standards:	Possible Points	Total Points	Comments
a. The course incorporates standards and reflects conformance with institutional policy regarding accessibility in online and hybrid courses.	3		
b. Course pages and course materials provide equivalent alternatives to auditory and visual content.	2		
c. Course pages have links that are self-describing and meaningful.	2		
d. The course ensures screen readability.	1		

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