Course Content Preparation and Standardization

Content standardization is an integral activity of an eLearning system. The course creator and the teacher remain involved in this activity during the whole stages of course building and implementation. But before actually starting the course creation, the process of course creation has to be standardized for common modules, common standardized text format and common look and feel of the courses.

1. Preparing Content for E-learning

The following general steps are involved in preparing the content for an e-learning course:

- Determine the objectives and outcomes for the course.
- Summarise the main topics for the content and arrange the content into an educationally sound sequence.
- Apply instructional design to the content. This includes determining how units of the content will be assessed, and how the learners will progress through the content. It also includes breaking the content into manageable units for the learner. Sometimes called modules or units, these are discrete segments of work that accomplish specific objectives. They help the learner to access the content easily, and to see which parts of the course they have completed as they progress.
- Brainstorm learning activities based on the content sequence. Try separating the theory from the practice and make the practice an interactive exercise.
- Write the body of the content. It is important to ensure that the language level is appropriate for the learner community. Make sure that the content fit comfortably onto a single screen. Minimise the use of jargon and acronyms, or at least explain them when their use is unavoidable. Use a style guide to have consistency in writing.
- Make sure the content is divided into units that comfortably fit on one screen. This process is called chunking. While it is possible to scroll through text, scrolling can make the learning cumbersome.
- Determine what media will be required to support the learning content and assemble the media in a way that will support the learning content.
- Decide how the learner will navigate through the content. Will the learner have complete freedom to navigate anywhere within the content, or will they be directed on specific paths? Will assessments be barriers to progress?
- Determine what will be able to be printed or downloaded by the learner. This affects decisions about how the course will be delivered.

2. Course Framework

The first step towards standardization is designing of a common course framework which includes:

- Designing a course map/flowchart.
- Design of a uniform structure for the course content.
• Collection of Course Material.
• Creation of the course content in MOODLE.

3. Course Map / Flowchart

The course map is designed in such a way so that it becomes the basic skeleton for each course. The courses are then developed on the top of it. The course map can be designed and followed for all courses as depicted in the Fig.1.

![Course Flow Chart](image)

Fig. 1. Course Flow Chart

4. Uniform Structure for the Course

• Overview of the Course (A brief about what this course will cover)
• Goals of the course (Purpose of the course in few lines)
• Distribution of course syllabus into topics/lessons (Course Flowchart) for e.g.: The course “Computer Fundamentals and Programming” is distributed like this:
  ➢ Number Systems
  ➢ Representation of Integers, Fixed and Floating point Numbers and Characters.
  ➢ Functional Units of Computer.
  ➢ Programming Fundamentals etc.

These topics serve as the Lesson Titles under the course.

Lesson

• A lesson delivers content in an interesting and flexible way.
• It consists of a number of pages.
• Each page normally ends with a question and a number of possible answers.
• Depending on the student's choice of answer they either progress to the next page or are taken back to a previous page.
• Navigation through the lesson can be straightforward or complex, depending largely on the structure of the material being presented.

5. Lesson Flowchart

A lesson can be thought of as a kind of flowchart.

• The student reads some content.
• After the content ask the student some questions.
• Based on the answers the student gives, the system sends him/her to another page.
• For example, if a student chooses answer one, the system goes to page 3. If the student chooses answer two, the system goes to page 1. If the student answers 3, the system goes to page 5.
• Lessons are very flexible, but do require some set-up.

The lesson structure and format that has been set up for the eLearnAgriculture (http://elearnagri.iasri.res.in/) site are as follows:

6. Lesson Structure

• Lesson Title
• Goals (Purpose of the Lesson in few lines)
• Lesson content (Division of lesson into different pages)
• For each page identification of
  ➢ Title
  ➢ Text (The text should be in bulleted form and should describe the content using examples)
  ➢ One Question (at the end of each page)
  ➢ Tables
  ➢ Graphs
  ➢ Equations
  ➢ Images
• Glossary (Contains definitions of important words coming in the Lesson text)
• Questions (Multiple Choice, True/False, Fill in the Blanks)
• Summary of the lesson
• References
• Power-point presentation of the lesson

An Illustration: Following is the structure of course on Elementary Statistical Methods (http://elearnagri.iasri.res.in/)

The structure, format and content of the lesson will look like the following one:
Lesson Title (Descriptive Statistics)

Goal
The purpose of this lesson is to familiarize the users with the following concepts related to basic statistics:
- Frequency Distribution
- Measures
- Graphical Procedures

Lesson Content
Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data.

Sections
Frequency Distributions
- The running text should be more in the form of bullets with examples (related to Agriculture).
- The keywords should be in bold and their definitions should be provided in the Glossary of the Lesson.
- The Tables/Graphs/any pictures should have a label.

Subsections
The graphical display can be depicted as a simple chart in Fig. 2.
Fig. 2: Pie chart of cropping pattern

- **Summary**

Contains short summary of the lesson depicting highlights of the lesson and how it would be helpful to the users as given below.

This lesson contains details about Descriptive Statistics. It describes various summary measures that include measures of Central Tendency and Variation along with illustrations and examples. The graphical procedures for describing the data have also been given. This lesson will be helpful to the users for understanding the data and presenting it in a meaningful manner.

- **Questions**

Multiple Choice, True/False, Fill in the Blanks, Match the Questions in left column with the answers in right column

- At least 10 such questions from each Lesson
- The answers should also be provided like a/b/c/d in multiple choices, T/F in True False, one or two word answer in case of Fill in the Blanks.
- Audio/Video presentation of the lesson

- Power Point Presentation

Presentation of each lesson describing the lesson in a slide show manner. More bullets and figures should be used in slides instead of running text. Don’t use any design template.