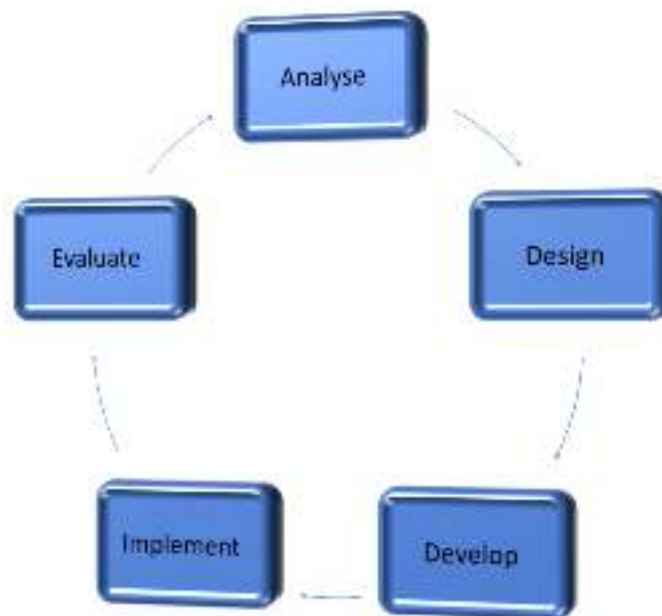


Course Name: Design and develop an eLearning course / ADDIE model to design eLearning courses

Description: This topic is intended for all those who have the need of creating their own online courses, regardless of the subject matter. The aim of this course is to equip HE teachers and lecturers to devise their own way of teaching their particular subject matter in an online environment by resorting to the most suitable online tools and platforms, as well as to the best possible pedagogical approaches to deliver their content in the virtual ambience. This particular course is oriented towards recommending the ADDIE model of course design.



The five stages of the ADDIE model enable one to arrange logical steps from the initial idea to the final product, as well as to assess the devised tool and its use.

ANALYSIS

Analysis refers to the initial segment of the process within which one defines the aims and goals of the desired course. This is the segment of needs analysis, so to speak. This is determined in relation to the course users, i.e. students. The course designer needs to assess what kind of knowledge will suit the best his/her students, what challenges to introduce, how to apply individual approach, the amount of “old” and “new” knowledge to be presented, manners and levels of improvement, etc.



It is necessary to be able to provide answers to the following questions:

1. What is the typical background of the students/participants who will undergo the programme? Personal and educational information such as age, nationality, previous experiences and interests should be determined. What is the target group? What are the educational goals, past knowledge levels, experiences, age, interests, cultural background etc. of the learners?
2. What do the students need to accomplish at the end of the program? What are the learner's needs?
3. What will be required in terms of skills, intelligence, outlook and physical/psychological action-reaction? What are the desired learning outcomes in terms of knowledge, skills, attitudes, behavior, etc.?
4. Are existing instructional strategies adequate? To answer this question, one needs to determine the current and/or popular methods used around the subject and take a look at what needs to be developed and improved.
5. What instructional goals does the course focus on?
6. What is the most conducive learning environment? A combination of live or online discussions? What are the Pros and Cons between online- and classroom-based study? What delivery option is to be chosen? What type of learning environment is preferred? Does one opt for online or face-to-face or a blend of both? If online is preferred what will be the difference in learning outcomes between classroom-based learning and web-based learning?
7. What are the limiting factors with respect to resources, including technical, support, time, human resources, technical skills, financial factors, support factors?

DESIGN

Design stage determines all goals, tools to be used to measure performance, various tests, subject matter analysis, planning and resources. In the design phase, the focus is on learning objectives, content, subject matter analysis, exercise, lesson planning, assessment instruments used and media selection. The approach in this phase should be systematic with a logical, orderly process of identification, development and evaluation of planned strategies which target the attainment of the project's goals. It should follow a very specific set of rules, and each element of the instructional design plan must be executed with attention to detail. Attention to details is crucial to the success of the design stage. Such a systematic approach makes sure that everything falls within a rational and planned strategy that aims to reach the project's targets. During the design stage it is necessary to determine the following:

- Different types of media to be used. Audio, Video and Graphics are prime examples. Will third party resources going to be utilized or you create your own? Will you prepare the teaching learning material?
- What are the available resources at your disposal for completing the project?
- What type of study do you plan for: Is it going to be collaborative, interactive or individual?

- Time frame for each activity. How much time is to be assigned to each task, and how will learning be implemented (per lesson, chapter, module, etc.)? Do the topics require a linear progression in presentation (i.e. easy to difficult)?
- The different mental processes needed by the participants in order to meet the targets of the project. What are the prescribed cognitive skills for students to achieve the project's learning goals?
- Knowledge and skill developed after each task. Do you have a way of determining that such values have been achieved by the students? What is your method of determining the acquisition of desired competencies by the students?
- If the project is web-based, what kind of user interface will you employ? Do you already have an idea on how the site will look like?
- The feedback mechanism you will use to determine if the participants are able to comprehend the lessons. What is your mechanism of obtaining the learners' feedback on material learnt?
- Given the wide variety of student preferences and learning styles, what method will you implement to make sure that the program fits their wants? How will you design your project activities so as to appeal to diverse learning styles and interests of students? Will you opt for variety in delivery options and media type?
- Pinpoint the main idea your training activity.

DEVELOPMENT

The development stage initiates the production and testing of the methodology being used in the project. In this stage, we make use of the data collected from the two previous stages to create a programme that will relay what needs to be taught to participants. If the two previous stages required planning and brainstorming, the development stage is all about putting it into action. This phase includes three tasks: drafting, production and evaluation.

Development thus involves creating and testing of learning outcomes. It aims to address the following questions:

1. Is the time frame being adhered to in relation to what has been accomplished in terms of material? Are you creating materials as per schedule?
2. Do you see team work across various participants? Are the members working effectively as a team?
3. Are participants contributing as per their optimal capacity?
4. Are the materials produced up to task on what they were intended for?

IMPLEMENTATION

The implementation stage reflects the continuous modification of the program to make sure maximum efficiency and positive results are obtained. Here is where we strive to redesign, update, and edit the



course in order to ensure that it can be delivered effectively. It is all about the procedure. Much of the real work is done here as instructors and students work hand in hand to train on new tools, so that the design can be continuously evaluated for further improvement. No project should run its course in isolation, and in the absence of proper evaluation from the instructor. Since this stage gains much feedback both from the instructor and participants alike, much can be learned and addressed.

Meticulous monitoring is mandatory. Proper evaluation of the course with necessary and timely revisions is done in this phase. When instructors and learners actively contribute during the implementation process, instantaneous modifications can be made to the project, thus making the program more effective and successful.

The following are examples of what can be determined:

1. What is the emotional feedback given to you by students during the course? Are they genuinely interested, eager, critical or resistant?
2. As the course proceeds, do you see that students are able to grasp the topic immediately or do they need help?
3. Explain how you are going to deal with any possible errors during testing. What will your response be if, after presenting activities to students, things do not go as planned?
4. Did you prepare a back-up tool in the event of initial failure of the project? When technical and other problems arise do you have a back-up strategy?
5. Will you go for implementation on a small scale or a large scale?
6. When the student group gets the material can they work independently, or is constant guidance required?

EVALUATION

The last stage of the ADDIE method is evaluation. This is the stage in which the course is being subjected to meticulous final testing regarding the what, how, why, when of the things that were accomplished (or not accomplished). This phase can be broken down into two parts: formative and summative. The initial evaluation actually happens during the development stage. The formative phase happens while students and instructors are working together during the course, while the summative portion occurs at the end of the programme. The main goal of the evaluation stage is to determine if the goals have been met, and to establish what will be required moving forward in order to further the efficiency and success rate of the project.

Every stage of the ADDIE process involves formative evaluation. This is a multidimensional—and essential—component of the ADDIE process. Evaluation is done throughout the implementation phase with the aid of the instructor and the students. After implementation of a course is over, a summative evaluation is done for instructional improvement. Throughout the evaluation phase the instructor should



ascertain whether problems relevant to the training program are solved, and whether the desired objectives are met.

While often overlooked for various reasons, evaluation **is a key step** of the whole ADDIE method as it aims to answer the following questions:

- a. Determine the categories that will be established to evaluate the effectiveness of the course (i.e. improved learning, increased motivation etc.) Based on what factors or criteria will the effectiveness of the course be determined?
- b. Determine the way you will implement data collection, as well as the timing at which it will be effectively made. When will the data related to the course's overall effectiveness be collected and how?
- c. Determine a system for analysing learners' feedback.
- d. Determine the method to be used if some parts of the course need to be changed prior to full release. On what basis will you arrive at a decision to revise certain aspects of the project before its full implementation?
- e. Determine the method by which reliability and content validity can be observed.
- f. Determine the method by which you will know if instructions are clear. How is the clarity of instructions assessed?
- g. Determine the method by which you can analyse and grade the response of the learners.