# Use ADDIE to Design Online Courses
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Every teacher who designs an online course goes through similar planning steps or tasks. A disciplinary process has developed over the past decade or two that provides structure to this planning - the process of instructional design. Various models have emerged that offer guidance to teachers involved in designing online instruction. The most common, even most popular model is called ADDIE, short for Analysis, Design, Development, Implementation, and Evaluation.
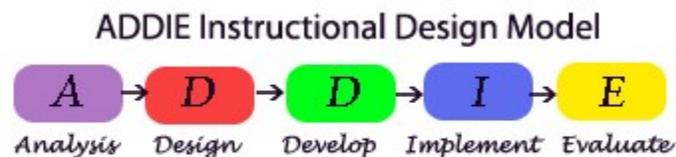
The process covers the entire instructional design process, albeit, in a rather linear way.

- **ANALYSIS:** The instructional designer identifies the gaps between the learner's current knowledge, skills, and behaviors and the desired or intended outcomes. If planning to teach adults, it is important to consider experiential knowledge and how this can be utilized in the planned instructional materials. When planning for distance learning on the Internet, consideration of the learner's level of computer expertise is also important. This is the time in the process to think about who your learners will be - their age range, their existent level of education, their accessibility and expertise, and the purpose of the instruction. Often concept maps and mind maps are used in this phase to outline the steps to take to progress to the design phase.

- **DESIGN:** Learning objectives, assessment processes, learning activities and content are planned. Objectives are usually set for three domains, popularly designed as cognitive (thinking), psychomotor (doing), and affective (being or attitudes) behaviors (Benjamin Bloom). Other considerations in this stage of the process include choosing activities that specifically capitalize on the nature of the online or distance environment. This includes the choice of media: if online, this can include the use of virtual journals, forums, chatrooms, quizzes, multimedia presentations, videos, audio and so on. Storyboards, human-computer interfaces, and instructional strategies are all ways that instructors can effectively plan this phase of the process.

- **DEVELOPMENT:** The actual content components are developed for the online milieu, specifically designed to meet the learning objectives and encourage active learning whether the study is occuring through the Internet or via printed correspondence courses. Storyboards, detailed user interface design, multimedia element design continue in this phase. A detailed plan of action is applied to create a complete learning environment. All of the text, visuals, multimedia components of the instruction are created or collected. In essence, the course is prepared and finalized, ready for testing.

- **IMPLEMENTATION:** The content is put into action with real students within the learning environment. Expert educators incorporate adult learning and effective learning theory such as constructivism, self-directed learning, and metacognition into the instructional design to encourage high level learning and successful meeting of the specified learning objectives. This stage begins with any necessary preparation and training of the instructors, and field testing the learning environment for completeness, user-friendliness, and quality.

- **EVALUATION:** The developed content is evaluated for effectiveness in meeting the learning objectives and meeting the learners' needs. Evaluation is done to determine both learner success and effectiveness of the actual designed content and process of instruction. Both formative and summative evaluation are necessary (of both the instructional content and the student's achievement), and though this is considered the final step in the instructional design, it is best if done during each stage of the process.