

Curriculum Development

The ADDIE Model¹



“If you are new to training development and have been thinking of putting together any type of training program, it is important to know and understand the most basic training tool used by professional trainers; it is called the ADDIE model.

The ADDIE model is basically a generic, systematic, step-by-step framework used by instructional designers, developers and trainers to ensure course development and learning does not occur in a haphazard, unstructured way. It is designed to ensure:

- (1) learners will achieve the goals of the course,
- (2) allows for the evaluation of learner's needs,
- (3) the design and development of training materials, and
- (4) evaluation of effectiveness of the training program using processes with specific, measurable outcomes.

Background

ADDIE came about with the development of the Cold War after World War II as the United States military struggled with itself to find a way to create more effective training programs for increasingly complex subjects. The result of this struggle for increased effectiveness bore fruit in the form of Instructional Systems Design which in turn, led to the design models that are in use today. You will often hear ADDIE referred to as Instructional Systems Design (**ISD**), Instructional Systems Design & Development (ISDD), Systems Approach to Training (SAT) or Instructional Design (ID). Most of the current instructional design models you will find in the workplace today are variations or spin-offs of the original ADDIE model.

¹ Image from: <http://edweb.sdsu.edu/Courses/EDTEC700/ETP/addie.htm> retrieved 8/24/2010

The Model

The literature on ADDIE estimates that there are well over 100 different ISD variations in use today, with almost all being based on the generic ADDIE model, which stands **for Analysis, Design, Development, Implementation, and Evaluation**; with each step or phase leading into the next as illustrated below:

Analysis ' Design ' Development ' Implementation ' Evaluation

One commonly accepted improvement to the ADDIE model that almost everyone uses whether consciously or unconsciously, is the use of what is often referred to as rapid prototyping which attempts to catch design flaws while they are still easy to fix. This is done by receiving ongoing feedback throughout all phases of the ADDIE model and making changes while moving forward.

During the Analysis phase, we define and develop as clear of an understanding of the audience's needs, constraints, existing knowledge, skills and the desired outcome of the training that we can. The Design phase endeavors to identify specific learning objectives, topic content, presentation methods and media, learner exercises and assessment criteria to be used. The Development phase creates and begins production of the learning materials to be used in the training. Implementation delivers the material by actually presenting and/or delivering the developed plan to the intended learning group or audience. After delivery, the Evaluation phase assesses the effectiveness of the topic content and training materials utilized in the training program and makes improvement changes for the next implementation or presentation. Let's take a look at each phase individually.

The Phases

The **Analysis** phase is the most important phase in the ADDIE model. It identifies areas requiring or needing training taking into account views of subject matter experts, the target audience, and the ultimate objectives and goals of the training.

During this phase, we define and develop as clear of an understanding of the audience's needs and constraints, existing knowledge, skills, and the desired outcome of the training as we can. It is here that we identify the learning problem, set the goals, objectives, any other relevant characteristics of the desired training, and consider the learning environment, available delivery options, and the timeline for the project.

Here are some areas that should be addressed during analysis phase:

- Who is the target audience; What is the minimum/maximum current knowledge of the participant audience? What are their characteristics? What are their special needs?
- What knowledge and skill deficiencies currently exist?
- What are the tasks currently performed by the target audience and what new skill level is required following the training?
- What are the available delivery options and methods for transferring the new skills to the workplace?
- What is the instructional setting; e.g. classroom, on-the-job, self study, etc?
- How do these skills connect to the intended audience?
- What is the timeline for project completion?

- What are the program constraints? Technological, timing and duration.
- What is going to cost to provide the training?
- Create performance measures for the tasks to be trained.

The **Design** phase is the systematic process of research, planning, identifying and specifying the complete design of the course objectives, lesson planning, topic content, training methodology, media, learner exercises, courseware content, and assessment criteria. Typically detailed prototypes are developed at this time, and the look, feel, design and content are determined. During this phase, the following should be taken into account:

- The entry criteria or knowledge level the learner must demonstrate prior to training.
- Develop learning objectives for each task to be covered.
- Identify, structure and sequence the learning steps required to perform the task from easiest to most difficult.
- Based on the time allocated for the training, determine approximately how long it will take to deliver the program taking into consideration the instructor's pace, course format and mode of delivery adjusting content and format accordingly.
- Develop participant assessments, program evaluation methodology, data collection method, and reporting formats that will be used to determine mastery of the tasks to be delivered
- If possible, conduct mini knowledge presentations to validate the program will meet the designated learning requirements.
- Review implementation and evaluation costs, effort required and schedule.

The **Development** phase is the actual production and assembly of the materials that were developed in the design phase. At this point it is important to include whoever is responsible for which elements, time schedules, and deadlines. In this phase, all audio, video, and courseware materials are collected, prepared, created and ready to be tested.

During this phase, the following need be taken into account:

- List activities that will help the target audience learn the task.
- Select the delivery method most appropriate to the learning group.
- Develop and produce program materials, aids and instructional courseware.
- Combine the courseware into a smoothly transitioning presentation.
- Validate the material and presentation to ensure it meets all goals and objectives.
- Develop trainer guides, learner guides, job aids and participant resources as necessary.
- Prepare coaches and mentors who will be assisting with the training.
- Book venue, accommodations and travel arrangements.
- Schedule participants.

The **Implementation** phase is where the developed course is actually put into action, and the final product, developed based on needs and errors discovered while testing with a prototype product, is presented to the target audience. Depending on the size of the audience and amount of time and resources allocated to this endeavor, the following considerations should be taken into account the day before or the morning of presentation day.

- Set up and prepare venue.
- The learning environment, i.e. room, is set-up and prepared prior to the arrival of the learners.
- Student registration area set when necessary with registration materials, instruction books, etc.
- Hands on equipment, computers, tools, software, etc. are in place at each station or seat. Make sure that if using a learning application, an external link, web-site or Internet connection that it is live and functioning.
- Conduct training session.

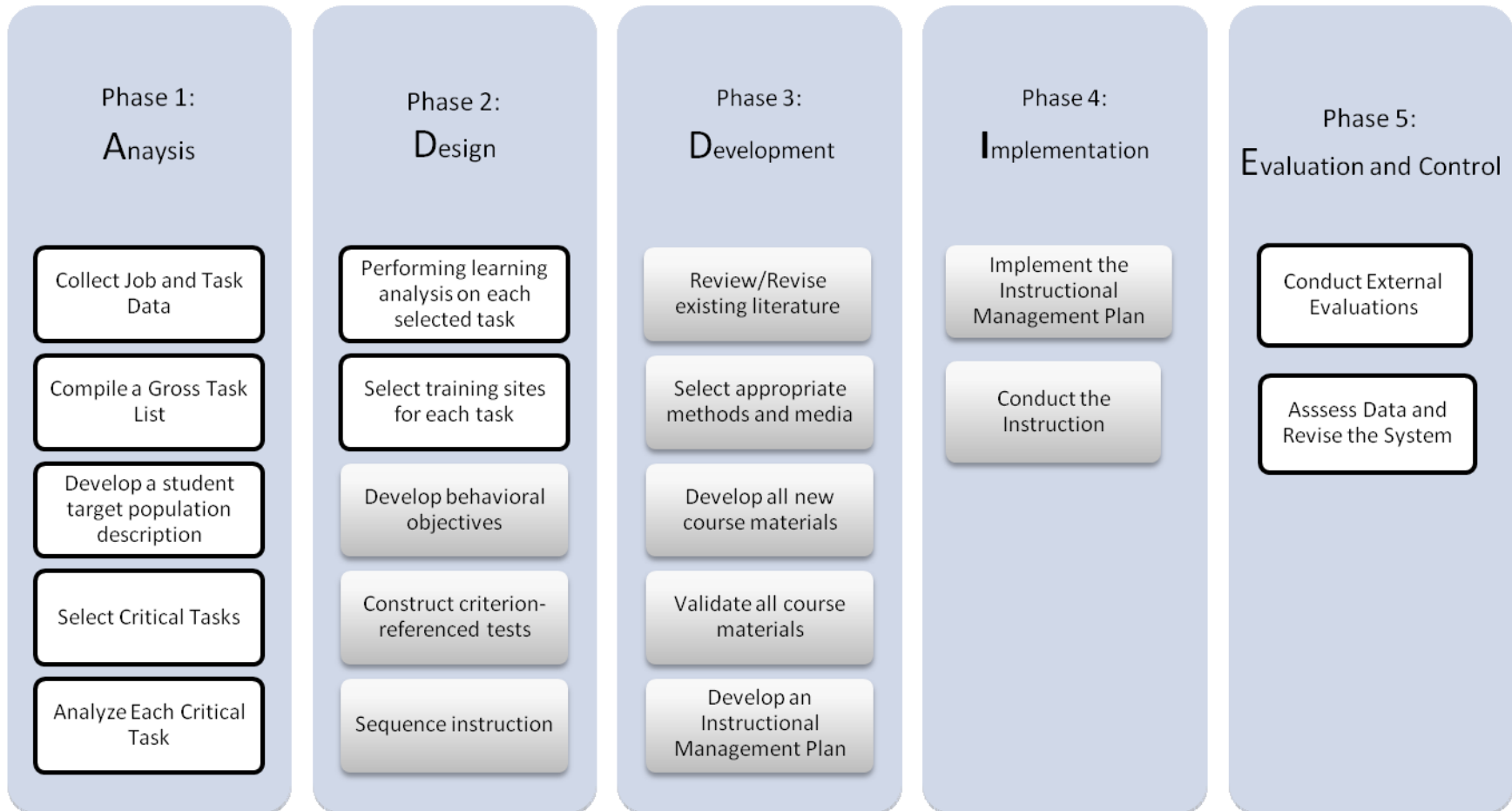
After delivery, the **Evaluation** phase, in a systemic process, considers feedback from the learners. The feedback gathered during this phase measures reaction, identifies what is working and not working, determines the effectiveness and quality of the delivery, and is designed to fine-tune the program. It validates whether the course satisfied its objectives and the effectiveness of the training materials used. It finds out whether the learning went as planned, and it may also uncover any obstacles that may have emerged, then, by making revisions, adjustments and corrections as needed, insures the success of the next presentation. Use a well-designed post presentation questionnaire, evaluation and/or survey that provides for anonymous feedback if desired by the participant. Some or all of the following should be included in the evaluation: ***[What the trainer should be looking for when presented the evaluations.]***

- Was the information and/or message presented clear and understandable?
- Were the examples, illustrations, and demonstrations useful?
- Was the information presented personally relevant to the learner?
- Was the instruction interesting and, most importantly, motivating?
- How did the instruction impact the learner? If so, in what way. If not, why.
- What should be done differently?
- Of the material presented, what was most important to the learner? What was least important?
- What would the learner change, modify or adjust?

At the end of the program, collect the evaluations, review the program data, prepare and report performance results. In reviewing the program data the report should include but not be limited to the number of participant learners trained, percent of participants who passed the course, and their satisfaction with the material presented and how it was presented.

An honest evaluation of the program results at this point will yield a bountiful amount of information that can be used to perfect and insure the success of all future presentations. Use this information positively, and you will be rewarded with a superb result!"²

ADDIE MODEL



http://www.nwlink.com/~donclark/history_isd/addie.jpg retrieved 8/24/2010

Document created by Irene Becker, LCSW for Training for Trainers: Curriculum Design 11/10.