



Preparing the Extension Professional: Technically Teaching

January 13-15, 2009
University of Nebraska–Lincoln
City Campus Union
Lincoln, Nebraska

I am Technically Teaching! Design Process Plan

Throughout the Technically Teaching training, participants will have the opportunity to explore ways in which the teaching method or style of a current UNL Extension educational program or idea can be enhanced with technology.

As you attend the various large group and breakout sessions, be thinking of ways that you can incorporate technology into teaching. Feel free to begin filling in some of the Design Process Plan areas shown below. On **Thursday, January 15, from 10:30-11:30am**, you will have an opportunity to spend additional time working on this plan, so that when you return to your county or district, you will have a usable plan ready to put into action.

Instructional System Design Using the ADDIE Model (Analysis, Design, Development, Implementation, Evaluation)

Analysis the process of defining what is to be learned	What is the learner problem?
	What are the possible solutions to the problem?
	What does the learner need to know to reach these solutions?



Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln cooperating with the Counties and the United States Department of Agriculture.

The 4-H Youth Development program abides with the nondiscrimination policies of the University of Nebraska–Lincoln and the United States Department of Agriculture.

Design the process of specifying how it is to be learned	Who is the target audience for this program?
	What are the educational objectives of this program?
	What type of delivery system will be used for instruction?

Development the process of authoring and producing the materials	Who will be a part of the development process for this program, and what are their roles/responsibilities?
	What materials/media need to be gathered for instruction?

Implementation the process of installing the project in the real world context	How will the program be delivered (classroom-based, lab-based, computer-based, other)?
	How will the delivery allow the learner to reach the educational objectives?

Evaluation the process of determining the adequacy of the instruction	Were the educational objectives reached?
	How can the overall effectiveness of the instruction be made even better?

Instructional System Design (ISD): Using the ADDIE Model

Instructional design is the *systematic* approach to the **A**nalysis, **D**esign, **D**evelopment, **I**mplementation, and **E**valuation of learning materials and activities.

Instructional design aims for a learner-centered rather than the traditional teacher-centered approach to instruction, so that effective learning can take place. This means that every component of the instruction is governed by the learning outcomes, which have been determined after a thorough analysis of the learners' needs.

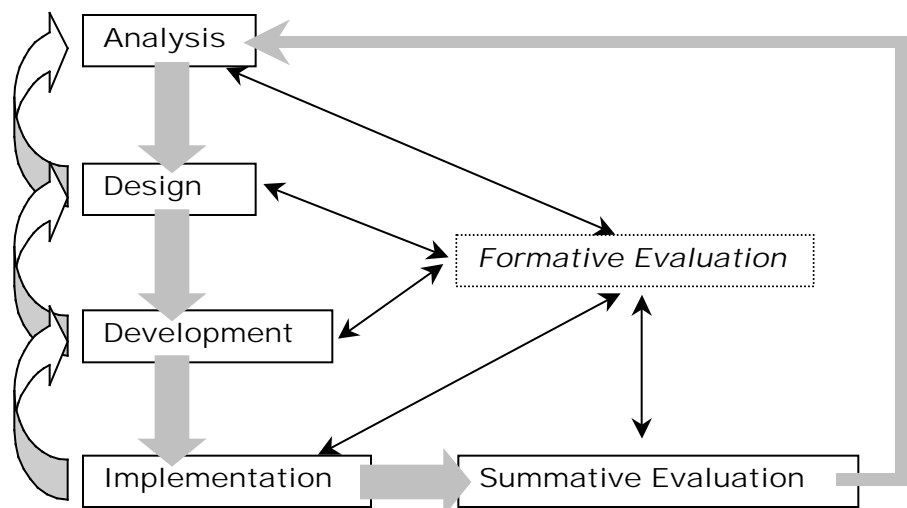
These phases sometimes overlap and can be interrelated; however, they provide a dynamic, *flexible* guideline for developing effective and efficient instruction.

	Sample Tasks	Sample Output
Analysis the process of defining what is to be learned	<ul style="list-style-type: none"> Needs assessment Problem identification Task analysis 	<ul style="list-style-type: none"> Learner profile Description of constraints Needs, Problem Statement Task analysis
Design the process of specifying how it is to be learned	<ul style="list-style-type: none"> Write objectives Develop test items Plan instruction Identify resources 	<ul style="list-style-type: none"> Measurable objectives Instructional strategy Prototype specifications
Development the process of authoring and producing the materials	<ul style="list-style-type: none"> Work with producers Develop workbook, flowchart, program 	<ul style="list-style-type: none"> Storyboard Script Exercises Computer assisted instruction
Implementation the process of installing the project in the real world context	<ul style="list-style-type: none"> Teacher training Tryout 	<ul style="list-style-type: none"> Student comments, data
Evaluation the process of determining the adequacy of the instruction	<ul style="list-style-type: none"> Record time data Interpret test results Survey graduates Revise activities 	<ul style="list-style-type: none"> Recommendations Project report Revised prototype

San Jose State University, Instructional Technology Program

The ADDIE Model is an iterative instructional design process, where the results of the formative evaluation of each phase may lead the instructional designer back to any previous phase.

The end product of one phase is the starting product of the next phase.



Instructional System Design (ISD): Using the ADDIE Model

Analysis

The **Analyze** phase is the foundation for all other phases of instructional design. During this phase, you must define the problem, identify the source of the problem and determine possible solutions.

The phase may include specific research techniques such as needs analysis, job analysis and task analysis. The outputs of this phase often include the instructional goals, and a list of tasks to be instructed. These outputs will be the inputs for the Design phase.

Design

The **Design** phase involves using the outputs from the Analyze phase to plan a strategy for developing the instruction. During this phase, you must outline how to reach the instructional goals determined during the Analyze phase and expand the instructional foundation.

Some of the elements of the Design Phase may include writing a target population description, conducting a learning analysis, writing objectives and test items, selecting a delivery system, and sequencing the instruction. The outputs of the Design phase will be the inputs for the Develop phase.

Development

The **Develop** phase builds on both the Analyze and Design phases. The purpose of this phase is to generate the lesson plans and lesson materials. During this phase you will develop the instruction, all media that will be used in the instruction, and any supporting documentation. This may include hardware (e.g., simulation equipment) and software (e.g., computer-based instruction).

Implementation

The **Implementation** phase refers to the actual delivery of the instruction, whether it's classroom-based, lab-based, or computer-based. The purpose of this phase is the effective and efficient delivery of instruction. This phase must promote the students' understanding of material, support the students' mastery of objectives, and ensure the students' transfer of knowledge from the instructional setting to the job.

Evaluation

This phase measures the effectiveness and efficiency of the instruction. **Evaluation** should actually occur throughout the entire instructional design process - within phases, between phases, and after implementation. Evaluation may be Formative or Summative.

Formative Evaluation is ongoing during and between phases. The purpose of this type of evaluation is to improve the instruction before the final version is implemented.

Summative Evaluation usually occurs after the final version of instruction is implemented. This type of evaluation assesses the overall effectiveness of the instruction. Data from the Summative Evaluation is often used to make a decision about the instruction (such as whether to purchase an instructional package or continue/discontinue instruction).

This ADDIE Model descriptive summary was provided by three Graduate Students (Sherri Braxton, Kimberly Bronico, Thelma Looms) in the Computer Science Department at The George Washington University in Washington, D.C. Available as of 9/23/00 at:

http://www.seas.gwu.edu/~sbraxton/ISD/general_phases.html