

INSTRUCTIONAL DESIGN THAT FITS ONLINE

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Traditional models of Instructional Design (ID) have proven ill fit to university courses delivered with online technologies (Harvey, 2002; Uden, 2003). "As a field, distance education has yet to find a framework or model that truly takes advantage of the unique capabilities of online technology" (Harvey, 2001, p. 29). This has led to the introduction of modified ID models such as the Courseware Engineering Model (Uden, 2003) and the Automated Instructional Design (Wilson, 2003). In order to discuss the differences in the types of ID models we created a classification system grouping them as formal, informal, and custom. These categories represent different levels of ID experience and different approaches regarding the instructor, cost, and time. Formal ID represents traditional models (e.g., ADDIE, Dick & Carey). Informal ID reflects the instructor's natural process of course design. Custom ID combines formal and informal strategies, allowing for more rapid and a more personalized design approach.

Custom instructional design (ID) is a process that can be molded to provide instructional solutions for situational learning problems. This process should be rapid, easy, and flexible. Piskurich (2000) proposes ID should do what really *needs* to be done for a given instructional situation without losing the main ID components (e.g., analysis, design, development, implementation, evaluation). He compares it to a connected circle with the end feeding back into the beginning, causing the designer to re-evaluate each process with each iteration (Piskurich, 2000).

Institutions should evaluate the ID methodology and guidelines for faculty developing online courses and provide resources for instituting such measures. Porter (2002) suggests that an institution should provide resources to create, implement, and modify online courses. These resources should encourage the instructors to begin analyzing, creating, and teaching their courses using a learner-centered approach. In order to achieve this goal, faculty support personnel will need to assist instructors with new instructional models for online course technologies (Gillespie, 1998).

The Analyze, Create, and Teach (ACT) custom ID model (Figure1) was developed by the Instructional Technology Resource Center at Idaho State University as a system for instituting custom ID. Though the process may look systematically formal, each stage provides flexibility, through continuous evaluation, to allow the instructor/designer to make decisions that can be tested and altered as needed from beginning to end.

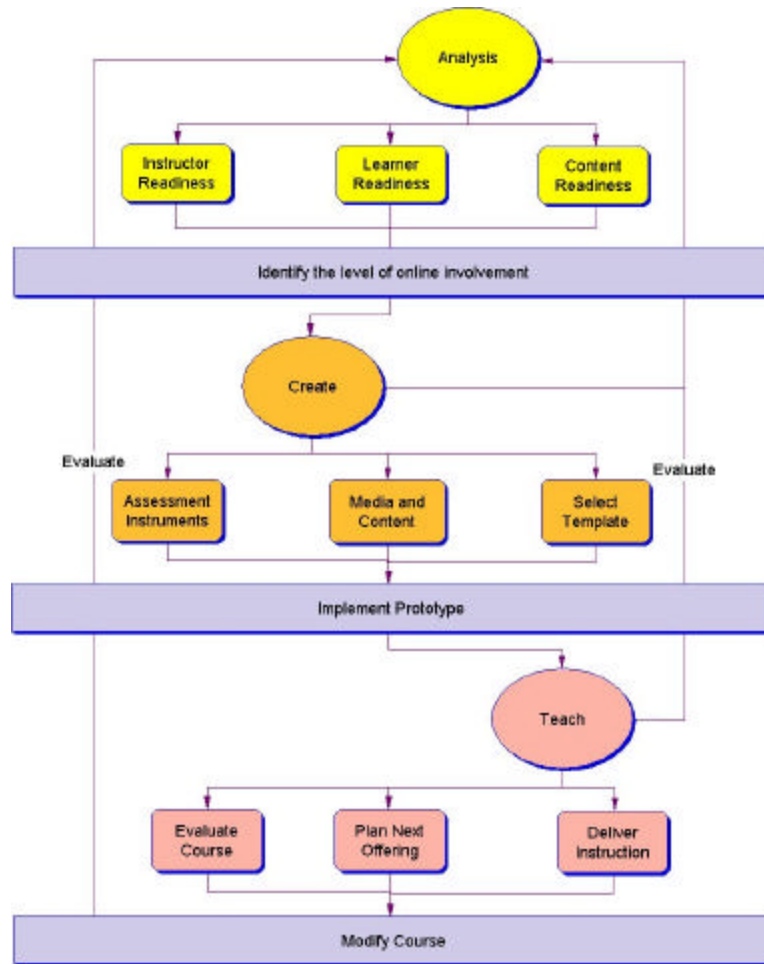


Figure 1: Analyze, Create, & Teach Model Flow Chart

The ACT model provides a rapid ID process to assist instructors with developing customized courses that use an online course management system (e.g., WebCT). The model was originally designed for use with WebCT, but it is adaptable to other course management systems. The ACT model provides a series of decision-making activities that guide the selection of a course template to fit the level of online involvement. “Level of online involvement” represents the amount of time and the types of activities that are to be completed online. Harmon and Jones (1999) described five levels of online involvement: 1) informational, 2) supplemental, 3) essential, 4) communal, and 5) immersive. The ACT model utilizes a similar scheme for determining the level of online involvement and appropriate tools for web-based learning activities.

The levels defined by the ACT model indicate not only how much the course will rely on the online medium, but the types of learning activities that will occur in the online classroom. More importantly the levels reflect the direction of communication (as shown in Table 1).

Level of Online Involvement	Direction of Communication
Level 1: Administrative	teacher ? student

Level 2: Adapt	teacher ? student
Level 3: Reflect	teacher ? students
Level 4: Interchange	teacher ? students ? students (meet face to face)
Level 5: Interact	teacher ? students ? students (never meet face to face)

Table 1: Online Involvement Levels

Each ACT level is designed to support a certain level of involvement, and hence certain types of interactions. Level 1 is intended for entirely face-to-face interactions with online information flowing in one direction; from instructor to learner. Level 2 supports a small amount of two-way online communication between the instructor and students on an individual basis. At level 3, two-way, large group communications can occur in which interaction is still primarily from teacher-to-student and vice versa. At levels 4 and 5 three-way communication is a significant part of teaching, including not only student-to-teacher and teacher-to-student, but also student-to-student interactions.

The primary function of the ACT model is to facilitate instructor analysis regarding the level of online involvement and to then move rapidly toward identification of instructional methods. As part of the Analyze stage of the ACT model, an activity guide was developed to help faculty focus on three critical considerations: content readiness, instructor readiness, and student readiness. The purpose of analyzing these elements is to align practical and pedagogical issues with the instructor’s experience teaching the course and the development of online learning activities. The analytical questions for each element prompt the instructor to begin strategically focusing on specific course objectives, learning outcomes, time requirements, delivery methods, resources, and technical issues.

Instructors will continue to revisit the Analyze stage throughout the Create and Teach stages. The Analyze stage is designed to allow instructors to operate from their existing knowledge, experience, and assumptions to select a level of online involvement. Instructors begin the course creation process by capturing the reflective data collected from the analytical questions and using it to select a template, create a syllabus, identify needed media/content, determine assessment instruments, and sequence their instructional activities.

In most cases, the process of creating a syllabus is the first step instructors take in preparing a course. There are some special considerations instructors will need to recognize when creating a syllabus for an online course. The ACT planning guide provides a syllabus exercise based on the information gathered in the analytical questions. The syllabus exercise is separated into mini-activities: instructor information, course goals, course information, lessons/activities, requirements/textbooks, policies, and additional information. Each activity provides guidance about where the instructor should look in their analytical data to find information needed to complete that section of the syllabus. For example, when considering the “Office Hours” section of the syllabus the instructor is prompted to consider offering telephone hours and/or online office hours using a chat tool.

After the template has been selected and the syllabus has been created, the task of developing media and sequencing content is performed with the goal of matching the instructional requirements to the instructor's pedagogy. Furthermore, the specific tools in the template are designed to fit with instructional objectives. The style of the instructor, the level of involvement and the learning outcomes will directly influence the online tools, assessment instruments, and how the course is evaluated. The Create stage may involve a few or potentially many iterations depending on the time frame between template selection and delivery of instruction. Furthermore, the Create stage may continue to occur throughout the delivery of instruction (the Teach stage).

Teaching is the final stage, which requires delivering and evaluating instruction, assessing the learners, modifying course materials, and planning for the next time the course will be offered. Teaching online involves guiding the students through the course and soliciting feedback about their experience. Potter explains, "simply dumping printed information on a Web site is not going to promote learning...interaction and socialization are keys to effective online education" (p. 5, 2004).

Formative evaluation encourages revisiting the decisions made throughout the ACT process of analyzing, creating, and teaching a course. This type of evaluation focuses on the collection of data and revision prior to teaching, which involves the learner, instructor and other content specialists (Dick, Carey & Carey, 2001). The process may include feedback from a sample group of students, technical support staff, and faculty members teaching the same course.

Custom ID systems that fit the needs of faculty members are important to consider when selecting or developing web-based ID protocol. The success of the institution, instructor, and student relies on a system that introduces modifiable ID that integrates with the infrastructure of the technology and the institution's support services. The ACT model is an example of how custom design can rapidly guide the informal design strategies of an instructor. Using the ACT model, faculty members at Idaho State University employ ID methodology without the pedagogical challenges of formal ID training.

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