

Instructional Methods for Distance Education¹

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Introduction

Much of the time, teaching with distance education technologies is a matter of adapting the teaching styles and instructional methods teachers have been using for years in the traditional classroom. This publication applies basic teaching principles to distance education technologies.

Instructional Design

“*Instructional design* (emphasis added) is the art and science of creating an instructional environment and materials that will bring the learner from the state of not being able to accomplish certain tasks to the state of being able to accomplish those tasks” (Siemens, 2002, para. 5). Instructional design comes into play in any educational arena—not just distance education—when instructors try to identify which areas need to be taught to bring about the desired learning outcome in students (Dick & Carey, 1985). The following questions must be answered to determine the instructional design of the course:

- What is the need for the educational program?
- What are the goals and objectives?
- Who will be the learners?
- What will be the subject content (message)?
- What teaching methods and media will be used?

- How will learners be assessed?

- How will the course or lesson be evaluated with a view to improvement?

Needs assessment

The *needs assessment* should take place before the rest of the design process is undertaken. The needs assessment, in essence, determines why the instruction is required by defining the need. This is often referred to as identifying a gap in knowledge or performance. A needs assessment also determines whether an instructional method is what is required to address the gap or not. As Willis (1993) wrote, “What external data verify the need [for the course], what factors led to the instructional need, and what past experiences indicate that the instruction being planned can effectively meet this need?” (p. 1) This could be as formal as a survey to determine if the course is needed or as informal as the instructor’s observations and knowledge about the need for the content for a particular audience.

Goals and objectives

Goals and objectives structure your plan of action. Goals and objectives are as important in the distance education arena as they are in the traditional classroom. Following is a brief definition of each and an example.

- **Goal:** A general statement of what you hope the course (or program) will achieve, perhaps expressed in terms of what you, the teacher, will be presenting to the learner.

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Example goal statement: To introduce the learner to healthy eating habits.

- **Objective:** A statement of what learners should be able to do (or do better) as a result of having worked through the course (or program). The objectives should be measurable so that they can be evaluated after students' successful completion of the lesson or course.

Example objective statements: a) List the principal components of a balanced diet and describe the function of each in the body. b) Name six diseases caused by an inadequate or unbalanced diet.

The learners

In any instructional environment, it is imperative to know as much about the *learner*—the intended audience—as possible. This is equally true for distance education. What are the audience members' ages, cultural backgrounds, interests, and educational levels? What is their familiarity with distance education technology and delivery systems?

In order to meet the learner's needs, you should

- learn about students' backgrounds and experiences,
- be sensitive to different communication styles and varied cultural backgrounds (e.g., humor is culturally specific),
- assist students in taking an active role in the course by independently assuming responsibility for their learning,
- make students aware of and comfortable with new patterns of communication to be used in the distance education course, and
- assist students in becoming familiar with the delivery technology and prepare them to resolve technical problems, should they arise.

The message

What are you trying to say, and what is the best way to integrate the message with the technology? The message should be decided even before a medium (instructional technology) is chosen so that you can match your message to the best available medium. Typically, a professor wants to cover too much content in a distance education class. Does this mean that you cover less material, that the distance education experience is a watered-down version of your regular class? Not at all. Many professors have found out that much of the material left out of their distance education classes really was not critical. Distance education has

helped them tighten up their presentations and focus on what was absolutely necessary. They have then been able to incorporate the improvements in their traditional face-to-face classes.

Teaching methods

Use a variety of teaching methods in your distance education course. Following are some suggested teaching strategies for use in distance education:

- **“Chunk” it.** Professors should teach in “chunks.” Don't spend more than 15 minutes lecturing without some type of break, such as showing a short segment from a video, using graphics, having an online chat, including some type of application activity, or initiating a question-and-answer period. The break allows students to process what they have just learned.
- **Lay down “ground rules.”** Do this at the beginning of the semester and ensure that they are followed. For example, in a videoconference session, every participant should state their name and site each time before they speak. For discussion boards, etiquette protocols should be established so that everyone knows how to respond to board posts.
- **Provide a strong online component to supplement the course.** Possibly include outside readings or similar resources as links from the course website.
- **Organize content.** Because of the logistics involved, presenting content at a distance usually takes more time than presenting the same content in a traditional setting. You can organize the content using a learning management system, such as Sakai, so that students know where material is located on each Sakai page and how to interact with both the content and the instructor.

The medium

Select the medium (distance education technology) that meets the needs of your class. The medium choice should come after you decide what you want to say. In your courses, provide media variety to your students; integrate voice, video, and print or online resources.

Assessment

Students' knowledge of the content should be assessed over the duration of the course. Following are some suggested ways to assess student performance:

- **Peer evaluation of group activities.** Groups can produce projects or papers via distance education technologies. Allow group members to assess each other's performance.
- **Student self-evaluation.** Ask students to evaluate how well they think they did. This requires them to be somewhat introspective and helps them to learn from the experience.
- **Conventional exams.** These can be administered via online testing programs, at regional testing centers, or by qualified monitors/site facilitators.
- **"Take-home" exams.** These exams can simulate real-world applications of course content.
- **Written reports and projects.** Written reports and projects provide students with the opportunity to synthesize the material they learned.

Evaluation

Evaluation should take place throughout the course. Decide on the criteria you will use to measure the distance education course's effectiveness and success. What can be done to improve the existing course? How well did you do? How can you change things? Did it meet the learners' needs? The primary reason to evaluate a course should be to *improve* it.

Formative evaluations can be conducted once or many times over the length of a course to find out students' reactions, attitudes, and achievements, always with a view toward improving the course (Holmberg, 1977). The idea behind the formative evaluation is to ensure the course or instructional product is meeting its stated goals as the course progresses throughout the semester.

Summative evaluations are given to students at the end of the course. They are used to determine the overall effectiveness of the class or instructional product. Summative evaluations usually focus on student performance, course relevancy, learner attitudes toward the delivery methods used, and the instructor's teaching style and effectiveness. Responses are used to improve the course for future students.

Interaction

Perhaps the most striking difference between the traditional and distance education classrooms is in the area of communication and interaction: Faculty members in the distance education environment do not have the benefit of seeing students' nonverbal cues to gauge how well they

are teaching. You must have confidence in yourself and the content that is being taught. The feedback you receive from students will help you gauge how well you are doing.

Distance education requires different communication methods than those needed in traditional classrooms (Zvacek, 1991) because information technologies are predominantly visual, as opposed to the textual and auditory environment of the conventional classroom (Dede, 1991). Interaction does not have to occur in real time (synchronous) to be effective. Virtual interactivity, which occurs through asynchronous (non-real-time) means, is effective in bridging the communication gap between instructors and off-campus students.

The following suggestions may help encourage interaction at a distance:

- **Call on sites.** When there are many off-campus sites watching or listening to a live videoconference or audioconference, you must call on specific sites for questions or comments.
- **Integrate delivery systems.** Integrate a variety of delivery systems or technologies for feedback and interaction. Interactive delivery methods can range from using discussion boards and chats to e-mail and videoconferencing.
- **Provide a detailed syllabus and personal message.** Develop a detailed course syllabus and provide it well before the class starts. Also include a personal message about who you are and what you expect from the class. You also might want to include a picture or video of yourself in the personal message.

Following are various communication technologies and ways to implement interactive strategies. This is not an exhaustive list, so feel free to integrate other strategies.

- **Videoconference:** Arrange small group activities, such as role-playing an issue or planning a debate, at local sites before asking groups to respond via the videoconferencing system to all sites. The instructor may determine if a sample of responses is sufficient or if each group needs to respond to the larger group.
- **Chat session:** A chat session enables students to react to others' ideas and encourages collaborative writing assignments.
- **Online/supplemental materials:** Provide a viewing or listening guide to supplement video or audio

presentations. The guide should help students focus on issues, prepare them for concepts to follow, and provide opportunities for further learning, whether independently, in pairs, or in small groups.

The Distance Education Development Team

Providing instruction to students at a distance is not the responsibility of the instructor alone. In the distance education framework, teamwork becomes important in the development and dissemination of instructional materials (Brinkley, Pavlechko, & Thompson, 1991; Collins & Murphy, 1987; Kelly, 1990). Instructional designers and educational technologists provide expertise in particular areas in which the instructor does not have experience (Kelly, 1990). Support staff and site facilitators also play important roles in the distance education environment.

- **Instructor:** The first member of the distance education team is the instructor or subject-matter specialist. These people are experts in their areas of content, not experts in the technology used to deliver instruction. However, instructors should understand the workings of the distance education technology used in the course (Thach, 1994). Such skills will make instructors more comfortable when interacting with the technology (Catchpole, 1992; Dillon, Hengst, & Zoller, 1991).
- **Instructional designer:** The distance education instructional designer must be knowledgeable of the resources available in a particular academic institution, must know how certain technologies and media work, and must serve as an intermediary between the instructor and technical specialists (Brinkley, Pavlechko, & Thompson, 1991).
- **Educational technologists:** These technologists include computer specialists and educational video producers. They have the production expertise to assist in the development of the program or course. Because of their professional backgrounds, they understand the specific instructional design needs dictated by the requirements of the media (Smith, 1991). The same person often performs both the instructional designer and educational technologist roles.
- **Support staff:** These individuals are the backbone of any successful distance education program. Support staff ensures that the little details are taken care of so a distance education program runs smoothly and successfully. Staff members handle such tasks as student registration,

materials duplication and distribution, copyright clearances, facilities scheduling, and textbook ordering.

- **Site facilitators:** These facilitators assist the instructor from the various “receive” or remote sites across the state or country. Site facilitators do not necessarily need to be knowledgeable about the subject matter for the class they are facilitating, but it helps. Instead, they should be able to handle technical problems that may arise at the sites and be well-versed in interactive strategies to involve the students as much as possible in course activities.

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