

Planning and Teaching Online Courses

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INTRODUCTION AND BACKGROUND

Generally, online courses intend to present a non-traditional learning approach for non-traditional students. Working adults can achieve success in pursuing higher education degrees without compromising their work schedule. **Online courses** aim to be flexible and convenient while achieving effective instructional results. **Online teaching** can allow students unlimited access to the course materials and provide them with interactive and engaging instructional activities.

Web-based instruction allows students to perform, online, most course activities that they would normally perform in a traditional classroom. In an online course, students can communicate with their instructor and each other, participate in discussions, interact in an online virtual class, perform course assignments, drop assignments into the instructor's digital drop box and receive his/her feedback, take online tests, and so forth. However, the face-to-face interaction of the traditional classroom continues to be a missing element from online courses, and the human interaction gap still influences online students' attitude toward this instructional delivery medium. While online instructors are eager to develop tangible Web technology skills and use it effectively in developing and delivering their courses online, they should not underestimate the impact of the human interaction on the learning process. Sherry (1996) noted that, "the most important factor for successful distance learning is a caring concerned teacher who is confident, experienced, at ease with equipment, uses media creatively, and maintains a high level of teaching with students" (p. 5).

Educational Web sites face a challenge to incorporate virtual, social, human interactions into the learning mixes of these programs. For instance, technologies such as CU-SeeMe, QuickTime Virtual reality for educators, and QuickTime Video tutorial and software help to bridge the physical and interactive communication gap between students and instructors by allowing students and instructors to have face-to-face meetings over the Internet (Hamza 2003; Hamza & Alhalabi

1999). Odasz (1999) also emphasized the significance of such technologies in bridging the interactive communication gap of the Web-based instruction.

Aisami (2004) stated that "in order to have effective **Web-enhanced instruction**, instructors need to know not only what to teach and how to teach it, but also how to utilize the Web technology efficiently to deliver and manage the course instruction" (pp. 24 -25). Developing and managing online courses is a comprehensive process that integrates both the instructional system design (ISD) and the Web applications to achieve the intended learning outcomes of the online course. Designing and developing the course instruction before building its Web site facilitates not only the Web site building process, but also the process of delivering and managing the course instruction online.

MAIN FOCUS: THE 5DS MODEL FOR TEACHING ONLINE COURSES

This chapter introduces the **5Ds model** for teaching colleges and universities online courses. As shown in Figure 1, the 5Ds model is comprised of five interrelated stages: **Define**, **Design**, **Develop**, **Deliver**, and **Determine**. It is worth mentioning here that the 5Ds model widely differs from Ted McCain's 4Ds (Define, Design, (Do) Develop, and Debrief) model. While McCain's 4Ds model is a classroom problem-solving model and "is based on the structured thought process found in systems analysis and design," the 5Ds model is an **online teaching model** that is based on the instructional system design **ADDIE (Analyze, Design, Develop, Implement, and Evaluate) model**. The ADDIE approach of the **instructional systems design (ISD)** was advocated by most of the subsequent ISD models that emerged in the last quarter of the 20th century. Kruse (2004) indicates that "there are more than 100 different ISD models, but almost all are based on the generic 'ADDIE' model."

The 5Ds model is a systematic process of an instructional cycle in which all five components work

Figure 1. 5Ds model for teaching online courses

<i>Define</i>	<i>Design</i>	<i>Develop</i>	<i>Deliver</i>	<i>Determine</i>
<i>Define course overall goal and learning objectives</i> <i>Assess students technical skills and readiness</i> <i>Determine requirements, accessibility, connectivity and support system</i>	<i>Apply ISD to design course instructional structure</i>	<i>Develop course syllabus, instruction, materials, activities, interaction, collaboration, assessment, and management strategies</i>	<i>Build course Web site</i> <i>Set the stage for course delivery</i>	<i>Determine course effectiveness</i> <i>- Conduct formative and summative evaluation</i> <i>- Collect quantitative and descriptive data</i> <i>- Analyze data to revise the course</i>

together to achieve specific learning outcomes. In this continuous cycle model, first, the overall goal of the online course is defined based on the students needs and current level of skills; the course learning objectives are stated based on the course overall goal; the course instruction is designed around the course objectives; the course Web site is built and developed based on the course design; the course Web site is used to deliver the course instruction on the Web; and, at the end of the cycle, the online course is evaluated to determine its effectiveness in light of the achievement of the course's stated objectives. However, the cycle will not be complete without conducting the instructional revision based on the data and information collected by the various means of the course evaluation. Therefore, the instructional revision represents the last step of this instructional process and the first one in the reversed cycle.

While most of the last century's ISD models were primarily established for the traditional instruction, the 5Ds model addresses the process of teaching online courses by universities and colleges instructors, and directly caters to the needs of the online college students. Furthermore, due to the nature of the **online instructional delivery medium**, the 5Ds model includes and emphasizes the "Deliver" stage as a critical component of the online teaching process. The Louisiana State University model is another **teaching online model** similar to the 5Ds model and based on the ADDIE Approach, and its purpose is also to "present to instructors interested in developing online courses information that will assist them in creating classes that are effective and efficient for the instructor and for the learner."

With the 5Ds model, most of the teaching elements of online courses are built as the course instruction is being designed and developed. Instructor's lectures, instructional guidelines, projects, case studies, group activities, research activities, assignments, and assessment instruments are all developed at the preparation stage before the first online course instructional activity begins. Unlike traditional classroom instruction, online courses require a specialized **e-learning** management system (E-LMS) to be delivered and managed on the Web. Therefore, the 5Ds model requires instructors' efficiency in building and managing the course Web site and students' proficiency in utilizing the Web technologies to participate in online courses. On the other hand, the 5Ds model offers a flexible instructional delivery approach by which the presentation of information can be delivered to the target students in either expository form, in which students can learn in a step-by-step fashion, or discovery form, in which students have the choice of selecting their own learning pattern and pace. Bailey and Blythe (1998) refer to these two forms as a "linear and non-linear Web site design."

At the final stage of the 5Ds model, the effectiveness of the online course is to be determined based on the students' performance in relation to the course objectives. Upon course completion, instructors need to collect not only quantitative data that includes students' scores on the pretest and posttest, but also a descriptive data that includes students' feedback and comments about the instruction, the course Web site, and the instructional delivery. Collected data should be analyzed and utilized in revising the online course.

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