

You Decide: A Novel Multimedia Format for Case Study Assignments in Online and Blended Learning Environments

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Abstract: Presenting learning activities in an authentic, engaging, and relevant manner is an ever-present challenge. This Best Practices paper presents a distinctive multimedia activity format termed *You Decide* developed by DeVry University that addresses this need in courses developed for both online and blended delivery modalities. Major components of a *You Decide* activity are the scenario to be analyzed, the student's role in the scenario, the key players, and the specific assignment to be completed by the student. Case facts are presented through a combination of text, static images, and audio narration. The application of this format is illustrated through a recent project in which several traditional case study assignments were converted to *You Decide* activities in an undergraduate course, BIS325: Principles of Web Development. *You Decide* activities are contrasted with conventional text-based case study assignments from the viewpoints of faculty, instructional designers, and learners.

Introduction

Creating an effective learning activity for a course is inherently challenging and usually involves trade-offs among a number of potentially competing objectives. An ideal activity should be closely aligned with the learning objectives of the course and should promote critical thinking and higher-level learning—the Analyzing, Evaluating, and Creating levels of Bloom's taxonomy (Anderson & Sosniak, 1994). The activity should be highly engaging to students and appeal to those with multiple learning styles, including visual, auditory, and kinesthetic learners (Fleming & Mills, 1992). At the same time, practical constraints on time and resources demand that activities be simple, rapid, and cost-effective to design, produce, and deploy.

DeVry University is a regionally accredited, career-oriented private-sector institution providing Associates, Bachelors, and Masters degrees. DeVry offers classes at more than 95 locations in the U.S. and online. At DeVry, courses are developed and updated by centralized teams, with each team consisting of an instructional designer (ID), a copy editor, and a faculty subject matter expert (SME). Course development teams also draw on other professionals for services such as multimedia production and intellectual property clearance as needed. Within this model, DeVry has evolved a distinctive multimedia activity format termed *You Decide* that is used in a standardized way across many courses to meet the challenges of creating rich, engaging, and resource-efficient learning activities. In the following sections, we will identify in greater detail some desirable characteristics of authentic, engaging learning activities; describe the *You Decide* activity format and how it facilitates incorporating these characteristics;

discuss specific applications of this format in a web development course; and evaluate the You Decide format from the perspectives of instructional designers, faculty, and students.

The Challenge: Authentic, Engaging Activities

Through an extensive literature review, Reeves, Herrington, and Oliver (2002) identified ten characteristics of what they called “authentic” learning activities: real-world relevance, open-ended task definition, complexity, multiple sources and perspectives, opportunity for collaboration, opportunity for reflection, integration across subjects areas and domains, integrated assessment, complete and polished end products, and diverse possible outcomes. Applying their insights to online learning, Reeves, Herrington, and Oliver criticized what they called “the tendency of some institutions to simply dump large tracts of text in modules or sections onto websites” (p. 565). However, they noted that the online environment, when used to its full potential, offers unique opportunities to facilitate authentic learning, in that “problems presented to students can use the full capabilities of the technology to present situations and scenarios in video clips, text links and images to give meaning and purpose to the students’ endeavours” (p. 566). Building on this idea, Lombardi (2007) observed, “Authentic learning can rely on educational software developed to simulate typical scenarios that professionals encounter in real-world situations” (p. 7).

Scenario-based learning has a long history of effective use in higher education (Errington, 2011). Carroll (2000) defined a scenario as essentially a story with a problem to solve, and noted that scenarios put people into the story (making it more tangible and engaging), provide opportunities for reflection, and emphasize and allow exploration of goals. Carroll also stated that scenarios are both concrete (providing specific, realistic levels of detail) and flexible (allowing for multiple solutions within the constraints identified in the story). Scenario-based approaches thus appear promising for creating engaging learning activities, in that such approaches naturally incorporate many of the characteristics of authentic learning activities and can easily take advantage of the technological presentation capabilities available online.

The You Decide Activity Format

The You Decide activity format developed at DeVry University is a standardized framework for incorporating scenario-based learning into courses designed for online and blended delivered modalities. A You Decide activity consists of four major components:

1. *Scenario*: the situation the student is asked to analyze. This is typically presented as a paragraph of text, although it may include diagrams, images, or other media if required.
2. *Your Role*: the student’s purported role in the scenario. This describes how the student fits into the situation. Like the Scenario, this is typically presented as a paragraph or so of text.
3. *Key Players*: the positions and views of up to four other characters in the scenario. Each character in the scenario is represented by a photo, name, and title (e.g., “William Turk, Director of IT”). By clicking on a photo, students can hear the character’s viewpoint presented in his or her own voice via a short audio clip. Facts of the case needed for the student’s analysis are interwoven into the characters’ statements.
4. *Activity*: specifications for the written deliverable the student is to produce. This is a text statement of the assignment with a list of specific elements to be addressed, including a grading rubric detailing evaluation categories, associated point values, and specific evaluation criteria for each category.

The process of creating a course is divided into distinct development and build stages. In the development stage, when drafting a You Decide storyboard, the SME (faculty member) and ID collaborate to determine the scenario and the student’s role in the activity. The SME and ID also identify the name, title, and gender of each of the key players, and write the script for each character’s expression of viewpoint. Optionally, they may describe other characteristics envisioned for the key players, such as each player’s approximate age or the expression he or she should have in the photo. Finally, the SME and ID describe the activity the student is required to complete and specify the grading rubric for the activity. All this information is entered into a standardized Microsoft Word document template and submitted to the copy editor.

After review and approval by the copy editor, the ID reviews the text portions of the activity within the template that provides a consistent design with its headings, layout, and backgrounds. Use of the Word template also simplifies setup, improves efficiency, and ensures compliance with Web accessibility standards. Moreover, the Word template provided by the SME and ID also serves as a storyboard for media development. After the ID reviews this storyboard to ensure the information is complete, a media developer assigns other members from the media development team to record audio. Other tasks performed by the media developer may include finding suitable images (usually from a stock photo service), formatting the images, creating XML files required by the LMS, and linking the audio and images into the activity. The media developer also generates a transcript based on the storyboard to add into the course for accessibility purposes.

In the build stage, a course producer is responsible for uploading course content, including the You Decide activities, into the LMS. The media developer works with the course producer to answer questions concerning implementation of the activity. After the course is built within the LMS, the ID and copy editor conduct reviews and generate punch lists of items requiring corrections for the course producer. The ID then contacts the SME and asks for a course review. The final course development team member, the academic coordinator (typically a dean responsible for the course and associated program) approves the course. In this way, all components within a course, including the You Decide activities, are reviewed and ensured to be functioning properly.

The You Decide activity format has proven flexible enough to be applied successfully to a variety of assignments across many courses and subject areas including network technology, e-commerce, and justice administration. A representative use of the activity format in a single course is described in the following section.

Application in a Web Development Course

BIS325, Principles of Web Design, is an undergraduate course in DeVry University's College of Business and Management. It is a required course in the Business Information Systems program normally taken by students in their fifth or sixth semester. Students in BIS325 learn to create simple static Web pages and websites using HTML coding and a professional Web authoring tool (currently, Adobe Dreamweaver Creative Suite). Major topics covered include site planning, images, color, typography, layout using Cascading Style Sheets (CSS), data tables, forms, JavaScript, and publishing a site via FTP. Students complete a series of interrelated case studies and labs which guide them through designing a small e-commerce website and implementing several pages of this site. Students also participate in online threaded discussions and complete weekly quizzes and a final exam. Like most DeVry courses, BIS325 is taught in an eight-week session and is delivered in two modalities, fully online and blended. In the blended modality, students meet face to face with an instructor for one four-hour period each week and devote approximately equal time to online activities between meetings.

In 2012, a significant redevelopment of BIS325 was initiated, with two primary goals: (1) updating the course content to reflect recent changes in the field of Web design such as HTML version 5, CSS version 3, and designing for mobile devices; and (2) revising the labs to use the latest release of the Adobe Creative Suite software, CS 6. Secondary goals were to make the course more engaging for students and to incorporate various corrections and improvements suggested by faculty members who had recently taught the course. Per DeVry's standard practices, as explained earlier, a development team consisting of an ID, copy editor, and SME was convened for this project.

During planning for the redevelopment, the team focused attention on the case studies as an opportunity to improve student engagement while updating the course content. The course originally included three case studies: one in week 2 in which students wrote a brief proposal for a website project; one in week 3 in which students created a detailed plan for the site; and one in week 7 in which students researched and selected a Web hosting provider. The information for these case studies was presented solely as written text in a rather dry pedantic style. An example of one of these original case studies is shown in Figure 1.

The course development team decided to convert all three existing case study assignments to the You Decide format, and to add a fourth assignment in Week 5 in which the student is asked to fix a badly designed Web page purportedly created by an amateur designer. The You Decide format was adopted to improve student engagement and to give the students a more realistic impression of involvement in an actual website development project. The new assignment was added to give students more practice with the design aspects of the course. For the three existing case studies, the essential case facts and the student deliverables were retained with minor changes. However, the specifics of the fictional company involved were changed to make the case setting more contemporary, and to eliminate the possibility of students recycling submissions from earlier offerings of the course. The original case studies gave students a choice of three companies for which to design a website: a vinyl record

store, a telecommunications company, and a textile-manufacturing firm. The new You Decide assignments were based on a residential solar power installation company named Sunholm Solar, a "green" business in a modern, rapidly growing industry.

Business Case Study Assignment

Throughout this course, you will be creating web page for a fictitious company. You will develop pages in the coming weeks that add up to a complete, small web site. This week, you will choose the company below for which you want to create a website; each has its own market niche, customer demographics, and revenue model. The logos have been created for you; you just have to apply them to the site.

Week 1 Assignment

- Select you company from the options below.
- Write a one-paragraph, well-written business memo as if you were writing directly to the client. Submit it to the Week 1 Assignments Dropbox. Include the following.
 - Identify client's web site needs.
 - How you would propose that they go about creating a new web site to help them achieve their goals?
 - What features should the site have?
 - Who is the audience of the site, and how would you address their particular needs?
 - What should be included and excluded from the site?

Figure 1: Excerpt from Original BIS325 Week 1 Case Study

For the new assignments, the student was cast in the role of an independent Web designer hired by Sunholm Solar to create the company's website. The key players were the chief executive officer (CEO), the chief financial officer (CFO), the vice president of marketing, and the vice president of operations. These positions were chosen to convey the required case information while also representing the range of perspectives typically encountered in a realistic web project, with the CEO providing the strategic vision, the marketing vice president promoting customer engagement and interactivity, the CFO voicing concerns about budgetary constraints and cost-effectiveness, and the operations vice president expressing the need for reliability and maintainability. In this way, students were afforded the opportunity to reconcile conflicting requirements, make tradeoffs, and integrate diverse viewpoints into a complete design solution. This set of key players was used consistently throughout all four You Decide assignments in BIS325.

The first You Decide activity, which requires students to write a website project proposal, will now be presented in some detail. Per the standard template, the You Decide activity is presented on an overview page in the Course Management System, with a link to an interactive element that presents the scenario, student role, and key player elements in sequence. After reading an introduction, students can click the indicated link to enter the interactive elements or click an alternate link for a text transcript. The sequence of interactive screens is shown in Figure 2. The scenario is described on the first interactive screen. Students read the scenario description and click the Your Role button to progress to a screen describing the role they are to assume in the scenario. Clicking Key Players advances to the key players screen, where students click on the photograph of each key player in turn to hear that player's speech. In the website project proposal activity, these speeches combine to simulate a pre-proposal meeting for a site design project.

To provide a sense of how case information is interwoven into the key players' speeches, some representative snippets are provided below:

Hugh Holben, President and CEO: Let me start by telling you about our business and how we see the website fitting into it. We plan to be the one-stop solution provider for every homeowner in the United States who wants to save on the electric bill . . . The website is going to be one of our main lead generation tools for the sales reps.

Susan Dalton, VP of Marketing: We're asking customers to sign a contract for as much as \$50,000 for something they don't know much about and to do it with a brand-new company they haven't dealt with before. The website needs to educate people about solar power, give them an overview of the process, and also make them feel comfortable that Sunholm Solar is a company they can trust.

Janet McLane, CFO: Don't forget to highlight the financing deals we offer! No money down with good credit, . . .

Steve Garry, VP of Operations: Maybe we could have something on this site for folks with installed systems, to answer common questions and tell them how to fix simple stuff themselves.

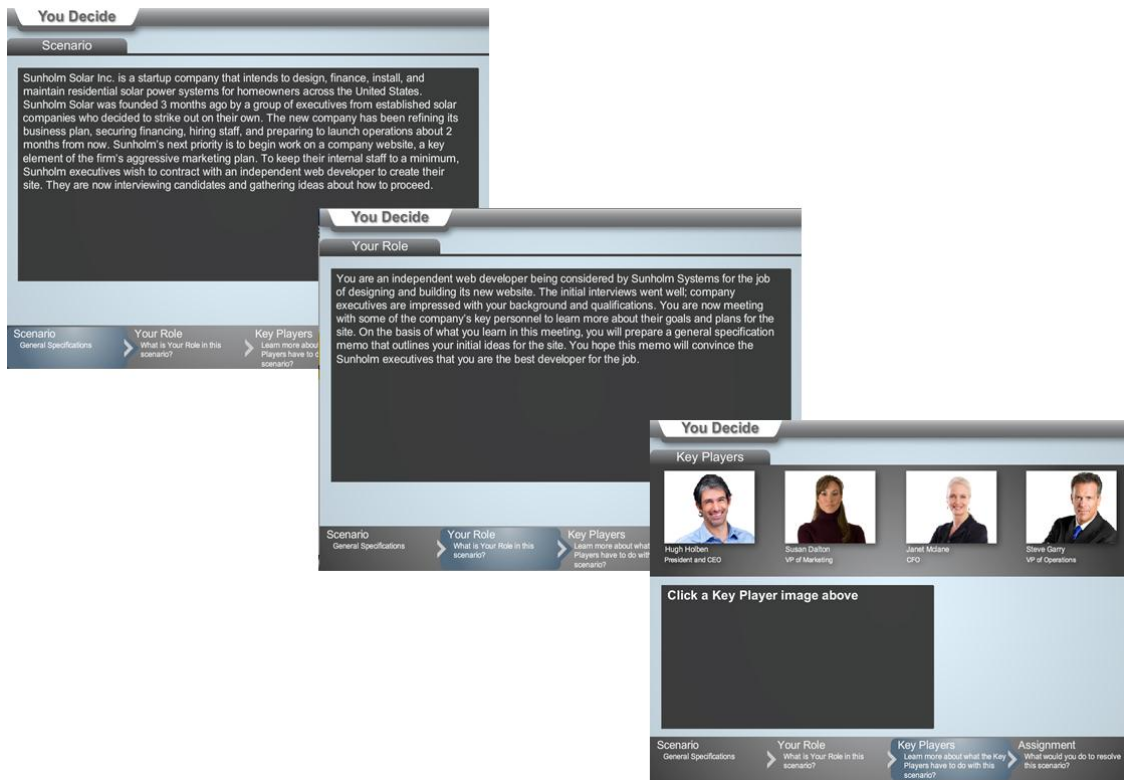


Figure 2: You Decide – Website Project Proposal Interactive Screen Sequence

Students return from the interactive portion to the overview page for details of the deliverable they are to produce for the assignment, including a grading rubric. For the assignment described here, students are asked to write a brief 1-2 page memo to the Sunholm Solar management team outlining a proposed design approach to the project. Assignments are graded based on identification of client needs, characterization of the intended audience for the website, description of proposed website features, quality of professional writing, and adherence to length and format requirements. In BIS325, the four You Decide activities together account for 12% of the total course grade.

Evaluation

The You Decide activity format has evolved to address the needs of three distinct sets of stakeholders: instructional designers, faculty, and students. From an instructional design perspective, the You Decide format offers several advantages. The standardized format simplifies the development process, eliminating the need to invent a custom format for each new activity, but is sufficiently flexible to adapt to a variety of subject areas and instructional goals. Use of Microsoft Word templates with pre-written instructions streamlines the authoring process in collaboration with the SME. Key player images can be readily selected from a stock photo library, and audio content can be recorded by staff members and edited with inexpensive software tools. Custom content (text, images, and audio) can be plugged into an HTML template and uploaded to the LMS in a smooth, efficient production workflow. The ability of the original script to serve as a production storyboard and as a transcript for accessibility compliance offers additional efficiencies.

From a faculty perspective, the You Decide format facilitates creating authentic learning activities that work well in both online and blended delivery modalities. You Decide activities are presented through the LMS and so are suitable for purely online learning environments. However, in a blended learning environment, the same activity can be extended into the onsite classroom through small-group face-to-face discussions of the scenario, presentation and peer evaluation of student solutions, and the like. Activities gain real-world relevance by choosing scenarios likely to be encountered by students in their careers. Multiple perspectives on an issue are easily introduced through the voices of the key players; the You Decide format accommodates this more naturally than the traditional text-based case study, which is typically written from a single (purportedly objective) viewpoint. The final activity section of a You Decide can encompass whatever form of deliverable is appropriate for the course objectives, including written papers, calculations, project plans, design diagrams, software applications, and other artifacts. Incorporation of a grading rubric created by the SME who designed the activity facilitates efficient, consistent assessment by other faculty members delivering multiple sections of the course.

To date, no data have been gathered from students concerning You Decide activities specifically; this may be done as part of a future research project. We expect students to find You Decide activities more engaging than traditional purely text-based assignments due to the former's narrative framework, personification of viewpoints, and multimedia presentation. The use of text, still images, and audio addresses audible and visual learning styles, while the interactivity component of clicking on images to reveal information addresses kinesthetic learners. The network bandwidth and hardware/software capabilities required to access multimedia learning resources are also concerns for many students. In this respect, You Decide activities represent a compromise between technically simpler but less engaging text-only formats and richer but more technically demanding formats such as video and animation. The static images and audio used in You Decide activities work well over low-bandwidth connections and on devices with limited processing power such as older laptops, inexpensive netbooks, tablets, and mobile phones. Also, using only static images and audio avoids potential problems with missing or unsupported software components such as specialized codecs, drivers, or plug-ins that often arise with richer, more technically complex forms of multimedia.

Conclusion

DeVry University's You Decide activity format was created in response to a need for authentic, engaging learning activities that could be developed efficiently and used effectively in both online and blended learning environments. The key You Decide elements are a standardized yet flexible framework, a narrative scenario, multiple viewpoints voiced by key players, and use of static images and audio as interactive multimedia components. The format has been found to be adaptable to a wide range of subject areas, courses, and assignment types. In particular, our recent experience in applying the format to assignments in a Web design course demonstrated that traditional text-based case study assignments could be readily converted into You Decide activities to provide a richer student experience.

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