INTRODUCTION

Scenario building provides a systematic process for the group of people involved in planning and implementing an e-learning program to work as a facilitated team to design the program. It contrasts favorably to how e-learning programs are typically planned: some evolve from individual efforts, some are designed based on specific technological capabilities, and others, more recently, are purchased from or co-branded with e-learning providers. Scenario building can be used for any type of organization, including a university or business, and can be used to plan a few courses, a corporate university, or an online learning community. It is ideal for planning a blended learning solution since it uncovers what is needed to make learning successful as well as what may hinder that success. The process also has the benefit of being a group activity that can facilitate team-building and commitment.

SCENARIO BUILDING

Scenario building begins with the identification of the planning team: who is responsible for designing and implementing the e-learning initiative, who has budgetary responsibilities, and who has IT responsibilities. Once the team is assembled, in what is usually a one-week process, the session starts with e-learning education and a discussion of best practices so that the team has a shared understanding and vocabulary.

The next step involves leading the team through strategic planning for the e-learning program. This includes selecting a planning horizon, which is typically one to two years, developing mission and vision statements, and performing an analysis of strengths, weaknesses, opportunities, and threats. The rest of the planning discussions include determining resources and constraints, how to manage risk, market research and competitive analysis, and evaluation and ROI.

Following this, the planning team is guided through the process of scenario building. Scenario building involves a number of steps and begins with the team determining who will be involved in developing, delivering, supporting, administrating, or taking courses, and prioritizing these roles. Starting with the most important perspective, usually that of the student or participant, the relevant characteristics of members of that category are determined by the group. This may include computer and Internet literacy, work environment and constraints, and time commitments. The group then determines what happens when a representative of that category carries out their role, i.e., taking, teaching, or supporting a class. This results in a list, which is then prioritized, of the needs and requirements from that perspective for the e-learning program to be successful.

Subsequent perspectives are usually easier to consider after the first, and the entire process leads to requirements analysis and implementation planning for the program. At this point, the team can consider candidate technologies and vendors, and finalize a plan that will be used, once technology choices are made, to analyze, design, develop, evaluate, and iterate. The plan includes roles and responsibilities, some of which will be assigned to the team members, some to others in the organization, and some to external consultants.
This process has been used for a number of organizations that are developing e-learning courses or programs, or building learning communities, including the University of Puerto Rico, Laborers-AGC, CTA Resource, and FranklinCovey.

THE UNIVERSITY OF PUERTO RICO

The Puerto Rican government funded an ambitious distance-learning program at The University of Puerto Rico. To help get the program underway, the university called on a team of EDS consultants to structure and support the program's essential planning and implementation processes. The team began with strategic planning to determine the tasks and responsibilities needed to ensure the program's on-schedule readiness.

During this process, it became clear that the distance-learning concept conjured widely different images for members of the steering committee depending on their knowledge of its theory and practice. Many assumptions were based on the association of distance learning with the room-based videoconferencing that dominated distance education prior to the introduction of Web-based technologies in the mid-1990s. Some of these images did not account for the level of interactivity and engagement that students and teachers experience using state-of-the-art distance-learning technologies or failed to accommodate the important differences between learning and teaching in traditional and technology-mediated settings. Education on how e-learning is being used in similar institutions and other types of organizations made it easier to clarify assumptions and develop shared views.

The team proceeded with scenario building, an activity designed to help the program's steering committee understand, envision, and specify technology's role in the new distance-learning offering. Scenario planning began by determining the roles that people will play in the university's distance-learning program; those roles are student, professor, teaching assistant, and a number of support and administrative positions. The scenario-planning work led to each role being assigned characteristics that are relevant to the how a person in that role operates in a distance learning program or that give the role dimension and interest. Characteristics of a student, for instance, included age, family/home situation, educational background, technology literacy, Spanish and English literacy, and typing skills. Characteristics of the environment in which a student would be studying included limited technology access, which necessitated building a regional center. These discussions also included contingency plans in case a hurricane disrupted power or phone service.

The goal was to agree upon the role of technology, the specific types of technology, and the support requirements for technology in the distance-learning program. To achieve this goal, we developed a prototypical member of each role in order to envision, as a group, what a day in that person's life would be like. We carried this to the level of detail of which relevant activities they were engaged in, where they carried out the activities, and what technological and human support was required. There were implications from some of the characteristics of a role; to discuss the activities of a person in a day, we needed, for instance, to know if there was access to a computer and, if so, under what conditions or with what possible distractions it would be used. If there was no access, then a staffed computer room must be available during reasonable hours. Additionally, we considered the implications of atypical but plausible cases for each characteristic, such as the ramifications if a student was older and returning after a period out of school or was employed in local businesses. The process culminated in requirements analysis, a list of initiatives necessary to the success of the program, and the criteria for measuring the success of the program.

CONCLUSIONS

The scenario-building process uncovered many issues, concerns, assumptions, and
previously unarticulated misconceptions, which led to constructive discussion that culminated in a consensus about technology's role in the project and about the people who would manage and support it. Equipped with the scenarios' insights, we completed a thorough analysis of the program's specific technology needs, identifying and prioritizing the components of the supporting technology. In subsequent discussions, we continued to refer to the prototypical characters, and found that they continued to help clarify issues since the group could look at that person's specific (imagined) needs. Ultimately, the process of identifying each role's relevant characteristics and the hypothetical activities and interactions of a person in that role pointed directly to the criteria against which the entire program will be evaluated, ensuring that the overall effort's success will be measurable and more easily repeatable.