Cases on Educational Technology Implementation for Facilitating Learning

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Chapter 16
Like Someone You Know:
Scenario-Based Simulation to Improve Academic and Life Skills

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EXECUTIVE SUMMARY

The director of a university tutoring center collaborates with an Instructional Design and Technology professor and his students to develop an interactive multimedia format that presents at-risk college students with stories of people like them dealing with academic, financial, and personal issues. The scenario-based simulations (SBS) prompt students in a study skills course to openly, but safely, discuss the often sub-optimal decisions made by characters in the scenarios. This case takes readers inside the process of developing the SBS format from scratch. Transcribed interview comments from both the client (the tutoring center director) and the designer (the IDT professor) reveal an iterative and negotiated process rather than a systematic ADDIE process. The case highlights: 1) adapting corporate-style "soft skills" computer-based training (CBT) to higher education, 2) the role of CBT in a blended course, 3) rapid development of multimedia products, and 4) use testing *of products with authentic learners.*

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INSTITUTIONAL BACKGROUND

State University is a public institution with an enrollment of approximately 20,000 students. The campus setting is rural, however, many of its students come from major metropolitan areas. State University has a long-standing legacy of opportunity; nearly half of undergraduates admitted are first-generation college students and approximately 35% are minority students. Many incoming freshmen lack adequate study skills and don't understand "what college is all about." Almost one-fourth of first-year students are conditionally admitted, meaning they did not meet the specified admissions criteria.

In addition to reflecting an institutional philosophy of opportunity, the revenue generated by expanding the pool of students helps support the university in a time of fiscal decline. State allocations to support State University that once averaged 52% of the total budget have dropped to 38% over the past decade. Increasing enrollment has, therefore, become a major emphasis. However, administrators, faculty, and staff all agree that they do not wish to damage students' futures by generating a great deal of debt through student loans without the students completing a degree. The university's vision of student success is formalized in a state-implemented system of performance-based funding in which the amount of state funding for colleges and universities depends on enrollment, retention, and completion of degrees.

Like a growing number of higher education institutions, State University has developed a University College program in which all incoming freshmen take a core curriculum and are guided in their growth as successful college students. The goals of increasing retention and graduation rates are challenging since State University typically loses approximately one-third of new students within their first year, and graduates less than half of its students within six years of initial enrollment.

As challenging as college is for under-prepared students, many of them avoid the very things that would help them succeed. For example, many of the students who need academic assistance do not take advantage of the free tutoring that is available for the most challenging first-year courses -- those with high DFW rates of students earning grades of D's, F's and Withdrawals. Typically, less than 25% of students enrolled in DFW courses attend the provided study sessions. Helping these students succeed, then, involves improving their awareness of support resources and attitudes about college as well as their academic skills (Hanger et al. 2012; Isaak et al., 2007; Phan, 2008).

SETTING THE STAGE

When the Chancellor declared State University's commitment to addressing student retention she asked the tutoring center, under the direction of Ms. Lena Saunders, to pay special attention to incoming students who immediately experience academic difficulties. In response, Ms. Saunders developed a new course (UCOL-102) for the University College program that would be required of the 300-plus first-year students who typically earn grade-point averages between 1.0 and 2.0 in their initial semester. These students are put on academic probation and need to raise their GPA to 2.0 or above in their second semester in order to avoid academic suspension. The UCOL-102 course is not intended for extreme-risk students with a GPA below 1.0 in their first semester; these students are suspended per university policy.

Ms. Saunders wants UCOL-102 to be positive and supportive, and to provide opportunities for students to immediately apply what they learn to the other courses that they are taking. Indeed, many of the students in UCOL-102 will need to earn a GPA of nearly 3.0 in their second-semester courses in order to raise their overall GPA enough to remain academically eligible.

CASE DESCRIPTION

Management and Organizational Concerns

UCOL-102 focuses on the development of meta-cognitive awareness, study skills, and personal as well as academic self-regulation. While UCOL-102 teaches academic skills and strategies, Ms. Saunders decided that it is also important to influence the attitudes, beliefs and behaviors of these at-risk freshmen. Recognizing the central influence of peers, Ms. Saunders designed UCOL-102 to include peer coaches who are assigned to work with ten students each. The peer coaches, drawn from the undergraduate population, will interact with "their" students both individually and in small discussion groups.

UCOL-102 will include three weekly meetings: a large-group classroom meeting (75 to100 students per section), a small-group discussion session led by a peer coach, and one-on-one time with the peer coach. In a *blended learning* format, UCOL-102 will be supported by a learning management system (LMS) that is used to manage classroom materials, assignments, and assessments.

Ms. Saunders envisions the small-group discussion involving the peer coach and the students talking about the misjudgments that academically at-risk students make in various academic and social situations -- but without putting the students

themselves "on the spot." Ms. Saunders sought out Dr. Jay Sandoval, who teaches in the Instructional Design and Technology (IDT) graduate program at State University, to help design an instructional activity that could prompt the rich discussions that she envisions.

After listening to Ms. Saunders describe the goals of UCOL-102, particularly the small group discussion sessions, Dr. Sandoval suggested that a *scenario-based simulation* (SBS) format commonly used in corporate training might be appropriate. Dr. Sandoval showed Ms. Saunders several examples of online computer-based training (CBT) modules that use workplace scenarios to train employees in business *soft skills* such as conflict resolution, cultural awareness, and customer service (Articulate Showcase, 2012; Yukon Learning, 2012). Adapting the CBT approach for UCOL-102 would involve students engaging in self-directed, individual learning by completing interactive modules on the course LMS. As a simulation, the SBS format would provide a realistic and "safe" environment for students to experience the consequences of poor decisions (Alessi & Trollip, 2000). The peer coaches could then refer to the realistic characters and dilemmas from the SBS stories as starting points for their small-group discussion sessions.

Ms. Saunders agreed that the SBS format might work well in the UCOL-102 curriculum. The SBS modules could present interactive stories involving characters very much like the UCOL-102 students, dealing with problems and challenges typically faced by academically at-risk freshmen students. In viewing the business SBS examples, however, Ms. Saunders noticed that the situations sometimes seemed forced, the characters shallow, and the dialog unnatural. "If this is going to work with UCOL students, the characters and stories must seem absolutely authentic. They'll sniff out anything fake."

Technology Concerns and Components

Ms. Saunders expressed concern that the SBS examples Dr. Sandoval showed to her were quite complex, with the scenarios branching in different directions based on the learner's choices. "Who's going to create all of these simulations?" she asked. "I don't think we can use anything generic. It really needs to be customized to our campus and students, and their problems. We'll probably need to make them ourselves." Dr. Sandoval agreed that the challenge was to develop an SBS format that would be:

1. Authentic in characters, stories, and dialog
2. Interactive but not overly complex
3. Easily created by non-professionals

With Ms. Saunders serving as the client, Dr. Sandoval made the task of developing an SBS format for UCOL-102 into a group project in his Interactive Multimedia course. Dr. Sandoval and his IDT students would develop an interactive multimedia format that was reduced in complexity so that non-professional *designers by assignment* (Merrill, 2007) in Ms. Saunders' tutoring department could use the SBS *template* to produce SBS modules.

SBS Format Decisions

An early decision in developing an SBS format was the choice of media to *author* and to present the simulations. Although some business soft-skills training programs use video to present scenarios, the *rapid e-learning* approach usually involves creating multimedia instruction modules in *PowerPoint* using photos and text and then importing them into a web authoring program such as *Adobe Captivate* or *Articulate* to add interactivity such as branching and quiz questions (Kuhlmann, 2011).

Dr. Sandoval decided that UCOL-102 modules would be developed in *PowerPoint* because of its familiarity to non-professionals, with the potential (but not the requirement) for further development by a professional instructional designer using web authoring tools (Kineo, 2008). Non-professionals could also use a free *PowerPoint*-to-*Flash* converter such as *iSpring* (2012) to create web-friendly SBS modules, including audio narration or dialog.

Ms. Saunders decided that SBS modules will relate to particular academic or life skills topics covered by readings or lectures in the UCOL-102 curriculum. The SBS module will not teach any new content, just show principles being applied in realistic situations. Each SBS will have a central character that encounters an academic or personal dilemma. Based on interviews that Ms. Saunders had conducted with first-year students, she specified that the SBS characters should always turn first to a friend for advice rather than parents, teachers, or counselors. The dilemma choices will be revealed in dialog between the central character and a friend. The choices offered can include talking to authority figures.

After introducing the characters and dilemma, the SBS will then present learners with a Decision Point. What should the character in the story do? UCOL-102 students will choose from three options and then be provided with a feedback screen that describes the pluses and minuses of each option and assigns points for each choice. The SBS module will assign points based on the learners' decision choice, but not branch based on the choice. A *pedagogical agent* (Moreno et al., 2001) will provide feedback and advice for every choice – not just the one that the learner chooses.

The central character in the SBS then decides and acts, not necessarily choosing the best option or the option selected by the UCOL-102 student viewing the SBS,

with consequences following. The SBS, in theory, elicits cognitive and emotional interaction without branching based on the learner's choices. Avoiding branching will simplify multimedia authoring and scenario writing, thus facilitating rapid development. In addition, the non-branching approach presents UCOL students with valuable information about sub-optimal choices that they may not encounter in a branching simulation.

With a basic SBS format established, the IDT students in the Interactive Multimedia course worked in teams to produce a variety of SBS modules in *PowerPoint*. In order to test the feasibility of non-professional instructional designers in Ms. Saunders' office producing SBS modules, Dr. Sandoval's students were given only two weeks to create the characters and scenarios, locate appropriate photos to depict characters, write dialog, and generate the decision options and expert feedback – which contained the bulk of the instructional material. Ms. Saunders served as the subject-matter expert (SME). The IDT students were directed to concentrate on characters, scenarios, and decision options. The IDT students would then *use test* their SBS modules with representative learners to reveal any problems with content or navigation aspects in the module. The end products of the class project would be: 1) an SBS template that was tested with designers and users, and 2) several ready-to-go SBS modules to start using in UCOL-102 and to act as examples for Ms. Saunders' staff to develop future modules.

CHALLENGES FACING THE PROJECT

Like most instructional design projects, the UCOL-102 SBS project encountered challenges and decisions at every stage of development. In order to track the SBS design challenges for this case, both Ms. Saunders and Dr. Sandoval were interviewed at various junctures in the process: idea formation, development of rough draft modules, and use testing of the modules. Excerpts of their interview comments, transcribed below, provide insight into the constant communication and negotiation that take place between a client and an instructional designer in the development of an instructional product.

Idea Formation Stage

Ms. Saunders told Dr. Sandoval's Interactive Multimedia class about her proposed UCOL-102 course for academically at-risk students. Dr. Sandoval showed the class several examples of corporate soft-skills training modules. Ms. Saunders described how UCOL students would be assigned to view particular SBS modules, found on

the UCOL-102 LMS, and then talk about the dilemmas and decisions of characters in the stories during small-group discussion sessions. Dr. Sandoval and Ms. Saunders described the basic SBS format that they had worked out and IDT students were given the opportunity to ask questions to guide their design efforts.

Dr. Sandoval

The IDT students asked the format questions that you'd expect: How long should the SBS be? Where could they get photos of characters? But the students also asked good questions about the instructional content and context: How much content should be in the SBS? Where does the content come from? Would the UCOL students be applying principles that they'd already read about? And they had questions about story writing, which most of my students had never done before: Where should the story start? How much background should be provided on characters? Do you need to use proper grammar in dialog? Could they use a common group of characters – like a soap opera? That was a new one on me; not something I've seen in corporate SBSs. But recurring characters might help maintain students' interest over a 16-week college course, whereas most corporate "courses" are much shorter – individual modules, really.

Ms. Saunders

When I went to Dr. Sandoval's class, I was naïve in focusing mostly on the content in the scenarios. But then the students were more concerned with questions such as, "Should we all use the same characters?" It made me realize how much I don't know about this form of learning! Usually, when teaching a course, I do my research and decide what material to present and how to assess student learning. This project differs from my standard operating procedure. I was somewhat uncomfortable with talking about stories and characters. I hope I helped by emphasizing that I want the SBSs to show UCOL students other young people making the same kinds of mistakes that they do, so they can talk about these things in a personal way, like the people in the scenarios are somebody they know.

Rough Draft Stage

Dr. Sandoval provided a *PowerPoint* "starter" template for authoring scenario-based simulations like those used in corporate soft-skills training. Multiple teams of IDT students were tasked with creating rough draft SBS modules. IDT student teams selected an SBS topic from among those provided by the client and were

free to use different colors, text fonts, text boxes, navigation buttons, photos, and other multimedia design elements for their rough draft SBS. In all, student teams produced six rough draft SBS modules from which the client chose a favorite (see Attachment A) that was finalized as the SBS template. The IDT design teams then revised their SBS modules to fit the new template.

Ms. Saunders

I was a surprised by the differences in "look and feel" that the SBS rough drafts had. I personally like a clean, professional look. But I had to think about how UCOL students would respond to these modules. I don't want the SBS to feel like content in disguise. It needs to be inviting, interesting and friendly. One of the SBS examples seemed to fit the bill and it was chosen to be the formal UCOL/SBS template. Even though I publicly made the decision to settle on one template, I was privately wondering if that was a good decision in case I wanted to change it. But Dr. Sandoval assured me that I would "own" the template, so I could change content or layout, or anything else, later. They were making the template as a tool for me to use.

Dr. Sandoval

The student designers were mostly focused on the multimedia aspects of the SBS – colors and fonts and photos -- and not enough on the story aspects. For instance, the rough draft SBS that was chosen as the final template had good multimedia design but the central character in the story seemed to be more like the grad student authors of the SBS than like the UCOL students (Attachment A). On the other hand, the best *story* came from a design team that included a student who works as a food server in a freshman dorm and has observed a lot of students who are a lot like those who could end up in the UCOL class (Attachment B). That design team wrote a scenario about a young woman trying to figure out how she could get out of sending all of her academic support money home. She was supporting her Mom, but she wanted to buy books and maybe a computer. It was so real that it made everybody squirm a little bit. Great! If the SBS format isn't *real* then it loses most of its power. The value of the SBS isn't delivering the content of life skills and academic skills. It's making them real.

Ms. Saunders

It struck me that it is might take some courage to implement the SBS format in UCOL-102. The rough draft SBS that I liked best had a great look to it. But the one that Dr. Sandoval liked best was just so raw in the story. I had to think about that.

But you know, from the chancellor on down, we're all saying that we want to relate to these at-risk students. That means we need to take some risks, too. But I must say that I'm anxious to see how this SBS format works with some real students.

Use Testing Stage

All of the IDT design teams reformatted their SBS *PowerPoint* rough drafts to conform to the selected UCOL/SBS template and then conducted a *use test* on another team's SBS module. The use testers needed to find at least one *representative user*, someone as close to the target learners as possible. The testers introduced the user to the context of the SBS module and then observed the user complete the SBS. The testers then de-briefed with the user, asking about specific areas in the SBS where the users' actions (e.g., clicking through screens before reading all of the content) indicated the user was confused or disinterested. See Attachment C for examples of SBS use test findings.

Dr. Sandoval

Instructional designers, and also clients, need to look beyond what they "like" or what "looks good" and focus on what works best for the target learners and learning goals. So I insist on use testing with authentic users -- or as close as you can come. All the multimedia design principles and front-end analysis are to make the best possible rough draft. Then it's all about formative evaluation, especially use testing. It's not easy to do use testing but it catches a lot of errors and generates insights.

With the subject-matter expert (Ms. Saunders) having approved the academic and life skills content of the SBS modules, design teams conducting use tests focused on what users liked or disliked about the module as well as observing users' progression through the module. In a meeting of the IDT class and the client, the IDT design teams discussed the findings and implications of their use testing.

Dr. Sandoval

A number of obvious things emerged from use testing. Too long; too wordy. A finding that was a surprise to me was that some users didn't like the point scoring system, saying it got in the way of the story. We spent almost an entire class meeting discussing this one design decision. I felt that the scoring was necessary to have interactivity, since we wouldn't have branching. Then Ms. Saunders changed the whole approach of the whole project, with one comment. She said that if we really want *interaction* with the SBS modules then the most interaction would be if they were used *during* small group discussions, with students acting out the sce-

narios and arguing the decision choices as they came up. This amounted to major re-conceptualizing the SBS, away from being a self-instructional module on the LMS and into being an in-class group activity. Great! That demonstrated that the instructional "product" here is not the SBS itself but rather how the SBS is used as a learning activity.

Ms. Saunders

Dr. Sandoval's class was really active, talking and even arguing about their use test findings. I should hope for that kind of action in UCOL discussion groups! They were especially concerned with the point system in the SBSs. It was important to think of other ways to have students compare the decision options. So I suggested using the SBS in the discussion groups instead of having students do them as homework. I like the idea of having the peer coaches and students discuss or even act out the scenarios, and then having students write journal entries in the LMS so I have something individual to grade. I like the SBS modules as a computer-based format, but also like mixing it in with live discussion. I think they could have some fun with it and also get into some very real issues, going from talking about the people in the scenarios to talking about their own dilemmas.

SOLUTIONS AND RECOMMENDATIONS

Ms. Saunders decides to introduce *scenario-based simulations* in UCOL-102 as a method of prompting discussion in small groups. Peer coaches will project the *PowerPoint* slides and read the on-screen text aloud, with students reading characters' dialog. At decision points the peer coach will prompt students to discuss the options, with the class voting on the choice to make. Students will be expected to have read assigned materials before the discussion group meeting and will be required to post a reflection on the UCOL-102 LMS as a journal entry (not seen by other students). The reflections can refer to the SBS and to comments from the discussion group, or relate to the students' personal experiences with the particular academic or life skills that are the topic of the week.

A few modifications will be made to the SBS format for in-class rather than self-instructional use. The navigation buttons will be removed since the peer coach will run the *PowerPoint* slides and can move forward or back as desired. The introductory slide of each SBS will include navigational links to the beginning slide for each character/story. The point system will be maintained but will be monitored for students' acceptance. The point system can be used to add a game-like quality,

with discussion groups being split into two teams who compete for points. The different sections of UCOL-102 may also post "best scores" on the UCOL-102 LMS.

Ms. Saunders will assign one of her graduate assistant positions to an IDT student from Dr. Sandoval's Interactive Multimedia class. The GA will observe the UCOL-102 discussion groups' use of SBS modules, keeping notes of which SBS features and which SBS modules "work" best in the group setting. Four of the six modules produced by the IDT students will be used, with modifications suggested by use testing. The use test finding that students want less text and fewer decision points is even more critical in the live discussion context and forces designers to stay away from delivering content and focus on prompting thinking and discussion.

The IDT graduate assistant will consult with the subject-matter experts in the tutoring center and help them create new SBS modules on their particular topics using the *PowerPoint* template. Peer coaches will be involved in generating characters, dilemmas, and dialogs that reflect the UCOL-102 students who they are working with. A regular cast of SBS characters will be developed, with a collection of approved photos, character profiles, and "back story" for future designers to draw upon.

Both Dr. Sandoval and Ms. Saunders envision a library of field-tested SBS modules eventually being developed using a multimedia web-authoring tool such as *Captivate* or *Articulate* and made available as individualized instruction through the UCOL-102 course LMS. Dr. Sandoval welcomes the *beta* testing opportunity of using the modules in actual UCOL-102 discussion groups, as well as being able to put the SBS method into action with minimal multimedia production.

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KEY TERMS AND DEFINITIONS

Branching Simulation: A computer-based module in which a scenario is presented and the learner must make choices that result in the scenario branching in different directions. Used for testing or training medical or systems diagnosis, soft skills, engineering, and other decision-making areas.

Computer-Based Training (CBT): Self-paced training modules, usually covering a single topic or skill, that are completed by learners on a computer. Similar to computer-assisted instruction (CAI) in education, CBT is associated with business and military training. Formats developed for CD-ROM delivery, now adapted to online delivery.

Pedagogical Agent: A "helper", often but not necessarily an animated character, who appears in computer-delivered instructional programs and offers tips on the skill being taught or using the computer program.

Rapid E-Learning: A process of quickly creating CBT-type modules, including tutorials and scenario-based simulations, for corporate online training. Often starts with *PowerPoint* because subject-matter experts have existing *PowerPoint* content and are comfortable with the program. Professional instructional designers usually do finishing work and add interactivity using authoring programs.

Soft Skills: A category of corporate and institutional training designed to assess or improve communications and interpersonal skills such as conflict resolution, sexual harassment awareness, leadership, team building, and salesmanship.

Template: A form of the product or program that can be used as a guide in creating new versions of the product or program.

Use Test: A loosely defined activity involving the formative evaluation of a product or a program by having representative users complete tasks using the product or program. Testers observe the user and then debrief with them about aspects of using the product or program. Use testing is more general than *usability testing*, which is associated with the functionality and ease-of-use of computer program interfaces.

ENDNOTES

1. The *Articulate Community* and *Yukon Learning* websites cited offer examples of complete interactive multimedia modules, including tutorial as well as scenario-based formats. While these websites are valuable for teaching multimedia design, the content is often changed and examples may be removed.
2. Tools such as *iSpring* offered as free downloads often disappear or are changed to fee-based products. If the product referenced is no longer available or no longer free, alternative versions can often be located.

APPENDIX A: SELF-CONTROL SBS (SELECTED AS UCOL-SBS-TEMPLATE)

Figure 1. Self Control slide

Figure 2. Control Your Time Usage slide

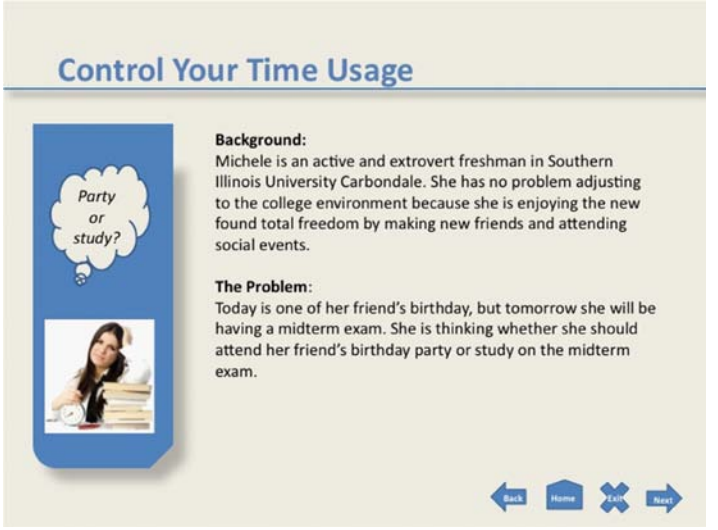


Figure 3. Control Your Time Usage slide

Figure 4. Decision Time slide

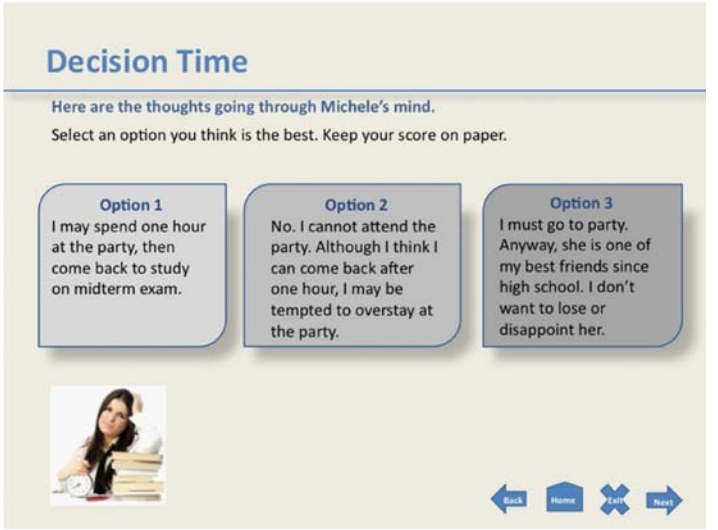


Figure 5. Professor Sharp weighs in slide

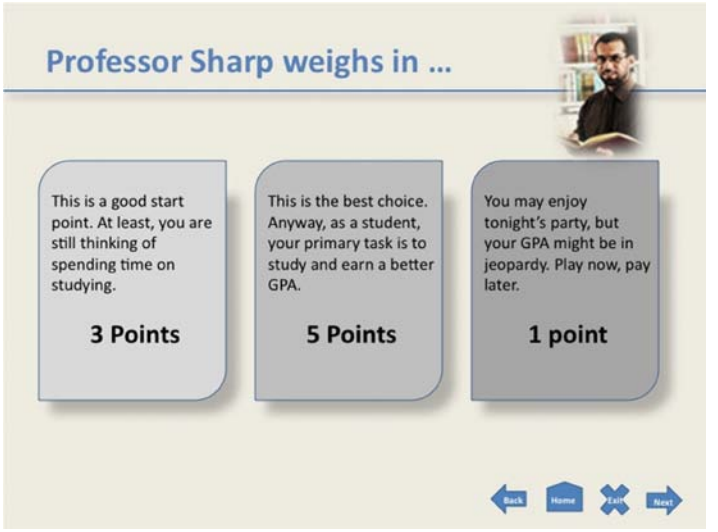
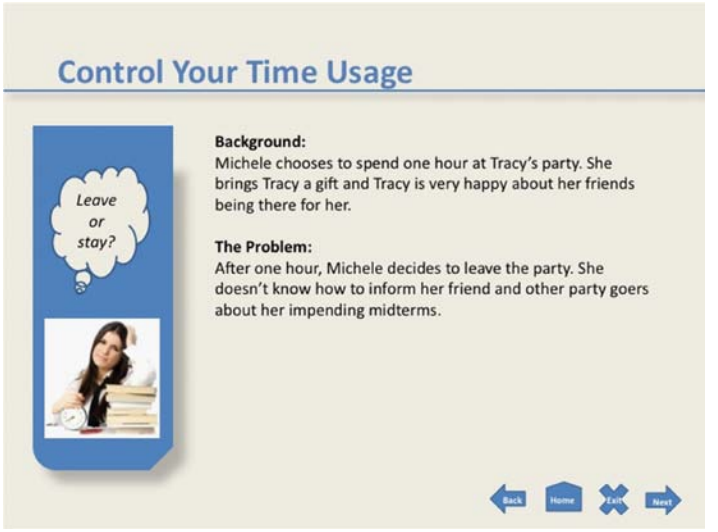


Figure 6. Control Your Time Usage slide



APPENDIX B: DAUGHTER'S DILEMMA SBS (ROUGH DRAFT)

Figure 7. Friends and Family Forever? slide

Figure 8. About Vicky slide

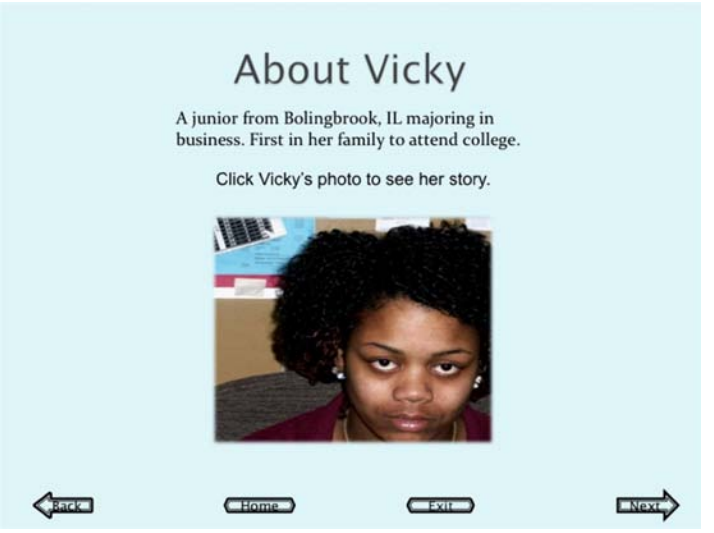


Figure 9. Daughter's Dilemma slide

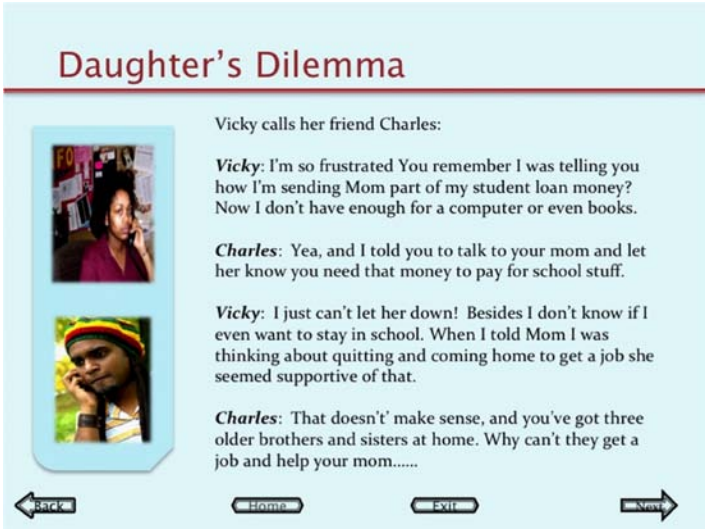


Figure 10. Decision Time slide

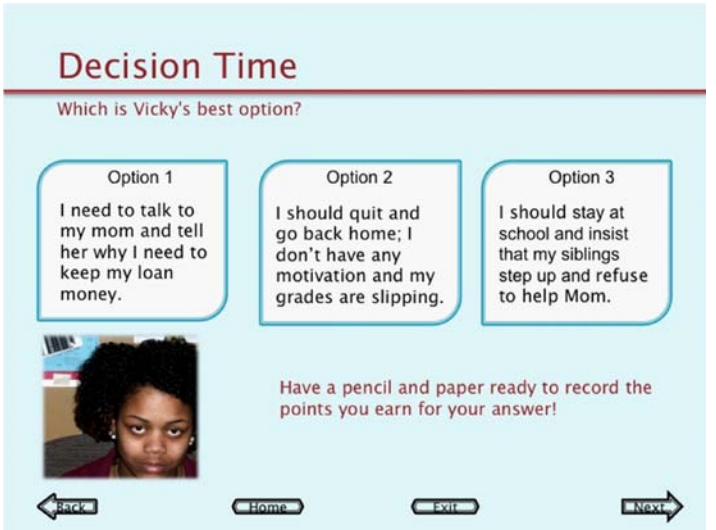


Figure 11. Professor Sharp weighs in slide

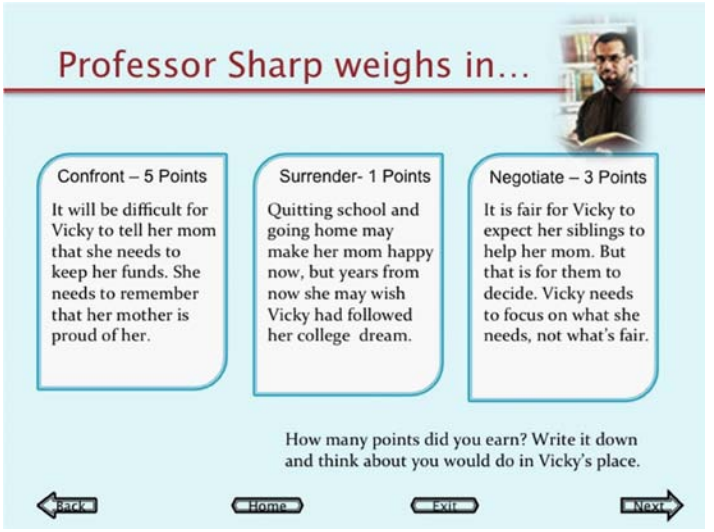
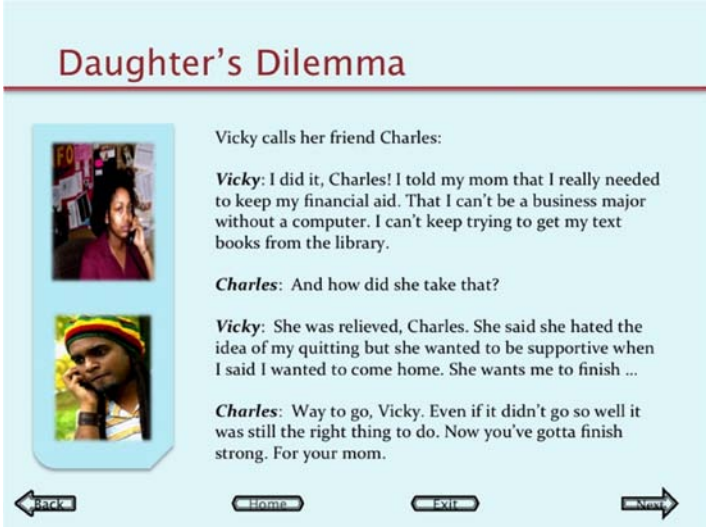


Figure 12. Daughter's Dilemma slide



APPENDIX C: UCOL/SBS USE TEST FINDINGS

SBS: FOCUS - CONCENTRATION

User: Male student worker, junior

1. What did you think about the characters? How "relate-able" were they?

User felt the characters were very realistic and presented real-life stories. Although the images were fuzzy, the user felt that was on purpose because the topic of the screen was "focus." The four categories (distractions, sleep deprivation, depression and ADD) were extremely relevant and the user felt that most students faced those issues, or had friends who faced those issues.

2. What did you think about the plot twists in the scenario?

User felt that the plot twists kept it interesting, and sometimes took him by surprise. He said that these were all things that came about because of poor decisions the character made, and that each decision leads to future dilemmas (*author's comment – yea! He gets it!!*).

3. Other comments, to help make this a useful learning tool for first-year students?

User thought it seemed OK, and that the follow up of Peer Mentors with the students would drive the points home. Otherwise, he felt that students would just skate through it and students wouldn't take it seriously. He said that scoring points seemed artificial and took away from following the story.

SBS: FOCUS - CONCENTRATION

User: Freshman student, male

1. What do you think of this SBS project?

It's ok. It is very blah. It needs to be more something I don't know but something.

Yah but it is way too much to read. I don't talk like that. It did not seem like something I would say, it's too, too right, not like someone would talk.

Yah it does seem to come up sometimes.

Yah I guess but boring. Too much to read. I skipped a lot.

Note: We had three students take this simulation and they clicked over most of the slides, they clicked all the way through without really looking at it. None kept score as the instructions said to.

SBS: WHY AM I IN COLLEGE?

User: Grad student

1. May need directions on the student's profile within the SBS. The user was unclear as to select a profile that would be similar to them or a "generic" student.
2. Need directions to the "choose the best choice" for the SBS character. By only having the back directional arrow, the user was unclear as to what he was supposed to do.
3. The navigational icons for the home and exit buttons are confusing. Might need to find other buttons or add an instruction page as to what those buttons are for.
4. The user felt as if the SBS was not sufficient as a stand-alone module. Should add reinforcement by including survey questions or classroom debriefing.
5. Was told that the SBS characters were very realistic and that students would have a good chance to pick a profile that would be like them.

SBS: WHY AM I IN COLLEGE?

User: Mass communications student, female, 18?

Slide 1: The user right off the bat mentioned that all of the pictures "looked like students she knew."

Slide 2: User was able to advance from slide to slide with minimal ease. User felt comfortable with the navigation buttons and the simple directions. User mentioned she could relate to this student because she had felt similar conflict when she first entered into college.

Slide 4 & 7: User read each decision point and talked about each as she was reading them. Student selected the correct decision. User liked the Dr. Sharp figure

and stated that it was like having your own Jiminy Cricket but with almost a judge like quality. So you wanted to listen to what he had to say.

Slide 5-6: User did use the back buttons as it stated in the directions to look at the other options and to read what Dr. Sharp's comments were for each.

Slide 9: User asked if a link or information was going to be added onto this slide for future users to know where to get help on campus. I thought this was a good suggestion. Have the Counseling Center's number and address or website might help the user right then and there instead of putting it off.

Overall: The user said the situation was very realistic and believable since she herself had faced this dilemma. She mentioned again that the pictures could be any student walking thought the college's halls. The program for the first character took less than 10 minutes to complete. The user stated that she did not feel bored by the project and again she had wanted to see what Dr. Sharp said about each decision point. User stated that she felt this could be a very useful tool for other students just starting out who are going through this problem. User indicated she would be interested in seeing other SBS programs as well after using this first one.

SBS: YOU CAN'T EAT ART

User: Engineering student, female junior

She says students will definitely deal with the situation of choosing a major. She said it would be helpful if someone told her to consult the Career Service before choosing a major. The learner thinks the options given in the decision time are logical and the advice given by Dr. Sharp is helpful.

Observations of the learner doing the SBS:

Slide 4: The learner is not sure whether she should click on one of the options or not. She suggests changing the instruction to "Click or Select one of the strategies that you think is best."

Slide 6: The learner thinks "tainted" is a negative word and it is better to change it to "influenced."

Slide 8: The learner thinks it is better to have a conclusion slide so that she knows it is the end.

The learner also thinks it is better to change the target learners to sophomore because it is a little too early to choose a major for a freshman.

SBS: ACTIVE READING - LEARNING TO READ EFFECTIVELY

User: 18-year-old female student

1. What did you think about the characters? How "relate-able" were they?

The characters were relate-able. I felt that the scenario that was presented is very common.

There wasn't much of a plot twist. The scenario was pretty straightforward.

It was easy to navigate, but there wasn't really any navigation required because I only had to follow the one scenario.

The solutions presented seemed to be common sense. Some people will probably ignore the alternatives presented.

SBS: SMART PHONE/TASK MANAGEMENT

User: A junior in the college of Mass Communication and Media Art participated in this user test.

1. The user does not think the girl "looks like" a Santana, more like a Samantha.
2. The user didn't feel the smiley face on the task management slide was needed.
3. **Decision Time (Slide 4):** The user perked up when he saw choices. He stated that he liked having choices because it creates interest and forces you to think about it. However, his choice option was not listed which was to go to the semi-formal and not care until the night before it was due. He also thought option 3 was a bit extreme and therefore unrealistic.
4. On slide 5, the user wondered why there was a point system. It would be okay as long as there is a description of your final score like you would see in a teen magazine, otherwise eliminate points.
5. The user thought the explanations of each option were nice. He enjoyed reading the feedback from professor Sharp.
6. **Slide 9:** "Another decision! There are too many decisions to be made." The user felt that having two points where he had a make a decision was overkill. He said, "There are a lot of steps, too many! I stopped reading after the second decision slide."
7. The user felt it would be nice to have a conclusion to the story. He wanted to know "how did it end?" "What did she decide?"