

## INSIDE THIS ISSUE

Calls for Papers	2
AECT Convention and ISMF	3
Research Requests	3
AECT-SITE Collabor- ation and NTLC	3
Member Publications	4
Research Roundup	4

The article at right is excerpted from AECT's newest periodical, the *Journal of Applied Instructional Design*, which is intended to "bridge the gap between theory and practice." No excerpt can do true justice to the full article. Please take time to consult the journal for full text of this article and much more. See the information on page 2.

Association for Educational  
Communications and  
Technology

P.O. Box 2447  
Bloomington, IN 47402-2447

U.S. Toll-Free:  
877-677-AECT

Local Phone:  
812-335-7675

Email:  
[aect@aect.org](mailto:aect@aect.org)

Website:  
<http://www.aect.org/>

## Formative Research on the Goal-Based Scenario Model Applied to Computer Delivery and Simulation

Chung-Yuan Hsu  
David Richard Moore

(Editor's note: See full article for complete reference citations.)

The purpose of a GBS is to teach skills in a context that is simulated to present a real-life environment in order to help students index relevant information, make predictions, and create explanations for the various phenomena taking place around them. A GBS model consists of seven components: learning goals, mission, cover story, role, scenario operations, resources, and feedback.

Despite evidence that supports the effectiveness of using the GBS model, no empirical studies have investigated the strengths, weaknesses, or possible improvement of the GBS model. Thus, our purpose was to evaluate the GBS model by answering following questions:

1. What are the strengths and weaknesses of the GBS model?
2. What improvements can be made?

To answer these questions we used formative research. Formative research is a qualitative methodology designed to improve instructional design models by creating an instance designed by following theory. Our instance was designed according to the GBS model and modified based on a series of user trials.

### Designing the Instance

We created *Statistics Specialist* to teach students sampling distributions and evaluate the application of the GBS model. Reigeluth and Frick (1999) emphasized that "the design instance should be as pure an instance of the design model as possible" (p. 639). They suggested that researchers include components of the model and avoid those that are not called

for by the model. This is related to construct validity. *Statistics Specialist* was designed based on the framework of the GBS model. Scenario operations consist of two approaches: expository and discovery. The former refers to the function of asking the expert; the learner asks the expert questions and the expert offers explanation. The latter refers to running the simulation; the learner follows the guideline to perform a simulation so that they can figure out how the target ideas develop.

We began by interviewing subject-matter experts to gain an understanding about issues related to learning sampling distributions. Interview results were analyzed and provided valuable ideas and suggestions for design of the instructional program. Additionally, we consulted the literature on statistics instruction to identify commonly misunderstood concepts and principles.

Based on the suggestions from statistics experts and the review of relevant studies, the instruction was divided into six questions, ranging from fundamental to more complicated. Each question was embedded into the actor-narrated scenarios, which described the scenario's problem (managing a shrimp farm). The actor, playing the client, presented questions to the learner through short video clips. If the learners did not feel confident in giving client advice, they could either choose to "Run the simulation" or "Ask the expert." In the "Ask the expert" section, users could choose questions to ask an expert and, once clicked, a video clip would play to deliver the instruction. In the "Run the simulation" area, learners could decide either to watch a worked example first or to try the simulation.

**ITECH DIGEST** is published quarterly by the Association for Educational Communications and Technology.

Barbara Lockee  
President

Phillip Harris  
Executive Director

Donovan R. Walling  
ITECH DIGEST Editor



### AECT Mission

The mission of the Association for Educational Communications and Technology is to provide international leadership by promoting scholarship and best practices in the creation, use, and management of technologies for effective teaching and learning in a wide range of settings.

### Goals:

- Define the disciplines and professional activities that comprise the field of educational communications and technology.
- Serve and represent professionals in the field and support professional growth.
- Advance scholarship and practice that contribute to and enlarge the knowledge base of the field.
- Promote policies that ensure the humane and ethical use of educational communications and technology at all levels, from the personal through the international.

**ITECH DIGEST**  
Copyright © 2011  
Association for Educational  
Communications and  
Technology

## Formative Research on the Goal-Based Scenario Model

CONTINUED FROM PAGE 1

During the treatment, we employed think-aloud and observation methods to gather data. Two computers were set up for observation. The first one was installed with *Statistics Specialist* and screen capture software to record the screen while participants used the program. In addition, an unobtrusive video camera was set up to allow observation of participant's facial expressions without intruding. We recorded all spoken comments to insure thoroughness of data collection. After treatment, participants took a posttest and then we asked additional interview questions. A second data collection session was conducted with all of the participants in a focus group.

### Conclusions

The purpose of this study was to evaluate the GBS instructional design model by examining its designed instance, *Statistics Specialist*. We were able to confirm many of the strengths and identify areas for improvement. The strengths of a GBS included: 1) learning goals that enabled learners to see their learning needs, 2) a sense of investment due to a mission that engaged students in the learning activity, 3) a cover story that provided a context and problems to enhance students' engagement in the program, 4) a role that increased users' motivation through a title that the role inherits and through the aid of the client, 5) scenario operations that satis-

fied learning control and different learning styles, 6) resources, indicated as the most helpful element, that promoted understanding, and 7) feedback that gave learners confidence and the perception of negative discrepancy that triggered further learning.

A GBS might become a better instructional design model if the following improvements are made: 1) provide a worked example or instruction that demonstrates the behaviors of using the program and seeking supports in order to increase the user's sense of self-efficacy while pursuing the mission or assuming the role, 2) employ small group usage and open-ended question approaches to promote learners' engagement and interaction in scenario operations, 3) carefully integrate other components in GBS to support hands-on activity, and 4) display a hint with negative feedback and recapitulate the concept in positive feedback.

*Chung-Yuan Hsu is at the National Taiwan University of Science and Technology.*

*David Richard Moore is at Ohio University.*

This excerpt is from the *Journal of Applied Instructional Design* 1 (1): 13–24. Same title as this article. Read it at <http://www.aect.org/>. Full access may require regular AECT membership.

## Calls for Papers, Proposals, and Participants

**Call for Papers.** Got a Hot Topic? A burning issue? A philosophical musing? Air your thoughts in a white paper for AECT directed at our field or our world. For more information please go to: <http://aect.org/publications/whitepapers/>.

**Call for Proposals.** ECT is requesting proposals from individuals or collaborative groups who are interested in organizing and facilitating the 4th biennial AECT Symposium in 2012. This biennial event is designed to draw the best minds together for an intensive intellectual exchange of ideas on a focused topic that would culminate in the publication of a Symposium Proceeding. The goal of the symposium is to bring a group of scholars together in a

format that encourages in-depth dialogue and different perspectives on predefined topics and problems. In the past the symposium has occurred in July and has involved three days of presentations and discussions.

See the detailed request by activating the link on the AECT homepage at: <http://www.aect.org/>.

**Call for Participation.** You, or someone you know, can become involved with AECT and its convention on many levels: as a volunteer, an intern, or a student mentor. Check the AECT homepage under "Get Involved!": <http://www.aect.org/>.

## AECT and ISMF Destination: Jacksonville

Jacksonville, Florida, is the site for this year's AECT International Convention, November 8-12, and the International Student Media Festival (ISMF), November 10-12. The Hyatt Regency Jacksonville Riverfront is the venue.

The theme of the convention this year is "Celebrate 3.0: Design.Learn.Community." The gathering is an ideal resource for professional development and networking.

Register early—before November 8—and save \$100 off the onsite registration fee. Visit the AECT website to register online: <http://www.aect.org/>.

Students, parents, teachers, media specialists, and other educators are invited to attend the International Student Media Festival, whether they submit a media project or not. Participants do not need to be expert media producers or even know anything about media production.

The festival features workshops, field trips, a student producer showcase, networking opportunities, an awards ceremony, and many other events.

Find out more about ISMF online: <http://www.ismf.net/>.

## How to Make a Research Participation Request

From time to time AECT receives formal requests for the purpose of soliciting AECT members to participate in surveys and other studies. A recent example of an approved request was one titled, "An Instructional Development Model for Mobile Learning Study." See: <http://www.aect.org/publications/studies/?ID=1>.

To make a formal request for the purpose of soliciting AECT members to participate in a survey or other study, please follow the steps listed below:

- Review the AECT Research Policy, which can be found on the website.
- Prepare a document outlining the study and questions.
- Include your name and email address as the contact person.
- Include the starting and ending dates of the study.
- Include an electronic link to the questionnaire if you have already prepared it. (Note: AECT will not create a questionnaire for you.)
- Include a paragraph of instructions or guidelines that you would like to have displayed after a member consents to participate.

Forward this information to AECT Executive Director Phillip Harris at [pharris@aect.org](mailto:pharris@aect.org). Additional information may be requested.

The executive director will initially review the study request and then forward it to the Executive Committee for approval.

Once approved, your study will appear

in the approved list of research study requests on the AECT website until the ending date of the study. AECT Members may elect to participate by signing in to your study. This action will send an email to the contact person of record. Maintenance of records of potential participants will be the responsibility of the study contact person.

AECT will promote any new study through the website or email list.

## AECT-SITE Collaboration Pairs with National Technology Leadership Coalition

The National Technology Leadership Coalition (NTLC) is a consortium established nearly a decade ago, comprised of national teacher educator associations, national technology associations, not-for-profit organizations, and some corporate organizations. The purpose of NTLC is to facilitate and encourage cross-disciplinary discussion of appropriate uses of technology in the core content areas across professional associations. The leadership within the Society for Information Technology and Teacher Education (SITE) has strongly supported this coalition and has often taken the lead on collaborative efforts of the NTLC.

AECT joined the NTLC in 2008 under the leadership of Mary Herring, providing opportunities for SITE and AECT to explore common goals and consider collaborative synergies. Read more using the link on the AECT homepage at:

<http://www.aect.org/>.

---

Have you been to CAVE Island?

If not, check out AECT's Second Life homepage using the link at:

<http://www.aect.org/>



# Research Roundup

## Member Access Publications

### **Educational Technology Research and Development**

Bimonthly  
ISSN: 1042-1629  
(print)  
ISSN: 1556-6501  
(electronic)  
Journal no. 11423  
Springer US

### **TechTrends**

Bimonthly  
ISSN: 8756-3894  
(print)  
ISSN: 1559-7075  
(electronic)  
Journal no. 11528  
Springer US

### **Instructional Science**

An International  
Journal of the Learning  
Sciences  
Bimonthly  
ISSN: 0020-4277  
(print)  
ISSN: 1573-1952  
(electronic)  
Journal no. 11251  
Springer Netherlands

### **International Journal of Designs for Learning**

Quarterly  
ISSN: 2159-449X  
(electronic)  
AECT

## NEW

### **Journal of Applied Instructional Design**

Quarterly  
ISSN: 2160-5289  
(electronic)  
AECT

## Global Study Examines College Students' Use of Media

College students around the world are strikingly similar in how they use media and how “addicted” they are to them, according to a global study by the International Center for Media and the Public Affairs (ICMPA) in partnership with the Salzburg Academy on Media and Global Change. The following is adapted from the study’s blog at <http://theworldunplugged.wordpress.com>.

Researchers studied nearly 1,000 students in Argentina, Chile, Hong Kong, the People’s Republic of China, Lebanon, Mexico, Slovakia, Uganda, the United Kingdom, and the United States. They concluded that the study’s lessons are five-fold:

First, the definition of *news* has hit a tipping point. *News* is no longer a noun reserved for what happens in politics, business, or world affairs. News is both worldwide events *and* friends’ everyday thoughts. Most students did not discriminate between news that the *New York Times*, the BBC, or Al Jazeera might cover and “news” that might appear as a friend’s Facebook status update. “News” to students simply means “something that just happened.”

Second, students no longer search for news; it finds them. No matter where they live, the amount of information coming at students through mobile phones or on the Internet is overwhelming; students are inundated 24/7. As a result, most students reported that they rarely go prospecting for news at mainstream news sites.

Third, students now get their news in chunks of 140 characters or from Facebook posts. Think Dickens’ serializing of his novels; that’s the way news comes to students. And if a chapter or two are lost along the way, students don’t bother to go back—nor do they often click on the shortened URLs embedded in the 140-character messages.

Fourth, the nonstop deluge of information coming through mobile phones and online means that most students across the world have neither the time nor the interest to follow up on even important news stories unless they are personally engaged. “We are used to having information about everything on the

planet and this information we have to have in an unbelievable time,” observed a student from Slovakia. “Our generation doesn’t need certified and acknowledged information. More important is quantity, not quality of news.”

Fifth, there is a need for news curation: people and tools to make sense of the 24/7 influx of information. Some of the headline-length bits of information come from news providers in tweets and RSS feeds on Facebook and the like; most of the “chunked news” comes in re-tweets and viral messages second, third, or tenth-hand from an assortment of “friends” and “follows.”

The key lesson for students, universities, and entrepreneurs: News curation needs to be taught to students as a life skill because everyone needs critical and analytical tools to sort through the vast amount of data that is being created in all fields.

## “EU Kids Online” Studies Young Media Users’ Activities and Risks

“European Kids Online: Their Skills, Activities, and Risks” looked at more than 25,000 students aged nine to sixteen years in twenty-five European countries, gathering data through in-home interviews between 2009 and 2011.

The survey examined key online risks: pornography, bullying, receiving sexual messages, contact with people not known face to face, offline meetings with online contacts, potentially harmful user-generated content, and personal data misuse.

Among the key findings: 93 percent of nine- to sixteen-year-olds go online at least weekly (60 percent every day or almost every day). The average age of first Internet use also is dropping—now age seven in Denmark and Sweden, for example.

The researchers are careful to assert that “risk” does not necessarily result in “harm,” an important distinction.

Principals are Sonia Livingston and Leslie Haddon in the Department of Communications at the London School of Economics. The full research report can be downloaded as a PDF from [www.eukidsonline.net](http://www.eukidsonline.net).