

INFORMATION SYSTEMS EDUCATION JOURNAL

In this issue:

- 4 **AACSB Learning Goals: One-Minute Guest Speakers Help To "Close-the-Loop"**
Randy Ryker, Nicholls State University
- 9 **Using Undergraduate Information Systems Student Epistemic Belief Data in Course Design: A Research-based Approach to Improve Student Academic Success**
Samuel S. Conn, Kentucky State University
John English, Kentucky State University
Fred Scheffler, Kentucky State University
Simin Hall, Virginia Polytechnic Institute and State University
- 23 **Real World Projects, Real World Problems: Capstones for External Clients**
Bryan Reinicke, University of North Carolina Wilmington
Thomas Janicki, University of North Carolina Wilmington
- 28 **Expansion and Validation of the PAPA Framework**
Belle Woodward, Southern Illinois University
Nancy Martin, Southern Illinois University
Thomas Imboden, Southern Illinois University
- 35 **Information Technology Diffusion: Impact on Student Achievement**
Gregory M. Lee, Our Lady of the Lake University
Mary L. Lind, North Carolina A&T State University
- 50 **Is there a Student 'Disconnect?' First-year Hybrid Class Teachers' Observations and Recommendations for Improving Student Engagement in Information Systems Classes**
Joan B. Parris, University of North Alabama
Jana P. Beaver, University of North Alabama
David W. Nickels, University of North Alabama
John D. Crabtree, University of North Alabama
- 59 **A Model for Long Term Assessment of Computing and Information Systems Programs**
Hisham Al-Mubaid, University of Houston – Clear Lake
Dan J. Kim, University of Houston – Clear Lake
Kwok-Bun Yue, University of Houston – Clear Lake
Sharon Hall, University of Houston – Clear Lake
Krishani Abeysekera, University of Houston – Clear Lake
- 68 **System Testing of Desktop and Web Applications**
James M. Slack, Minnesota State University
- 83 **Integrating Statistical Visualization Research into the Political Science Classroom**
Geoffrey M. Draper, Brigham Young University Hawaii
Baodong Liu, University of Utah
Richard F. Risenfeld, University of Utah

The **Information Systems Education Journal** (ISEDJ) is a double-blind peer-reviewed academic journal published by **EDSIG**, the Education Special Interest Group of AITP, the Association of Information Technology Professionals (Chicago, Illinois). Publishing frequency is quarterly. The first year of publication is 2003.

ISEDJ is published online (<http://isedj.org>) in connection with ISECON, the Information Systems Education Conference, which is also double-blind peer reviewed. Our sister publication, the Proceedings of ISECON (<http://isecon.org>) features all papers, panels, workshops, and presentations from the conference.

The journal acceptance review process involves a minimum of three double-blind peer reviews, where both the reviewer is not aware of the identities of the authors and the authors are not aware of the identities of the reviewers. The initial reviews happen before the conference. At that point papers are divided into award papers (top 15%), other journal papers (top 30%), unsettled papers, and non-journal papers. The unsettled papers are subjected to a second round of blind peer review to establish whether they will be accepted to the journal or not. Those papers that are deemed of sufficient quality are accepted for publication in the ISEDJ journal. Currently the target acceptance rate for the journal is about 45%.

Information Systems Education Journal is pleased to be listed in the 1st Edition of Cabell's Directory of Publishing Opportunities in Educational Technology and Library Science, in both the electronic and printed editions. Questions should be addressed to the editor at editor@isedj.org or the publisher at publisher@isedj.org.

2011 AITP Education Special Interest Group (EDSIG) Board of Directors

Alan Peslak
Penn State University
President 2011

Wendy Ceccucci
Quinnipiac University
Vice President

Tom Janicki
Univ of NC Wilmington
President 2009-2010

Scott Hunsinger
Appalachian State University
Membership Director

Michael Smith
High Point University
Secretary

Brenda McAleer
Univ of Maine Augusta
Treasurer

Michael Battig
Saint Michael's College
Director

George Nezlek
Grand Valley State University
Director

Leslie J. Waguespack Jr
Bentley University
Director

Mary Lind
North Carolina A&T St Univ
Director

Li-Jen Shannon
Sam Houston State Univ
Director

S. E. Kruck
James Madison University
JISE Editor

Kevin Jetton
Texas State University
FITE Liaison

Copyright © 2011 by the Education Special Interest Group (EDSIG) of the Association of Information Technology Professionals (AITP). Permission to make digital or hard copies of all or part of this journal for personal or classroom use is granted without fee provided that the copies are not made or distributed for profit or commercial use. All copies must bear this notice and full citation. Permission from the Editor is required to post to servers, redistribute to lists, or utilize in a for-profit or commercial use. Permission requests should be sent to Wendy Ceccucci, Editor, editor@isedj.org.

INFORMATION SYSTEMS EDUCATION JOURNAL

Editors

Wendy Ceccucci
Senior Editor
Quinnipiac University

Thomas Janicki
Publisher
Univ NC Wilmington

Don Colton
Emeritus Editor
Brigham Young University
Hawaii

Nita Brooks
Associate Editor
Middle Tennessee
State University

George Nezek
Associate Editor
Grand Valley
State University

Mike Smith
Associate Editor - Cases
High Point University

ISEDJ Editorial Board

Alan Abrahams
Virginia Tech

Brenda McAleer
University of Maine at Augusta

Li-Jen Shannon
Sam Houston State University

Mike Battig
Saint Michael's College

Monica Parzinger
St. Mary's University
San Antonio

Karthikeyan Umapathy
University of North Florida

Gerald DeHondt II
Grand Valley State University

Doncho Petkov
Eastern Connecticut State Univ.

Laurie Werner
Miami University

Janet Helwig
Dominican University

Samuel Sambasivam
Azusa Pacific University

Bruce White
Quinnipiac University

Mark Jones
Lock Haven University

Mark Segall
Metropolitan State College of
Denver

Charles Woratschek
Robert Morris University.

Cynthia Martincic
Saint Vincent College

Peter Y. Wu
Robert Morris University

AACSB Learning Goals: One-Minute Guest Speakers Help To “Close-the-Loop”

Randy Ryker
randy.ryker@nicholls.edu
Information Systems, Nicholls State University
Thibodaux, LA 70310, USA

Abstract

A key activity in any assurance of learning process is to identify learning deficiencies and then to develop and implement tools and strategies to correct the deficiencies. The activity is often referred to as “closing-the-loop.” This paper describes a process whereby the College of Business’s Board of Advisors is engaged in a series of short videos. On the videos they talk about the College’s learning goals and the importance of the goals to the business community. The inventory of short videos is made available to all faculty who can insert them into their presentation software to help close the loop. The development and use of the videos is described. Additional benefits of the videos that go beyond closing the loop are also discussed.

Keywords: closing the loop, short videos, assurance of learning, learning goals, board of advisors

. INTRODUCTION

Nearly every information systems program in the United States is required by some accrediting agency to establish learning goals, assess how well their students achieve the learning goals and to address any learning deficiencies. Addressing the deficiencies is a process known as “closing-the-loop.” In some cases a university or a regional accrediting agency requires such an assessment process for each major (Pringle & Michel, 2007). In other cases an organization like the Association to Advance Collegiate Schools of Business (AACSB) has an assurance of learning (AOL) standard that applies to all programs within the business college (AACSB Accreditation, 2010).

The focus of this paper is on closing-the-loop in the AACSB AOL process, but the concepts can be readily adapted to work with any assessment plan. The specific five-step process AACSB recommends for AOL includes:

- Step 1 – Define learning goals and objectives.
- Step 2 – Align curriculum with goals.
- Step 3 – Identify instruments and measures.
- Step 4 – Collect, analyze and disseminate

assessment data.

- Step 5 – Use assessment data for continuous Improvement (AACSB International, 2007)

The final step in the process, Step 5, uses assessment data to improve student learning and is known as closing-the-loop (Martell, 2007). This step is summarized in the AACSB standards as follows:

“Measures of learning have little value in and of themselves. They should make a difference in the operations of the school. Schools should show how (AOL) results impact the life of the school. Such demonstration can include uses to inform and motivate individual students and uses to generate changes in curricula, pedagogy, and teaching and learning materials” (AACSB, 2007).

The most recent AACSB standards do not directly mention the 5 step process. However, in their guidance on how to document AOL they state that a school should:

- Define the learning goals for each degree program—this should include

both conceptual and operational definitions.

- Show that students meet all of the learning goals for degree programs. Or, if assessment demonstrates that learning goals are not being met, describe efforts that have been instituted to eliminate the discrepancy (AACSB Accreditation, 2010).

The last part of the guidance dealing with efforts to eliminate the discrepancies is what the Association earlier referred to as closing-the-loop. For many schools, this step is the most challenging and is often where the assessment efforts fail (Gardiner et al., 2009). This step has also been found to be one of the greatest concerns about AOL for business school deans (Martell, 2007).

Given these concerns, increasing attention has been focused on efforts to close-the-loop (Abraham, 2006; Gardiner, Corbitt & Adams, 2009; Martell, 2005; Martell, 2007; Omar, Bhutta & Kalulu, 2009; Pringle & Michel, 2007; Redle & Calderon, 2005; White & McCarthy, 2007). For example, Martell (2007), identified a list of actions that can be used for closing-the-loop: (a) new pedagogical techniques, (b) new or modified courses, (c) closer coordination between courses, (d) major curriculum change, (e) faculty development, (f) increase admission requirements, (g) greater use of out-of-the-classroom learning experiences (e.g. internships). More recently others have suggested: (a) remediation, (b) adding prerequisites, (c) increasing or changing specific assignments in existing courses, and (d) providing support structures (e.g. tutoring or help session) to close-the-loop (Gardiner et al., 2009). Pringle and Michel (2007) also reported colleges using: (a) the development of better learning objectives, (b) improvements to the curriculum, (c) closer coordination of multi-section courses and (d) adoption of more effective teaching methods.

This paper describes the development of a new tool and strategy that faculty can use to assist them with closing-the-loop. The new tool is a set of short videos that feature members of the College's Board of Advisors talking about the importance of the College's learning goals. Each video features a board member addressing one of the learning goals and describing how the goal is relevant and important in the context of their particular business. Faculty can embed the videos in their presentation software and use the

videos to reinforce their own efforts to emphasize the learning goals. In effect, the set of videos serves as an inventory of one-minute guest speakers who can help the faculty close-the-loop.

Background

Participation of the business community is considered a best practice by the AACSB when defining a College's learning goals (AACSB Accreditation, 2010). External constituencies bring experiences and perspectives that enrich the discussion. Certainly members of the College's Advisory Board should be included in developing the College's learning goals. Other business leaders, including recent graduates of the College, can also offer a useful perspective on the strengths and weaknesses of programs, and when possible, their input should also be considered. This paper describes a way to extend the participation of external constituencies from simply defining learning goals into efforts to close-the-loop.

The historical use of classroom educational films can be traced from the silent era through the 1980's when film began to lose ground to digital media (Alexander, 2010). The body of research on the earlier forms of educational video may be of use to practitioners who utilize newer technologies such as DVDs and YouTube. Although an extensive review of the early literature on the uses of educational videos is beyond the scope of this paper, a comprehensive examination of the topic can be found in a book by Wetzel, Radtke and Stern (2007). In their book they review research on a variety of issues including:

- Teaching techniques used effectively with video media;
- The combining of visual and verbal information;
- The effect of various video production techniques on learning;
- The relationship between media perceptions and learning; and
- Critical perspectives on learning from media (Wetzel et al., 2007).

The use of video to teach business concepts is certainly nothing new. Today numerous videos of national and international business leaders are available to facilitate teaching. The web site of Films for the Humanities and Sciences offers over 6,300 digital educational videos; 1,224 of

them are related to business and economics (FFH, 2010). The videos range in length from twenty minutes to an hour or more and address broad national and international business issues.

What's different about the approach described in this paper is the use of much shorter videos, one to two minutes in length, that focus on regional business leaders speaking about specific learning goals of the College, and how the goals are relevant to regional businesses.

2. NEW TOOL AND STRATEGY

Development

In the Fall of 2005, the Advisory Board of the College of Business and the faculty met for a day-long strategic planning retreat. A strategic planning consultant was contracted to facilitate the meeting. Along with a traditional SWOT analysis, the mission of the College was discussed. The establishment of a broad set of learning goals to support the mission was also considered. In the following months, faculty used input from the retreat to establish the College's mission statement and the College's learning goals to support the mission. This approach to setting learning goals is consistent with the best practices recommended by the AACSB (AACSB Accreditation, 2010).

Given the current emphasis on closing the loop, the author suggested a way to engage the College's advisory board members in the process. The approach presented here takes some of the best practices from Step 1 in the AOL process, the setting of learning goals, and applies them to Step 5, closing the loop.

Prior to the May 2008 Advisory Board meeting, each board member was provided a list of the learning goals and was asked for permission to film them discussing the importance and relevance of the goals in their specific businesses. They were also informed that relatively short responses of 1 to 2 minutes were preferred because we planned to allow faculty to embed the videos in classroom presentations. Fifteen of the board members agreed to participate in the filming. As Table 1 shows, not all board members addressed every learning goal.

Eight members addressed the goals of Communications and Ethics; seven members addressed Critical Thinking and Disciplinary Knowledge; six discussed Diversity and Multiculturalism and five Collaboration. The responses ranged in time from a minimum of 6

seconds to a maximum of 1 minute and 45 seconds, with an average time of about 30 seconds. The size of the files ranged from 2KB to 33KB when saved in a MPG format compatible with PowerPoint.

Communications

N = 8

Max = 33KB; 105 seconds

Min = 8KB; 24 seconds

Collaboration

N = 5

Max = 32KB; 96 seconds

Min = 9KB; 27 seconds

Critical Thinking

N = 7

Max = 28KB; 84 seconds

Min = 6KB; 18 seconds

Disciplinary Knowledge

N = 7

Max = 22KB; 66 seconds

Min = 6KB; 18 seconds

Diversity and Multiculturalism

N = 6

Max = 29KB; 87 seconds

Min = 5KB; 15 seconds

Ethics

N = 8

Max = 26KB; 78 seconds

Min = 2KB; 6 seconds

Table 1. Learning Goal Videos

The videos were filmed while board members were sitting around a conference table in a room designed for the Executive MBA program. None of the responses were scripted. Each board member was given an opportunity to speak about the importance of any of the learning goals they chose to respond to. There were no "re-takes" and only basic editing was required to split the responses into individual files for use in PowerPoint.

A local media company volunteered to record, edit and produce the videos at no charge to the College. The results were delivered on a DVD approximately two months after the filming. The faculty was made aware of the inventory of video clips at a College-wide faculty meeting in the Fall 2008.

Use of the Videos

The full extent of use of the videos has not yet been assessed. One minor complication of the project was that the files were delivered in VOB format, and the presentation software, PowerPoint, did not support that file type.

Before the faculty could insert the videos, they had to be converted to a compatible format. The computer services group at the University agreed to do the conversion at no cost to the College. A second minor problem was that some faculty did not know how to add a video file to a PowerPoint presentation. One faculty member researched the issue and produced a one-page handout that described the process. This ancillary activity may be seen as faculty development.

The author has used these clips and has found that students respond well to them. It is helpful to have these one-minute guest speakers on video to reinforce key points about learning goals. Additional promotional effort would help to get more of the faculty involved in using the videos. If the AOL process identifies gaps in students' knowledge of the College's learning goals, faculty must find ways to address the deficiencies. One way faculty members typically address the deficiencies is to either emphasize related material from their current lectures or present new material related to the learning goals. Whichever approach they take, their materials can be reinforced by using the short videos described in this paper.

Additional Benefits

The tool described in this paper was developed proactively and not in response to any gaps in knowledge that had been identified by the AOL process. It was expected that a gap in knowledge of one or more of the college's learning goals would be identified at some point during the assessment process, and that these videos could be used to help address the gap and thereby help to close-the-loop. One may argue that such proactive effort is wasted in the event that no learning gaps are identified. However, in addition to providing the faculty with a new tool and strategy to close-the-loop, other benefits, some beyond student learning, can be identified:

- By asking the Advisory Board members to participate in the videos, we raised awareness in the business community of what the College is trying to achieve, and engaged them as partners in our educational efforts. Participating board members appeared to appreciate being asked to be involved.
- The videos also served to introduce students to business leaders in the local community. Prior to the use of the videos, many of the

students had never met local leaders and had never seen them talk about business issues.

- Similarly, the videos can be used in the orientation of new faculty, to familiarize them with the Advisory Board and local business leaders.
- From the students' perspective, the videos provide an opportunity to break up the lectures with one-minute segments that reinforce points made by the professor. Students become very accustomed to hearing the professors lecture and may at times tune them out. Having a "one-minute guest speaker" can be interesting and helps to focus the students' attention.
- If a local media company or the University volunteers to produce the videos, the cost to the College is minimal.
- The videos are designed to address the College's learning goals and thus should have a relatively long shelf life.
- The approach may be seen by students, the faculty, the advisory board, and the AACSB as an innovation with multiple benefits

3. CONCLUSIONS

The definition of learning goals is Step 1 in the AOL process, and it answers the question, "Assurance of learning what?" Best practices associated with Step 1 include engaging external constituencies, including the Board of Advisors, in setting the learning goals. This paper describes a process whereby these same external constituencies are also engaged in Step 5 of the AOL process, closing-the-loop.

The learning goals addressed in this paper were developed at the college level. One natural extension of this process would be to develop videos at the program level or the major level. The AACSB requires program-level learning goals that address the broad educational expectations for each degree program (AACSB Accreditation, 2010). Faculty at universities with a regional accrediting agency may similarly be interested in using short videos to address AOL issues for each major. The variety of benefits identified in this paper should also apply when individual programs or majors engage their advisory board members in the same process.

Although the project described in this paper was well received by the members of the Board of

Advisors and students; additional research into the use of short videos of regional business leaders to reinforce classroom lectures needs to be conducted. For example, how effective are the videos in engaging the students in the learning goal topics? Do the students report being more interested in the topics after exposure to the short videos? What is the quality of the follow-up discussion after watching the videos? Are the short videos of regional leaders more effective than the use of longer videos of national business leaders speaking about the same or similar topics? Would the involvement of students in the process of shooting a YouTube version of the videos be even more engaging to the students?

If such videos prove to provide significant improvements in learning then producing and using them should become a best practice. However, regardless of the outcome of such research, given the additional benefits that accrue from the approach, engaging local business leaders in this way seems to be a win-win situation for all involved.

4. REFERENCES

- AACSB (2007). Eligibility procedures and accreditation standards for business accreditation. Retrieved August 20, 2010 from http://www.aacsb.edu/accreditation/process/documents/AACSB_STANDARDS_Revised_Jan07.pdf
- AACSB International. (2007). AACSB Assurance of Learning Standards: An Interpretation. Retrieved August 20, 2010 from <http://www.aacsb.edu/publications/papers/accreditation/assurance-of-learning.pdf>
- AACSB Accreditation. (2010). Eligibility procedures and accreditation standards for business accreditation. Retrieved August 20, 2010 from <http://www.aacsb.edu/accreditation/AACSB-STANDARDS-2010.pdf>
- Abraham, S. (2006). Assessing the learning outcomes of a computer information systems program. *Information Systems Education Journal*, 4(14). Retrieved May 10, 2010 from <http://isedj.org/4/14/>
- Alexander, Geoff (2010). Academic Films for the Classroom: A History. McFarland.
- FFH. (2010). Films for the Humanities & Sciences. Retrieved May 17, 2010 from <http://ffh.films.com/>
- Gardiner, L., Corbitt, G., Adams, S. (2009). Program assessment: Getting to a practical how-to model. *The Journal of Education for Business*, 85(3), 139-144.
- Martell, K. (2005). Assessment in business schools: what it is, where we are going, and where we need to go no, assessment of student learning in business schools: best practices each step of the way. In K. Martell & T. Calderon (Eds.), *The Association for Institutional Research and AACSB International*, 1(1), 1-26.
- Martell, K. (2007). Assessing student learning: Are business schools making the grade? *The Journal of Education for Business*, 82(4), 189-195.
- Omar, A., Bhutta, K. & Kalulu, D. (2009). Assessment of student outcomes in management information systems online course participation. *Information Systems Education Journal*, 7(83). Retrieved May 10, 2010 from <http://isedj.org/7/83/>
- Pringle, C. & Michel, M. (2007). Assessment Practices in AACSB-Accredited Business Schools. *Journal of Education for Business*, 82(4), 202-211.
- Redle, D. & Calderon, T. (2005). Closing the loop in Finance, assessment of student learning in business schools: Best practices each step of the way. In K. Martell & T. Calderon (Eds.), *The Association for Institutional Research and AACSB International*, 1(1), 227-238.
- Wetzel, C., Radtke, P., & Stern, H. (2007). Instructional Effectiveness of Video Media. Routledge.
- White, B. & McCarthy, R. (2007). The development of a comprehensive assessment plan: One campus' experience. *Information Systems Education Journal*, 5(35). Retrieved May 10, 2010 from <http://isedj.org/5/35/>