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Reversing the Downward Trend: Innovative Approaches to IS/IT Course Development and Delivery

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Abstract

It is well known that student enrolment, and quite likely interest, has fallen in many IS/IT related courses in recent years, by our count as much as 75%. This downward trend has become a frequent topic of conversation among IS academics at conferences and on discussion lists such as ISWorld. However, there is a small but growing number of IS educators who are re-examining what it means to study information systems. The purpose of this panel is to present and discuss diverse and innovative approaches to IS/IT teaching and course development. This panel is intended to promote discussion and debate among the panellists, as well as audience members, to create a lively and interactive forum that we anticipate will continue beyond the conference.

Keywords: Curriculum development, innovation, teaching methods

Introduction

It is well known that student enrolment, and quite likely interest, has fallen in many IS/IT related courses in recent years (George, Valacich, and Valor, 2005; Looney and Akbulut, 2007; Ives, Valacich, Watson, and Zmud, 2002; Vegso, 2005). Data that we collected informally from 20 universities suggests that student enrolment in IS/IT courses has dropped by 75% since 2000, with an average annual decline of more than 20% over the last 4 years, as shown in Figure 1[1]. This downward trend has become a frequent topic of conversation among IS academics at conferences and on discussion lists such as ISWorld. Part of this trend can be attributed to changing market conditions and other exogenous events, such as the dot.com crash. However, it is likely that at least part of the problem is internal. Students (and by extension, university administrators) are questioning the value of what is delivered in the classroom. The trend toward lower IS/IT enrolments appears to be occurring both at the undergraduate level across the world.

Figure 1

Undergraduate MIS major enrolment 2000-2006 (n=20)
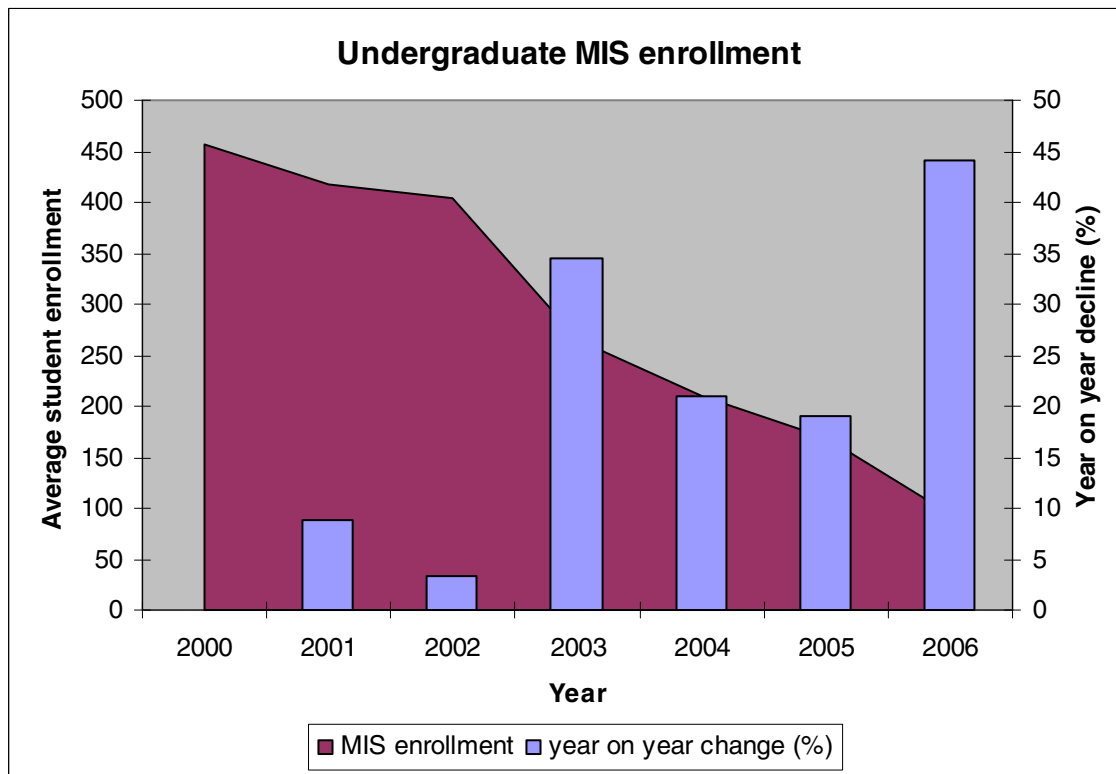
However, there is a small but growing number of IS educators who are re-examining what it means to study information systems. Instead of falling enrolment, they have witnessed increased interest in their courses from students, administrators, and employers. The purpose of this panel is to present and discuss diverse and innovative approaches to IS/IT teaching and course development in the undergraduate program and particularly in the core IS/IT undergraduate course.

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[1] Dataset consisted of enrollment figures from 20 universities as reported on ISWorld (http://sbuweb.tcu.edu/mackay/enrollment%20decline.htm).

Figure 2 presents a framework that categorizes different areas of innovation in IS/IT course development and delivery. The framework depicts a cyclical process that passes through four stages: content, structure, delivery, and marketing. Each stage is linked to a critical question that must be answered effectively in order for innovation to occur.

The first stage, content, is associated with the question: 'what do you cover?' The nature of the material that is covered in IS/IT courses has changed a great deal over the years. Michael Zack of Northeastern University will address innovation in this area by describing an approach that emphasizes course content about information management (e.g. how can organizations capitalize on, or benefit from, technology?) rather than information technology (e.g. how is the Internet structured and how does it work?) in the core IS course .

Figure 2.

Areas of Innovations in IS/IT Course Development and Delivery
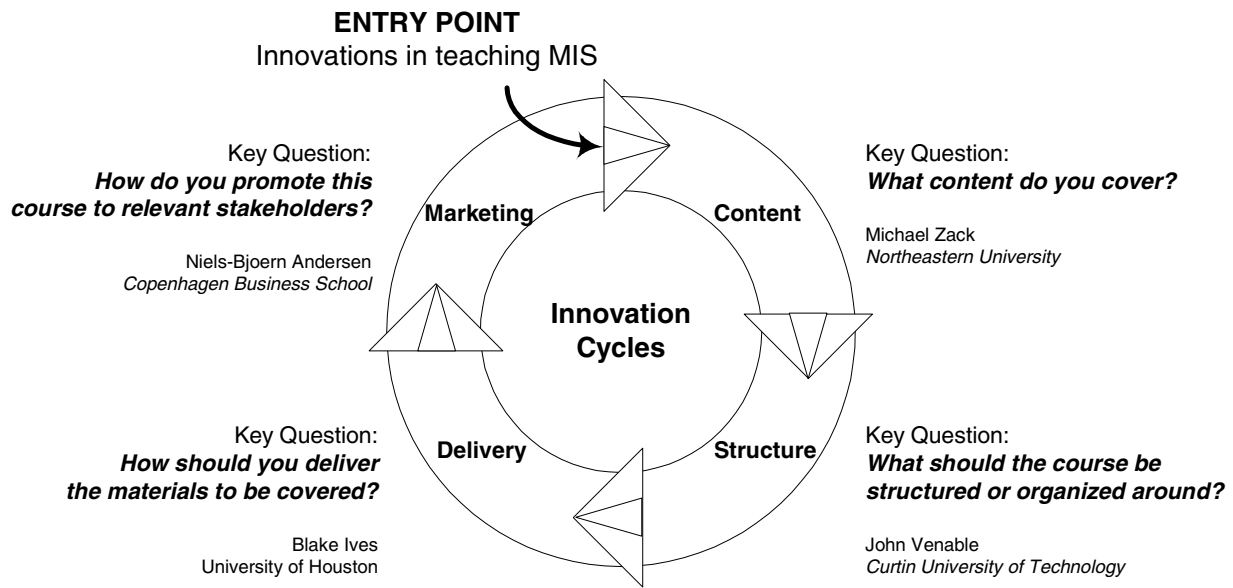
Innovation can also occur in the way that the content is structured. Structure addresses the second question: 'how do you structure and organize the content?' Clearly, it is important to structure IS/IT content in a way that promotes learning, and at the same time engages student interest. John Venable of Curtin University of Technology will speak about different approaches to developing a problem-solving orientation, where the focus is on how information systems can be applied to organizational problems or business opportunities.

The third stage is delivery. This stage is concerned with the question: 'how do you deliver the content?' There has been a huge amount of innovation around how course material is delivered. Blake Ives of the University of Houston will speak about his pioneering efforts to incorporate new technologies such as virtual communities, Blogs, and Wikis into the classroom.

Finally, there is innovation in the way that IS/IT courses are marketed to students, employers, and administrators. Marketing is related to the question: 'how do you promote the course to relevant stakeholders?' This is an area where the field has been especially deficient. Niels-Bjoern Andersen of the Copenhagen Business School has experimented extensively with hands-on collaborative approaches to working with students and industry partners in order to demonstrate the value of IS/IT undergraduate courses.

The marketing phase leads to insights about the preferences of different stakeholder groups that in turn influences course content decisions. Thus, a feedback loop is formed in the innovation cycle.

Panel Participants

We have assembled an international group of panelists who have first hand experience with IT/IS course innovation. Table 1 shows each of these panelists and provides a summary of their contribution to the panel.

Table 1. Panel Participants		
Panellist	**Home University**	**Perspective brought to the panel**
Niels-Bjoern Andersen, Professor of Information Systems	Copenhagen Business School, Denmark	Niels-Bjoern believes that the problem with falling enrolments lies as much with a failure to 'sell' the content to students than it does with the content itself. He will describe an approach that the CBS has taken to market IS courses to students, as well as IS students to employers, resulting in higher enrolments and reduced student drop out.
Blake Ives, Professor and Director, IS Research Center	University of Houston, United States	Blake is a pioneer in the use of information technologies to enhance learning. He will describe the use of Internet-related technologies to support classroom activities, such as blogs, wikis, and delivering a class on Second Life.
John Venable, Associate Professor and Head Of School School of Information Systems	Curtin University of Technology, Australia	John will describe a complete redesign of Curtin's undergraduate IS program. This redesign has placed a primary pedagogical focus on 'problem analysis'. Curtin has also extensively experimented with double majors.
Mike Zack, Associate Professor of Information, Operations and Analysis	Northeastern University, United States	Mike will discuss a comprehensive program to create push and pull in the student marketplace by reorienting the IT course towards information management rather than information technology. This program disseminates information about IS career opportunities via several methods, and actively markets IS through various channels.

Panel Format

Session length 1.5 hours

The format of the panel is designed to deliver two important objectives: education and interaction. First, the panelists will educate the audience on how they overcame the problem of falling IS/IT interest or enrolment in their home institutions. Second, the panel format is designed to promote interaction and discussion around the issue of IS/IT course innovation. There will be a chance for members of the audience to volunteer to speak about their own experiences with problems and solutions around interest and enrolment issues. Further, a question period will provide the opportunity for audience members to ask questions of the panelists about their innovation strategies.

The format of the panel will be structured as follows:

1. Introduction by the chair (10 minutes)

Chris Street will introduce the panel participants and describe the objectives of the panel, and outline the format of the panel. He will also briefly present data relating to declining IS/IT course enrolments.

2. Presentations by panelists (50 minutes)

The purpose of this section is to educate the audience on methods to infuse innovation into IS/IT courses. Each panelist will have approximately12 minutes to describe their experience with an innovative approach to IS/IT course development and delivery in their home school. The panelists will speak to each of the stages as outlined in Figure 2.

3. Ideas from the audience (20 minutes)

Sheets of paper will be distributed throughout the audience at the start of the presentations by the panelists. These sheets of paper will be divided into two parts: the top part will be titled, 'Innovative ideas for IS/IT course design and delivery that worked' and the bottom half will be titled, ''Innovative ideas for IS/IT course design and delivery that didn't work'. Audience members will be encouraged to write down experiences they have had with IS/IT courses that were, and were not, effective. Michael Wade, acting as Moderator, will collect and quickly read these submissions from the audience as they are completed. Relevant and interesting submissions will be read out loud at the conclusion of the panelist presentations and the contributors will be asked to comment/elaborate, particularly where the audiences' experiences add, or provide contrast, to those of the panelists.

4. Questions (10 minutes)

The final component of the panel will be a question and answer period. The audience will be invited to ask questions to the panelists as well as to the audience participants. The Moderator will prepare questions in advance in the event that none are forthcoming from the audience.

Conclusion

This panel addresses a serious issue being faced by many IS departments: falling student enrolment. It is quite likely that without reinvigoration of new ideas and new approaches, this decline will continue. While student enrolments are falling in most places, some schools are managing to buck the trend. We have brought together a panel of experts from across the world who have drawn on innovative approaches to the development and delivery of IS/IT course material. The panel is intended to promote discussion and debate among the panelists, as well as audience members, to create a lively and interactive forum that we anticipate will continue beyond the conference.

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