

Information Systems Education and Research: Are We Leaders or Laggards

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Article:

Every discipline should periodically indulge in self-introspection to assess its value to the various stakeholders. In this writing, I exhort the MIS academic community to examine the value of the education and research that it provides to its various constituencies, such as students, other academicians, researchers, and practitioners. My central premise is that in many instances, IS education and research coining out of colleges and universities, is not current, and certainly not leading. In fact, it may well be lagging in several cases. I will provide underlying reasons for this situation, and present some anecdotes below.

Perhaps, a lack of grounded theory, prevents us from teaching many core fundamental concepts. While this is an arguable point, nonetheless IS education and research cannot be exclusively theory-oriented. The nature of our discipline requires that we have to be, to a large degree, information technology (IT) oriented in our education and research. Even, the management of technology requires a basic understanding of the fundamental concepts underlying technology. Herein, lies the dilemma. Information technology is advancing at such an exponential pace that it has become difficult for an individual to keep up with the advances in a broad academic sense. Simultaneously, we are also supposed to teach about business applications of IT. Businesses, in turn, are also moving very rapidly. They are moving swiftly in order to fully exploit the latest technology due to intense competitive pressures and the globalizing economy. Once again, we are left behind.

The traditional approaches to education and research appear to be insufficient and antiquated. Technology-oriented IS books are already outdated by the time they are published. Changes in information technology occur within months, if not weeks or days; however, it takes a book anywhere from one-to-three years from conception to publication. A case in point is books on "Telecommunications.". Most books with a publication date of 1996 simply could not cover the latest topics. The faculty member is obviously handicapped in teaching if he or she does not have the latest materials.

The same problem is faced in IS publications. With the time lag in journal publications, by the time an article is published, the IS community as a whole has moved to newer and more pressing issues. An example of this is the "IS management key issue studies" published periodically in the *MIS Quarterly*. The key issue study published in 1991 by Niederman, Brancheau, and Wetherbe was actually conducted in 1989. It could, therefore, not predict "business process engineering (BPR)" as a key issue, although by 1991 BPR had become an important issue consequent to the publication of the very popular articles and books by Davenport, and Hammer and Champy. The BPR issue finally appeared in the key issue study by Brancheau, Janz, and Wetherbe that was very recently published (in 1996) by the *MIS Quarterly*. However, it can then be argued that the 1996 key issue study was more of a current or even lagging indicator. The bulk of the study published in 1996 was actually conducted in 1994, and could not predict current-day issues. For example, a glaring omission in my opinion, is Internet and electronic commerce.

There are other reasons for this phenomenon. One is that colleges and universities have to go through to a long bureaucratic cycle (one-to-two-years) to get new courses approved. An example of this long approval cycle is

that many educational institutes may still be teaching antiquated courses (such as in programming). Another reason is the information overload on IS faculty members. The amount of new knowledge to be assimilated is simply too great to be absorbed in a short time. To make matters worse, many educational institutions today are poorly funded and have inadequate resources. They find themselves to be in a position of not being able to invest in the retraining and further education of their faculty.

What are the solutions to this apparently deteriorating situation? The answers are neither simple nor do I claim to have all the answers. The following suggestions are offered as a starting point; I encourage others to address the issue and offer their remarks.

1. Out of necessity, the practitioners are ahead of academicians, in their knowledge of specific technologies and their applications. While the academicians may provide the "theory" part of a course, they may rely more on practitioners for the "technology" part. Several options are possible: have practitioners come as guest lecturers in a class, have students visit company sites, and have practitioners teach the "technology" courses.
2. Most practitioner journals have shorter lead times than most academic journals. For technological issues, rely more on them both for education and research. That way, you are more likely to be in touch with state-of-the-art technological issues; also, your own research will be available to others on a more timely basis.
3. Use Internet and the World Wide Web resources. While, the web does not guarantee accuracy of the information available on it, there is a vast amount of the most current information available on it on practically any topic. By consulting multiple sources, you can mostly get around the "accuracy" issue.
4. Many conferences run "free" or highly-subsidized workshops on emerging technologies. Take advantage of them. Many of these are run by experts in the field or technology vendors.
5. Focus. Because of the information overload, you cannot expect to be an expert in many areas. Select one or two areas where you wish to develop the expertise. On other topics, maintain a general level of familiarity.
6. Develop "genetic" courses and course descriptions, which are not tied to a specific technology. Then, you will have more degrees of freedom in the course content. For example, rather than having a course in a specific programming language, call the course "Business Programming," or "Structured Programming," or some similar title. Then, the specific programming language taught in the course may change over time in tune with the prevailing trends.
7. For your research to have relevance, try to publish it as quickly as possible. The best journals in our discipline have excruciatingly long review times, and we all wish to publish our best work in these journals. A compromise may be to publish partial/preliminary results in conferences, practitioner journals, journals with short lead times, and electronic publication.

These are some thoughts in no particular order. Readers, I will be interested in your comments.