Ethics in the IS Curriculum: A Summary of Directives from AACSB, IS2002, and ABET

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ETHICS IN THE IS CURRICULUM:  
A SUMMARY OF DIRECTIVES FROM 
AACSB, IS2002, AND ABET

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Abstract

This paper examines the directives for ethics content in the Information Systems curriculum as recommended by AACSB, the IS 2002 Model Curriculum, and ABET standards. In summary, ethics is expected to be included in the IS curriculum by all three constituencies. The AACSB accreditation standards discuss the importance of ethics in the business curriculum, but it does not provide any specifics as to which class or which business discipline it should be taught. ABET accreditation standards are such that ethics must be taught somewhere in the Information Systems curriculum as a recognizable area of study, but it does not specify it to be addressed in a particular IS core class or indicate how much content must be presented. And finally, the IS 2002 Model Curriculum explicitly recommends that it be included in the scope of topics for three of the ten recommended courses.

Keywords: ethics, information systems curriculum

Introduction

Business ethics, as McDonald & Donleavy (1995, p. 843) claim, is a paradigm of applied ethics where the application of ethical theory and normative guidelines is done in the context of the business environment. The research literature provides strong support for including ethics in the business curriculum. One recent report (Borrus, 2004) suggests that business ethics is an essential enough topic to warrant a new business ethics training institute at the University of Virginia for top executives of corporate America, decided upon and established by an association of CEOs themselves. This comes, of course in response to a string of corporate scandals that have appeared recently in the public media. In their study of business professionals, Cole and Smith (1996) similarly conclude that top executives need to make ethics a high priority, and that this attitude can, in part, be molded while they are still in college.

Just as ethics education is a priority topic in the business curriculum, researchers have suggested that it is equally important for technology students (Anderson & Sanzogni, 2000; Athey, 1996; Byrne & Staehr, 2004; Cougar, 1989; Laudon, 1995; Pierce & Henry, 1995). One researcher (Athey, 1996) suggests that this is imperative because Information Systems students will become the ones who design and write systems for organizations and they should consider the ethical issues of how these systems will be used. She also maintains that technology professionals have a responsibility to share with society the pros and cons of technology, and not just design information systems but reflect on whether these systems will be used for ethical purposes.

Laudon (1995) suggests that the study of ethics provide a valuable lesson for computing professionals. Technology is a social phenomenon that carries constraints such as responsibility and accountability. He argues:

An ethics of information systems is impossible without an understanding of how information technologies affect human choice, human action, and human potential. Societies do not stand naked before technological change, swept along before the tide, as some popular journalists intimate. Historically, societies react to technological change by mitigating its influence,
civilizing the change, compensating injured individuals, attempting to restore balances….it is a socially enacted phenomenon, in its design, use, and implementation. (Laudon, 1995, p. 38)

Cougar’s (1989) motivation for teaching computer ethics courses is a reaction to industry scandals. He notes that “computer industry has been plagued with problems for many years; to the extent that legislation has been introduced to try to control the problem” (p. 211).

These are just a few notable reasons to consider when teaching ethics in the Information Systems curriculum, but as educators, it would be helpful to know what exactly is directed of us according to our professional organizations and accrediting agencies, for these are the groups that we are accountable to in regards to curriculum content. This paper will provide a summary glance at the specific expectations of ethics teaching in the IS curriculum, as guided by the Association to Advance Collegiate Schools of Business (AACSB), IS2002 Model Curriculum and Guidelines for Undergraduate Degree Programs in Information Systems (IS2002), and Accreditation Board for Engineering and Technology (ABET) organization.

AACSB Guidelines

The Association to Advance Collegiate Schools of Business (AACSB) is the international governing accreditation body for business schools worldwide, and it provides voluntary recommendations about what should be included in the business curriculum at both the undergraduate and graduate levels. Since the Information Systems discipline is traditionally part of the business curriculum, the content of the IS courses must follow AACSB recommendations.

The most recent set of standards from 2003 (AACSB, 2005) recommends that ethics education be included in the business curriculum as an “essential requirement”. This AACSB recommendation, according to one researcher (Bishop, 1992, p. 291) began in 1976 but has subsequently been decentralized and fragmented in most business school curricula because it does not specify any time commitments, approaches, reading lists, or actual course requirements, only that it should be taught as a topic in the business curriculum. It does not specify if ethics is to be addressed in an entire course, nor does it specify who should be teaching ethics, or which functional area of business is best suited for teaching it.

IS2002 Guidelines

The primary professional societies that are associated with the IS discipline are the ACM, AITP, and AIS. Collectively they release a periodic report, the most recent of which is the IS2002 report, which provides specific model curriculum guidelines for Information Systems programs and courses. The IS2002 Model Curriculum and Guidelines for Undergraduate Degree Programs in Information Systems (Gorgone et. al, 2002), also known as IS2002, outlines the characteristics of an IS professional as a person who has:

1) … broad business and real world perspective.

2) … strong analytical and critical thinking skills.

3) … interpersonal communication and team skills and have strong ethical principles.

4) … design and implement information technology solutions that enhance organizational performance. (pg. v)

In examining these characteristics it must be noted that in addition to the business skills (item 1), and the IT skills (item 4), that IS professionals must also have critical thinking skills (item 2), people skills and ethical integrity (item 3). It is this last characteristic that provides a foundation for including ethics in the IS curriculum and it is listed as such in the IS2002 recommendations as one of the representative capabilities and knowledge expectations of an IS program graduate (Gorgone et al., 2002, pg. 14). According to their report, the IS2002 model is widely accepted in the United States and “has become the basis for accreditation of undergraduate programs of information systems” (pg. iii) by AACSB (Association to Advance Collegiate Schools of Business), the accrediting body for business schools, and by ABET (Accreditation Board for Engineering and Technology), the accrediting body for computing, engineering, and other technology disciplines.
The authors of the IS2002 report, Gorgone, Davis, Valacich, Heikki, Feinstein, and Longenecker (2002) use the information systems professional characteristics as the foundation for developing the following exit capabilities for IS graduates:

- analytical and critical thinking
- business fundamentals
- interpersonal, communication, and team skills
- technology (Gorgone et. al, 2002, p. v)

Included in the criteria for analytical and critical thinking are the knowledge areas of ethics and professionalism. Specifically, they identify the topics in this category as codes of conduct, ethical theory, leadership, legal and regulatory standards, and professionalism. The IS2002 report provides sample course descriptions for the model curriculum listed in a suggested sequence of completion, and ethics is explicitly listed as part of the content in three of the ten courses in the structure, and implied in at least one other course.

The first course where ethics is concretely identified in the suggested model is the IS 2002.1: Fundamentals of Information Systems course. In addition to introductory coverage of systems concepts, the topics are also to include “information security, crime, and ethics” (Gorgone et. al, 2002, p. 24). The IS 2002.3: Information Systems Theory and Practice course also includes “societal and ethical issues related to information systems design and use” (Gorgone et. al, 2002, p. 29) as one of fourteen topics for the course. A discussion of professional codes of ethics is directly suggested for a third course in the model curriculum. Identified as IS 2002.7: Analysis and Logical Design, this course teaches students to analyze and design information systems using the systems development life cycle phases. And finally, an argument could be made that ethics is implicitly included as a topic in IS 2002.10: Project Management and Practice since the scope of this course includes behavioral aspects of development projects and team collaboration techniques. The entire body of knowledge recommended in the report is designed to be prescriptive and may be adjusted to meet the needs of the local university’s IS program.

The IS2002 model appears to play a role in curriculum development for IS programs and normally it is expected that recommendations be followed in order to achieve accreditation. As such, it is reasonable to expect that the teaching of ethics will increase in the IS curriculum, especially when programs wish to obtain ABET accreditation.

**ABET Guidelines**

The ABET organization is a more recent stakeholder in the IS curriculum as it provides criteria for accreditation of Information Systems programs as well as other computing disciplines and programs in applied science engineering and technology. The Accreditation Board for Engineering and Technology (ABET), was established in 1932 and consists of 30 different professional and technical societies (ABET, 2005). Originally known as the Engineers Council for Professional Development or ECPD, it underwent its name change in 1980 to reflect its new accreditation area of computing and technology disciplines. Information Systems programs were not accredited by ABET until recently, beginning with PACE University in 2002.

ABET distinguishes itself from AACSB in that ABET accredits the actual discipline, such as IS, whereas AACSB accredits the business school/college where the IS program traditionally resides. As such, some IS programs are now trying to meet the standards for accreditation by both AACSB and ABET. As of July 2005, there are 504 business schools (AACSB, 2005) that have obtained AACSB accreditation, and only 17 IS programs (ABET, 2005) that have qualified for ABET accreditation. Of the 17 IS programs that are ABET accredited, only one school (Robert Morris University) is not associated with an AACSB business school.

As pointed out earlier, the ABET accreditation standards are in still in their infancy for IS programs, but many more aspire to be accredited and are thus trying to abide by the criteria now outlined for ABET accredited IS programs. The most recent standards available for both IS and Computer Science programs are included in the *Criteria for Accrediting Computing Programs* (2004), and are effective for programs being reviewed for accreditation during the 2005-2006 academic year.
Ethics is included as one of the criteria topics for additional areas of study under section IV-15 as follows:

IV-15. There must be sufficient coverage of global, economic, social and ethical implications of computing to give students an understanding of a broad range of issues in these areas. (ABET, 2004, p. 9)

The interpretation of the standards are such that ethics must be taught somewhere in the Information Systems curriculum as a recognizable area of study, but it does not specify it to be addressed in a particular IS core class or indicate how much content must be presented. This allows some latitude for IS faculty to determine where ethics should be placed within their own degree programs.

The structure of ABET includes an Industry Advisory Council (IAC) whose makeup consists of an assortment of industry leaders in the profession who provide viewpoints on issues related to accreditation. In 1999, the IAC released a white paper called Improving Ethics Awareness in Higher Education, in which they encouraged ABET to take a leadership role with universities in promoting ethics in the educational process. In this they outline six ways that colleges and universities can effectively improve and increase ethical awareness that include an analysis of corporate codes of conduct, and the increased inclusion of ethical awareness in a capstone computing or engineering course (IAC, 1999, p. 4). The recommendations of the IAC and the latest criteria for IS programs clearly indicates ABET’s commitment and influence on the inclusion of ethics in the curriculum.

Summary

In reviewing the directives of AACSB, IS2002, and ABET, it is clear that ethics is a viable topic that should be included somewhere in the Information Systems curriculum. Table 1 below summarizes the directive from each organization and indicates where, if anywhere, it should be in the curriculum model.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Directive</th>
<th>Where it should be taught</th>
</tr>
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<tbody>
<tr>
<td><strong>AACSB</strong></td>
<td>• Recommends that ethics education be included in the business curriculum as an “essential requirement”</td>
<td>• Somewhere in the business curriculum; no specifics</td>
</tr>
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</table>
| **IS2002**   | • Included in the criteria for analytical and critical thinking are the knowledge areas of ethics and professionalism  
• Identify the topics in this category as codes of conduct, ethical theory, leadership, legal and regulatory standards, professionalism, societal and ethical issues, professional codes of ethics, and behavioral aspects of project management | • IS 2002.1: Fundamentals of Information Systems  
• IS 2002.3 Information Systems Theory and Practice  
• IS 2002.7: Analysis and Logical Design  
• IS 2002.10: Project Management and Practice (implied) |
| **ABET**     | • Additional areas of study under section IV-15  
• There must be sufficient coverage of global, economic, social and ethical implications of computing to give students an understanding of a broad range of issues in these areas | • Somewhere in IS curriculum; no specifics |

The previous paragraphs have summarized the directives for ethics content in the Information Systems curriculum, now the question for educators becomes how should it be taught and what content should be included? The
recommended guidelines and criteria from AACSB, IS2002, and ABET, for the most part do not specifically address what should be taught, or how it should be done; only that it should be included in the curriculum. Educators are left to determine many of the details and future research is currently being done in this area by the author, some of which will be presented at the conference.

References


