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RESEARCH IN PROGRESS: ETHICS-INFUSED MANAGEMENT INFORMATION SYSTEMS EDUCATION

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ABSTRACT

Suggestions have been made about ways in which to address ethics within Management Information Systems education. One proposal has called for “built in” ethics, or the incorporation of ethical learning as organic elements infusing the introductory management information systems course. This paper describes the design of such a course, introduces a new element termed “binge discovery” that is proposed to spur student dialogue and maintain student enthusiasm, and includes a plan to operationalize the evaluation of the success of this course.

Keywords

Management information systems, education, ethics, values, dialogic approach, dialogue-based learning, dialogue-based teaching, binge learning, binge discovery

INTRODUCTION

The headline subtitle reads, “B-Schools Step Up Efforts to Tie Moral Principles to Their Business Programs, but Quantifying Those Virtues is Tough” (Korn, 2013). As the article describes, the importance of ethics as a part of business school curricula is generally accepted but going from the generalization to the details has proven to be difficult. Not only is it difficult to know how to teach ethics (or if it actually can be taught), determining the lasting value of this effort is questioned by both academics and business professionals alike. Even so, business schools are working together to grapple with this problem because it is clear that the stakes are high. While the importance of including ethical learning in curricula is generally accepted, there is much disagreement over how to make this happen. A particularly vexing dilemma is whether it is better to teach ethics as a separate course or to weave it into subject-matter courses. “Stand-alone ethics courses are a start, but they ‘compartmentalize’ the issue for students as if ethical questions aren’t applicable to all business disciplines, says David Ikenberry, dean of University of Colorado’s Leeds School” (Korn, 2013). The alternative, however, also holds concerns. Instructors worry that they will not be able to adequately cover all of the subject area content required for the course. Since they themselves are not ethicists, some worry that they are not qualified to teach ethics even within the context of their primary field of study. Others worry that students may resist attempts to encourage them to apply ethical considerations to every topic. Finally, it is not clear that efforts to inculcate ethical stances on the part of students will result in modified behavior when graduates enter the world of work.

To address these concerns, Vowels (2013) offered a two-pronged approach to incorporate ethics learning in management information systems (MIS). The first element lay in the organization of content throughout course. She proposed providing students with tools to help them consider ethical considerations when dealing with MIS problem-solving, and emphasizing that ethical consideration needs to be an organic element in addressing MIS initiatives. Lacing the entire course with ethics rather than confining the discussion to a single chapter was proposed to inculcate habits of ethical thought in students that would remain with them later in life. The second element was to encourage students to engage in dialogic exercises designed to help them internalize the ethics learning; in other words, providing intentional engagement in the solving of ethical challenges as a way to encourage deep, rather than superficial, learning. The goal of this proposal was to:

- “provide students with ethical tools that enrich their understanding of Management Information System topics,
- develop within students the habit of linking ethical considerations with other critical-thinking and analysis, and
- elevate student ability to ethically assess, design, deploy and evaluate management information systems as they enter their professional careers.” (Vowels, 2013)

In this research in progress, I describe a course being offered in Spring 2014 designed with these elements in mind, along with a research project to evaluate the impact of this approach on student thinking about ethics and their perceptions of the

impact that the ethical learning will have on judgments they might make in the future. I also introduce the concept of “binge discovery,” an added element designed to further support dialogic learning, and thus deep learning of ethics.

MANAGEMENT INFORMATION SYSTEMS COURSE STRUCTURE

This introductory course in management information systems will make use of empirical results from previous studies (Nguyen, Basuray, Smith, Kopka and McCulloh, 2008) by putting the consideration of ethical issues early in the course. Students will be provided with frameworks and examples as described by Vowels (2013) to help them logically approach the situations they will later encounter. By providing this knowledge early, they will be able to apply these tools to later cases and exercises. The course outline can be seen in Table 1.

<p>Section I: Building a Foundation</p> <ul style="list-style-type: none"> • Introduction to Management Information Systems • Ethics and MIS • Strategies for Sustained Competitive Advantage <p>Section II: Information Systems and Running the Organization</p> <ul style="list-style-type: none"> • Information Systems and Business Processes • Understanding Transactional Systems • Cutting the Wire – Mobile and Cloud Computing <p>Section III: The Power of Knowledge</p> <ul style="list-style-type: none"> • Data • Business Intelligence • Organizational Knowledge <p>Section IV: Wrapping It All Up</p> <ul style="list-style-type: none"> • Management of Information Systems • Now It’s Your Turn
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Table 1: Course Outline of Topics

An emphasis on ethics will be incorporated throughout; the second major topic, Ethics and MIS, will provide students with ethical tools that will be applied throughout the balance of the course. Even with this emphasis on ethics, this outline provides students with a comprehensive overview of management information systems sufficient to provide preparation for future electives in MIS. The organization of the topics reflects both the stability of foundational concepts and the volatility of information technologies that are the hallmarks of management information systems. The inclusion of binge discovery (covered in the next section) allows students to supplement this broad coverage with their own in-depth coverage of areas that pique their interest the most. Course materials will be provided in electronic form to allow students easy access to online materials through embedded hyperlinks. When possible, reference materials listed in section bibliographies will also incorporate hyperlinks so that students may easily read primary materials to supplement the course materials.

BINGE DISCOVERY

From binge eating to binge drinking, we typically ascribe negative connotations to the term “binging” due to its emphasis on the uncontrollable desire to consume. This negativity has been modified somewhat as the term “binge viewing” came to be applied to the consumption of entire seasons of television programs within a short period of time, sometimes all in one viewing session (Hibberd, 2006). Although the term “binging” is not generally linked to reading, the voracious consumption of books is very similar to binge viewing. With the advent of MOOCs (massive online open courses), a newer phenomenon has been seen, called “binge learning” (Dourado, 2013). Binge learning can take place within the context of a MOOC or outside of it. Within a MOOC, binge learning takes place when students have access to materials on demand, termed “open materials,” rather than having materials released to them bit by bit throughout the course. Since some of this open material persists in cyberspace, guides are being published that provide even those not enrolled in courses to find this content (Lepi, 2012) and binge on them. Interestingly, in traditional face-to-face teaching, students also have had most if not all of their materials available to them at the beginning of the semester in the form of textbook.

I am proposing a modified version of binge learning designed to enhance student dialogue and deep learning in a traditional face-to-face setting. I’m calling this “binge discovery” because in this context, students use the Internet to binge online, consuming as much information as quickly as they desire, but rather than being restricted to the open content provided by the instructor, they discover new information related to the course subject. The ancillary materials discovered by students are then integrated back into the main flow of the course through structured classroom assignments and class discussion, thus enriching the materials provided by the instructor. This is ideal for a wide range of topics, and particularly for management

information systems with its constantly changing basket of technologies. Not only should binge discovery keep up student interest, it will also provide the instructor with streams of new information that can be plowed back into future courses.

As an example, course materials will spotlight Twitter's global influence by making students aware of the range of languages reflected in an analysis of tweets ("Month in the life of Twitter", 2013). For students who wish to explore this phenomenon more deeply, a link will be provided to the peer-reviewed source document (Leetaru, et al, 2013) that in turn sends them to high resolution visualizations of the analysis of a Twitter decahose (10% of a month's worth of Twitter traffic). The goal is to provide a launch point for students who find this information interesting. From this starting point, they will be encouraged to look for additional online sites providing information about social media traffic, languages used, technology used, or some unanticipated connection to this information. They will be asked to keep a journal of their findings and to share their findings with their fellow students.

Asking students to research outside of provided course materials is not new; what is new is encouraging unbridled enthusiasm to kindle student passion about the topic and bringing the materials back into the framework of the course through dialogue within the classroom rather than restricting the use of their research to formal class presentations or research papers. It is hoped that the continuous stream of discovered material will provide continuous ethical thinking and learning as well because each new discovery has the potential to require slightly different ethical reasoning about appropriate exploitation of the technology.

EVALUATION

In order to evaluate the effectiveness of this approach to MIS teaching, students will be surveyed before the course and at intervals throughout. Sixty-six students in two sections will be offered the opportunity to participate in the survey. They will be surveyed before being introduced to the syllabus and at intervals throughout the semester.

The initial survey (see Appendix A) is designed to establish baseline student outlooks and identify areas for future study. The survey will be administered electronically and require that students first answer open-ended, unaided questions and then answer questions using Likert scales. They will not be able to return to the initial questions after seeing the Likert scale questions; this is to ensure that their initial responses to ethics questions are captured rather than responses that might be influenced by subsequent questions. Open-ended questions will explore student thoughts on ethics, examples of ethical dilemmas that come to mind, areas in which ethical considerations are necessary, and the importance of ethics in their school lives and prospective work lives. They will be asked to recap a situation in which they had to make a difficult ethical decision and describe the method used to arrive at their decision.

They will be asked if they think it is appropriate to spend class time discussing ethics and why or why not, and the degree to which ethics is a part of their studies in other areas (a list of subjects will be provided and a Likert scale ranging from not at all to very much will be used). They will also be asked their opinions on the relative importance of ethics in completing a range of business-related tasks such as posting corporate profits to the general ledger, designing a website, working with customer private information, designing a purchasing system, designing a manufacturing system, selecting software.

Over the course of the semester, portions of the initial survey will be re-administered to determine changes in perspective. Students will be assigned subject numbers so that longitudinal changes can be captured without identifying individual students. The survey information captured will not be viewed by the instructor until after the course has been completed and grades have been posted to ensure that the answers will have no impact on the instructor's perception of the students that might impinge on grades.

CONCLUSIONS AND OPPORTUNITIES FOR FUTURE RESEARCH

This research in progress attempts to operationalize the proposal put forth by Vowels (2013) to design and implement an introductory management information systems class that will lead students to view ethical considerations as an integral part of problem-solving and decision-making. The class will contain elements that provide tools for students to use in making ethical decisions. Deep learning in students will be pursued by incorporating class discussions and structured exercises and assignments that require dialogue. This dialogic approach will be supported by student binge discovery activities outside of the classroom.

It is hoped that the survey results of this class will provide insights into the effects of such an approach on student perceptions about the importance of ethical thinking and prospects for their long-term and continued use of the ethical tools acquired in this class. Elements that prove successful will be continued for Fall 2014 and will be studied as well. The ultimate goal of this research is to develop replicable pedagogy that can benefit the teaching of management information systems in undergraduate and graduate settings.

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REFERENCES

1. Dourado, E (March 6, 2013) "'Binge Learning' is online education's killer app," *The Ümlaut*, viewed at <http://theumlaut.com/2013/03/06/binge-learning-is-online-educations-killer-app/> on December 19, 2013.
2. Gilbert, S. (5/29/2013) "Should universities mimic Netflix and encourage binge learning?" *Huff Post College*, viewed at http://www.huffingtonpost.com/susan-gilbert/should-universities-mimic_b_3354671.html on January 9, 2014.
3. Hibberd, J. (2006) "All 'Sleeper Cell,' all the time," *Television Week*, 10/23/2006, 25, 40.
4. Korn, M. (2013) "Does an 'A' in Ethics have any value?" *The Wall Street Journal*, February 7, 2013, B4.
5. Leetaru, Kalev H.; Wang Shaowen; Cao, Guofeng; Padmanabhan, Anand; Shook, Eric (May 2013). "Mapping the global Twitter heartbeat: The geography of Twitter," *First Monday*, Volume 18, Number 5 – 6, <http://firstmonday.org/ojs/index.php/fm/article/view/4366/3654> doi:10.5210/fm.v18i5.4366.
6. Lepi, K. (November 10, 2012) "How to find the best open course materials", Edudemic, viewed at <http://www.edudemic.com/how-to-find-the-best-open-course-materials/> on January 9, 2014.
7. "Month in the life of Twitter' survey shows network's distribution of languages" (09 May 2013). *The Telegraph*. Viewed at <http://www.telegraph.co.uk/technology/twitter/10046248/Month-in-the-life-of-Twitter-survey-shows-networks-distribution-of-languages.html> on December 18, 2013.
8. Nguyen, N.T., Basuray, M.T., Smith, W.P., Kopka, D. and McCulloh, D. (2008) Ethics perception: Does teaching make a difference? *Journal of Education for Business*, 84, 2, 66-75.
9. Vowels, S.A. (2013) "Ethics Built In: A dialogic approach to management information systems ethics education", *Proceedings of the Southern Association for Information Systems Conference*, March 8-9, Savannah, GA, USA.

APPENDIX A: INITIAL SURVEY INSTRUMENT (CONDENSED)

Q2 Please list your majors and minors.

Q3 What year are you?

Q4 Please indicate which Business Management courses you have already completed. Do not include courses you are taking this semester.

Q5 Do you plan to attend graduate school?

The following question is asked if students indicated that they plan to attend graduate school.

Q6 What do you anticipate will be your course of study in graduate school?

Q7 What are your career plans?

The following questions ask you about your attitudes towards ethics and its place in business education. There are no right or wrong answers to the following questions. Please enter the first thoughts that come to mind.

Q9 How would you define "ethics"?

Q10 How do you think ethics applies to business?

Q11 Do you think ethics should... (select the answer that comes closest to your opinion):

- not be included as part of the business curriculum.
- be taught as a separate course.
- be integrated in business courses.
- be taught as a separate course and also integrated into business courses

Q12 Please elaborate on why you selected the above response.

Q13 Please describe how you navigate tricky ethical situations. In other words, what is your thought process when confronted with an ethical dilemma?

Q14 If you feel comfortable with answering, please recap a situation in which you had to make a difficult ethical decision and how you arrived at your course of action. Do not include any identifying information such as names.

Q15 You will find typical business tasks listed below. Thinking in the broadest terms, please indicate the level to which you think honesty, global awareness and environmental awareness are factors in accomplishing them.

Q16 POSTING A JOURNAL ENTRY (Same table used for Questions 17 – 21)

	Not a factor	Somewhat	Important	Essential	No opinion
Honesty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Global awareness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental awareness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q17 DESIGNING A MARKETING CAMPAIGN

Q18 CHOOSING SOFTWARE TO AUTOMATE A MANUFACTURING PROCESS

Q19 DESIGNING A WEBSITE FOR ONLINE SALES

Q20 CALCULATING FINANCIAL RATIOS

Q21 UPDATING A HUMAN RESOURCE POLICY

Q22 Thinking about ethics in general, to what extent do you think it applies to the following typical Business Management topics?

	Not at all	Somewhat	Important	Essential	No opinion
Accounting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organizational Behavior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management Information Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strategic Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following questions explore your experiences in pursuing information beyond that supplied by your professor. When answering these questions, please exclude assignments such as research papers or class presentations in which your finding additional articles, etc. was necessary in order to complete the assignment. There are no right or wrong answers to the following questions. Please enter the first thoughts that come to mind.

Q24 Please list tools you have used to help you with learning while at Washington College for all of your classes, not just Business Management.

Q25 When studying outside of class, how often do you search for knowledge beyond the materials provided by your instructor? Please select the answer that most closely describes your experience in the past for all of your college courses. Do not include preparation for research assignments or presentations.

- Never
- Rarely
- About half of the time
- Often
- Always

The following question is asked if students indicated that when studying outside of class, they searched for knowledge beyond the materials provided by their instructor to some extent.

Q38 Please indicate which of the following tools you have used to acquire information beyond the materials provided to you by your instructor. Select as many as apply.

- Internet search
- Video such as YouTube
- Miller Library online research
- Miller Library books
- Miller Library periodicals
- Other Miller Library services - please describe _____
- Textbooks other than those assigned for the class
- Personal contact such as parent, friend, work associate - please describe _____
- Other _____

Q39 Were you encouraged to search for additional information by your instructor?

- Yes
- No

The following question is asked if students answered "Yes" to being encouraged to search for additional information by their instructor.

Q40 Please describe how your professor encouraged you to pursue knowledge outside of the materials provided.

The following questions are asked if students indicated that when studying outside of class, they searched for knowledge beyond the materials provided by their instructor to some extent.

Q31 Did you feel it enriched class discussion for the following? Select as many as apply.

- ..for you
- ...for your classmates
- ...for your instructor

Q32 Please explain why you searched for materials beyond those provided by your instructor?

Q33 Do you feel that your pursuit of additional information beyond what was provided by your instructor helped you to better understand the provided course materials?

- Yes
- No

Q34 Do you feel that your pursuit of additional information made the course more exciting for you?

- Yes
- No