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Bruce C Herniter

North Brunswick Campus, bherniter@devry.edu

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EARLY HISTORY OF SURVEY AND CORE COURSES WITH IMPLICATIONS FOR INFORMATION SYSTEMS EDUCATION

Bruce C. Herniter
DeVry University
North Brunswick Campus
630 U.S. Highway One
North Brunswick, NJ 08902-3362
bherniter@devry.edu
Office: (732)729-3911
FAX: (732)729-3745

ABSTRACT

Recent proposals for a model MIS curriculum recommend that all business students be exposed to an introductory course. It is assumed that this course is a survey course, covering the spectrum of hardware, software, personnel, data, and information. In taking for granted that readers know the nature and purpose of a survey course, curriculum authors are tapping into ideas and experiences so common that no one feels the need to examine them.

This article focuses on the history and philosophy of the survey course. Survey courses have played an integral role in the business curriculum since the advent of collegiate business schools. However, we shall show that the development of such a course and the way it plays in the MIS curriculum is an unsettled issue. We see that it is far from settled how to develop such a course and the role it plays in the broader curriculum. Two ideas concerning the survey course emerge and are in continual tension: the survey as the introduction to the field for future specialists and the survey as transmitter of fundamental ideas and skills to all business students. The broader implications for information systems education are discussed.

Keywords: undergraduate education, survey course

1. INTRODUCTION

There has been much discussion about the nature of Information Systems as a discipline and the IS Curriculum in recent years. The AACSB Accreditation Standards document of 2002 was vague in defining the role of IS in the undergraduate business curriculum and continues to be vague in its current version (AACSB International, 2002, 2007). The response from the IS community to the 2002 proposal was a model curriculum which offered specific recommendations on courses and course content for all undergraduate students (Gorgone, Davis, *et al*, 2002). The update in progress to the 2002 proposal makes several adjustments, but appears to leave alone the recommendations to the introductory first course, IS 2002.1 *Fundamentals of Information Systems* (George *et al*, 2005).

The aim of this paper is to discuss the purpose and pedagogy of the survey course in light of its history in the United States and the use of the survey course business schools. In discussing the MIS curriculum, the focus will be specifically on model course IS2002.1 *Fundamentals of Information Systems*.

2. THE LITERATURE REVIEW

WHAT IS A SURVEY COURSE?

What exactly is a survey course? The 2002 model curriculum offers several characteristics of a survey course.¹ The first set of characteristics offered by the 2002 model is that of content:

¹ The characteristics mentioned here are derived from the following paragraph (Gorgone, Davis, *et al*, 2002, p.12):

A survey course provides all students an introduction to the purposes, and value of information systems and information resources in organizations. It introduces concepts and methods by which systems are designed and implemented. The technologies and processes for providing information and communications resources are explained. The opportunities for users to employ these resources are illustrated. Students can build on their prerequisite knowledge to investigate useful concepts, functions, and capabilities usually provided by information

- Concepts of the field
- Methods of the field
- Technologies of the field
- Processes of the field

The purpose of incorporating these characteristics into the course is to introduce the IS field to students regardless of major or background. A course with these characteristics meets the definition of an *introductory disciplinary course*. In the educational literature, such a course is defined as an overview of a discipline (Levine, 1978).²

The second set of characteristics can be labeled as characteristics of *purpose*. These purposes are:

- fulfill the prerequisite for further course work in the IS major
- fulfill the prerequisite for further course work in the non-IS majors

The focus this paper is on the tension between the two purposes of the course in that it both seeks to provide all students with an appreciation and knowledge of IS, while simultaneously preparing IS majors for further course work in the field. As we shall see, this tension has existed in business survey courses in the United States for a long time.

systems. Exercises will assist students in understanding system development processes, effective use of information systems, and quality concepts in providing inputs and using outputs from systems. Knowledge at this level is necessary for further work in Information Systems.

² A second type of course is the *interdisciplinary course*, defined as joining two or more disciplines.

A BRIEF HISTORY OF THE BUSINESS SCHOOL IN THE UNITED STATES

Today's business schools in the United States of America can trace their beginnings to colonial times. We can start to understand the role of the survey course by first considering the origins and development of the business school in the United States. U.S. business schools have a heritage of both practical training and the liberal arts.

In colonial times, there were no formal collegiate schools of business; early American colleges were church-sponsored and produced clergy and lawyers. But, school-based instruction in American business does go all the way back to the colonial period. Accounts were taught in the Plymouth Colony school in 1635 and in an Ipswich school in 1652 (Knepper, 1941 citing Munroe, 1917). Also, itinerant teachers taught the essence of accounting and penmanship. Bookkeeping was offered by several private teachers in Boston, New York City, and Philadelphia in the 1700's and Benjamin Franklin's *Academy* had courses in accounts and business history in 1751 (Wannous, 1959). Knepper has found references in colonial newspapers dating from 1774 of school masters announcing "Mercantile Arithmetic" (Knepper, 1941). Thus, business education in the United States started as strictly skills-based, emphasizing basic arithmetic and bookkeeping.

The 1800's saw the spread of business education in the public schools and colleges and the start of the business schools as separate entities. Business schools in the United States began as private schools, perhaps earlier than 1830 (Douglas, 1963). Chains of these schools were established by the middle of the century. In 1851 (Wannous says 1853), Bryant and Stratton created the first business school in their national chain of the same name. Located in Cleveland, it was the first of what grew to 50 schools in ten.³ George Eastman (of Kodak

³ The chain is now known as Bryant and Stratton College, a proprietary institution. Bryant University (now a not-for-profit independent university) was founded in 1863 as Bryant and Stratton National business College and became nonprofit in 1949.

fame) and H. G. Eastman had business schools in 4 cities (New York, Rochester, Poughkeepsie, and St. Louis).

As the culture of business grew increasingly prominent in America after the Civil War, American universities responded. By 1871, Rudolph (1977) has found that “over twenty colleges and universities” offered “commercial courses”. These courses were practical and offered as companions to existing programs, not as part of a business program with a terminal degree.

The Wharton School was established in 1881 with \$100,000 from Joseph Wharton (Johnson, 1931). As noted above, business courses were offered at American universities, but the Wharton School was the first school dedicated to business.⁴

From the outset, the school was to “impart a liberal education in all matters concerning finance and economy” (Wharton, 2007). It was intended to replace apprenticeship and “Commercial Colleges” and to focus on a broad education. Wharton himself uses the word “liberal” in describing the object of the school in educating students in finance and economics (Sass, 1982). As quoted by Johnson, Joseph Wharton’s proposal to the University of Pennsylvania Trustees included “branches of an ordinary good education” as well as a broad list of subjects in business and law. Thus a pattern of a liberal education in the early career of the undergraduate was established.

While Joseph Wharton’s School was charged to provide a generalist education, it appears to have been under pressure from its faculty to produce specialists. Repeated curriculum reforms pushed the curriculum to one pole or the other. It appears that the faculty had an impulse toward specialization, while various deans and alumni asked for generalization. In fact, a survey of Wharton graduates taken around 1929 found that courses in English were felt to be of

⁴ The distinction of the world’s first business college goes to the École Supérieure de Commerce de Paris (ESCP) which was established in 1819 (ESCP-EAP, 2007). It merged in 2000 with the École Européenne des Affaires to form ESCP-EAP.

more benefit in the long run than specialized classes in business (Bossard and Dewhurst, 1931), although other results of the same survey were not as kind to the liberal arts. As late as 1959, a curriculum reform saw the number of required undergraduate courses reduced from 20 to 12.

THE ORIGINS AND CONTEXT OF THE SURVEY COURSE

Though the starting point of this discussion was the business school, the survey course was a *liberal arts* phenomenon. As the Wharton School wished to impart a liberal education, it is natural to assume that its' curriculum was influenced by trends in colleges of liberal arts. Survey courses arose in U.S. higher education in the early twentieth century in response to the expanding breadth of the subjects offered by academic institutions as well as the increasing specialization of both students and faculty. Science was one such specialty.

At that time, individual educators at established institutions had enormous impact. Thus, when President A. Lawrence Lowell of Harvard, in his 1909 inaugural address, said that students should "study a little of everything", his remarks were published in the *Atlantic Monthly* (Lowell, 1909). Another college president, Alexander Meiklejohn of Amherst College, complained about specialization in *his* inaugural address of 1912 and likened it to "a man (who) minds his own business because he does not know any other business, because he has no knowledge whatever of the relationships which justify his business and make it worthwhile" (Meiklejohn, 1920). He further complained that "the pity of it is that more and more chairs in our colleges are occupied by men who have only this special interest, this specialized information, and it is through them that we attempt to give our boys a liberal education, which the teachers themselves have not achieved". Two years later, Amherst College introduced the first survey course (for the 1914-15 academic year) entitled: "Social and Economic Institutions". Note that both the complaints which were made and the solution which was implemented were within the context of a general *liberal* education. Survey courses in the following years were offered by several institutions and had phrases in their titles such as "Politics and Economics", "Civilization", and

“American National Problems”. Soon after, several colleges instituted multiple survey courses as a way to cover multiple areas in the humanities and the sciences as part of a general education curriculum (Johnson, 1937).

So, as we have seen, survey courses developed in general education curricula in response to specialization and to maintain the ideal of a broad, unified education liberal education. Interestingly for a technical field like IS, the science faculties resisted developing courses for non-majors that were required for general education (Rudolph, 1977).

The IS introductory course however, developed in the environment of business schools, not general education. In the next section, we will see how it fits into models of business education.

INFORMATION SYSTEMS EDUCATION

Information Systems (IS) education today is impacted by several events. First, the IS academic community has mounted a sustained effort to provide a model curriculum and to keep it current with technology. Second, there is the worry that students are increasingly shying away from the IS major. Enrollment declines as high as 80% have been reported. Finally, the undergraduate population is peaking and the pressure is on to attract new students to the field.

In this section, the recent changes to the IS curriculum model are briefly traced.

Model of 2002

In 2002, a new model was proposed as an update to the 1997 model (Gorgone, Davis *et al*, 2003). In the intervening years, the rise of the web and increased computer literacy necessitated a curriculum update (Topi *et al*, 2007).

In the proposed model, *IS2002.1 Fundamentals of Information Systems* is the survey course to be taken by all business students. Gorgone *et al* could have taken the stand that the course is really a first course in IS and therefore must impart certain knowledge and skills useful to future specialists. Instead, their definition states that it is “a survey course (that) provides all students an

introduction to the purposes, uses and value of information systems and information resources in organizations” (Gorgone, Davis, *et al*, 2002). The course encompasses a wide range of topics including, but not limited to: systems theory, the organizational role of IS, computing technology, telecommunications technology, and process improvement (among others). Thus the path chosen for this 2002 standard was that of transmitting fundamental ideas and knowledge to all business students. This was not always the case for the introductory IS course. In the recent past, the other path was chosen, that of the specialist.

2007-2008 Revisions

Since the start of 2007, a joint effort of ACM and AIS has been undertaken to revise the model curriculum (Topi *et al*, 2007). The reason for this revision was changing technology and industry practices in five broad areas:

- Globalization
- Web technologies and development
- ERP/Packaged software
- Mobile computer
- IT control and infrastructure frameworks

While indications are that the role of the IS 2002.1 Fundamentals of Information course at course will be unchanged, the content will be updated. Part of this update may reflect a change from business fundamentals to domain fundamentals; since IS programs exist outside of business schools, they should not focus exclusively on technology and technology-related processes.

3. IMPLICATIONS FOR THE IS CURRICULUM

Both business and liberal arts education has had the same reform emphasis: a search for relevance and an impulse toward broad, generalized education. This represents an opportunity for MIS academics to develop a multi-pronged

approach to the MIS survey course. As shown in Figure 1, the introductory IS course has content for 3 types of students:

- Content for MIS majors and minors
- Content for non-MIS business students
- Content for non-business students

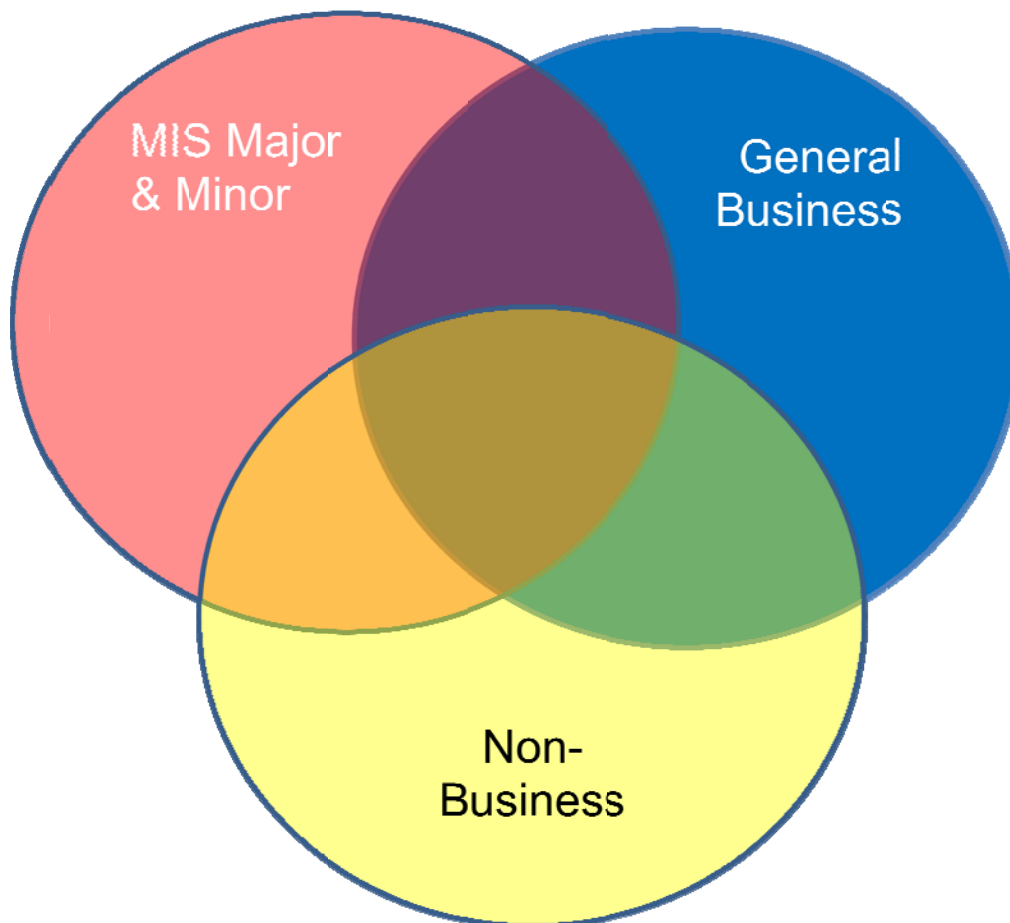


Figure 1. The Three Service Areas of course *IS 2002.1, Fundamentals of Information Systems*

What is clear from the literature is that the primary purpose of IS 2002.1 is NOT to impart basic skills. Instead, the prerequisite skills course is *IS 2002.P0 Personal Productivity with IS Technology* covers use of “spreadsheets,

databases, presentation graphics and Web authoring” (Gorgone, Davis, *et al*, 2003). IS 2002.P0 clearly is designed to serve all three groups of students: MIS majors and minors, non-MIS business students, and non-business students, providing them with “a personal capability for student use of information technology.” The catalog description mentions “applying information technologies to problem situations by designing and using small information systems for individuals and groups”; there is no specific mention of business anywhere in the proposal. Clearly, this course is not a recruiting ground for MIS majors and minors.

The curriculum moves forward with IS 2002.1. It is a management course, teaching technology and methodology in an organizational context; there is no reference to areas outside of business. The course takes a systems design and organizational approach, examining “the purposes, uses, and value of information systems and information resources in organizations.” Instructors are encouraged to make the subject matter relevant by encouraging students majoring in other non-MIS business areas to use applications packages in their major fields of study.

4. CONCLUSION

Every course developer and textbook author must examine the three service areas and decide which suits their purpose best. The course developers need to select the audience for which the course is primarily intended (majors or non-majors), which subjects to cover (theoretical, practical, concepts and skills). The balance among these various categories in turn impacts succeeding courses in the curriculum as the students may or may not need further preparation within those later courses. It also impacts the role of the MIS faculty in balancing their support of the broader business curriculum with the usual mandate to offer a major or minor in MIS.

ACKNOWLEDGEMENTS

LIST OF REFERENCES

Editor's Note: The following reference list contains hyperlinks to World Wide Web pages. Readers who have the ability to access the Web directly from their word processor or are reading the paper on the Web, can gain direct access to these linked references. Readers are warned, however, that

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