

# A SURVEY OF PROJECT MANAGEMENT COVERAGE WITHIN UNDERGRADUATE INFORMATION SYSTEMS' SYSTEMS ANALYSIS TEXTBOOKS

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## ABSTRACT

*This research continues an earlier examination by the authors into the level of adoption of recommendations relating to project management course context that were included in the IS'02 Model Information Systems Curriculum. In particular, this research follows initial research findings that indicated that, for those programs that did not offer a separate Project Management course as recommended by the Model, project management concepts were most often included in the Systems Analysis course. This research examines commonly available Systems Analysis & Design textbooks seeking to determine the incidence and level of project management topical coverage available. The results of this research provide an indication of how well the textbook publishing community is responding to reports by faculty who want to include project management coverage in Systems Analysis courses. This research is valuable to faculty wishing to incorporate project management content into their Systems Analysis courses, and to textbook authors seeking to revise and update textbooks to include the project management-related course content outlined in IS'02.*

**Keywords:** Project Management, Information Systems, Curriculum, Systems Analysis, Textbook, IS Model Curriculum

## IS '02 MODEL CURRICULUM COURSES AND LEARNING UNITS

The IS'02 Model Curriculum for information technology education [4] was an update to the original Model Curriculum published in 1997 as IS'97 [1, 2]. The current Model consists of a core of ten courses plus a prerequisite elementary course. The courses encompass 127 learning units, eleven of which pertain to project management.

## RESEARCH QUESTION

An earlier survey of faculty teaching project management topics in IS curricula [5] found that, due to a lack of standalone Project Management courses in many MIS and CIS programs, faculty tend to cover Project Management concepts in the Systems Analysis course. While this finding was contrary to what the framers of IS'97 and IS'02 prescribed, where Systems Analysis courses were not expected to cover much project management, it did present an interesting research opportunity to determine whether current textbooks supporting Systems Analysis courses were providing the necessary topical coverage to allow faculty to include Project Management learning objectives in their courses. A reasonable hypothesis would be:

H1: Systems Analysis textbooks provide a consistent source of Project Management teaching materials.

Another question relating to the inclusion of project management related topical coverage in Systems Analysis course is the age-old axiom of whether coverage exists in Systems Analysis courses because that is the way it has always been done or whether it exists in Systems Analysis courses because authors and publishers have added Project Management related support materials to recent editions of Systems Analysis textbooks. This hypothesis is stated as:

H2: Systems Analysis textbooks have historically been a source of Project Management teaching materials consistent with the Learning Objectives presented in IS'02.

### **RESEARCH METHODOLOGY AND RESULTS**

The web pages of major textbook publishers were searched to identify current Systems Analysis textbook offerings. This process was begun in April of 2003. For each textbook identified, the Table of Contents was examined and the following data was extracted.

- Publisher
- Title
- Author
- Copyright Year
- Number of Chapters and Appendices directly Related to Project Management IS'02 Learning Units
- Total Number of Chapters and Appendices
- Total Number of Pages

Where the Table of Contents was ambiguous or unavailable, an examination copy of the textbook was requested and the desired information was extracted by examining the actual textbook.

Table 1 summarizes the results the availability of this search process, sorted by copyright year to illustrate changes in the level of project management coverage over time. The most obvious observations that occurs when examining Table 1 is that the number of chapters and appendices devoted to project management coverage has not changed significantly since the mid 1990's. It is also interesting to note that in the last several years all but one textbook includes at least some project management coverage, the exceptions being the Kendall text with no specific coverage and the Satzinger, et al text with one chapter and two appendices. In reviewing the table of contents of the Kendall text, it appeared that the text does include references and examples of project management tools, but does not dedicate a specific chapter to their use. The Satzinger, et al text appears to contain the most coverage, but in examining the table of contents it appears that the project management coverage is included in a single chapter with references to two short appendices that provide more detail on specific learning unit objectives. Table 1 offers no substantial differentiation amongst publishers in their coverage of project management learning units in their Systems Analysis textbooks and, since the current textbook offerings do not reflect copyright dates prior to 1995, did not offer data regarding the historical coverage of project management learning objectives in Systems Analysis textbooks.

<u>Publisher</u>	<u>Title</u>	<u>Author(s)</u>	<u>©</u>	<u>Number of Project Management Chapters &amp; Appendices</u>	<u>Number of Chapters &amp; Appendices</u>	<u>Total Pages</u>
Irwin McGraw Hill	Introduction to Systems Analysis & Design: A Structured Approach (3rd Ed)	Kendall, P.	1995	1	17	704
Irwin McGraw Hill	Systems Analysis & Design and the Transition to Objects	Dewitz	1995	0	13	600
Irwin McGraw Hill	Application Cases in Systems Analysis & Design	Dittman	1998	0	7	234
Prentice Hall	Systems Analysis and Design: An Active Approach	Marakas	2001	(1)	14 (2)	483
John Wiley & Sons	Systems Analysis Design: An Object Oriented Approach with UML	Dennis & Wixom	2001	1	16	544
John Wiley & Sons	Systems Analysis Design (2nd Ed)	Dennis & Wixom	2002	1	15	544
Course Technology	Systems Analysis and Design in a Changing World (2nd Ed)	Satzinger, Jackson, & Burd	2002	1 (2)	15 (4)	704
Prentice Hall	Modern Systems Analysis & Design	Valacich, George, & Hoffer	2002	1	20	768
Prentice Hall	Systems Analysis & Design (5th Ed)	Kendall, K & Kendall, J.	2002	0	22	944
Course Technology	Systems Analysis and Design for the Small Enterprise (3rd Ed)	Harris	2003	(1)	15 (3)	500
Course Technology	Systems Analysis and Design	Shelly, Cashman, & Rosenblatt	2003	(1)	10 (6)	656
Irwin McGraw Hill	Systems Analysis & Design Methods (6th Ed)	Whitten, Bentley, & Dittman	2003	1	20	800
Prentice Hall	Essentials of Systems Analysis and Design (2nd Ed)	Valacich, George, & Hoffer	2004	1	10 (2)	496

**Table 1 - Systems Analysis Textbook Coverage of PM Topics**

## CONCLUSIONS, RESEARCH LIMITATIONS AND NEXT STEPS

This research examined commonly available Systems Analysis & Design textbooks seeking to determine the incidence and level of Project Management topical coverage available with the goal of understanding whether or not the level and amount of project management coverage has increased in concert with the finding that many information systems programs are using the Systems Analysis and design course as the vehicle to provide project management instruction in lieu of offering a separate Project Management course.

Two hypotheses were offered. The first suggested that Systems Analysis course textbooks provide a consistent source of project management teaching materials. Our sampling of major publishers found thirteen textbook offerings with two textbooks authored by the same authors and essentially identical except for a shift in emphasis from traditional to object-oriented systems analysis methodology. Given this small sample size, we recognize that our findings may not be generalizable to all Systems Analysis textbooks. Nonetheless, the major textbook vendors do provide a representative sample of what might be offered by other publishers and utilized by faculty for teaching. Our findings indicate that all but one of the textbooks with copyright dates subsequent to 2000 do offer at least one chapter or appendix with coverage oriented to the teaching units specified by the IS 2002 Model Curriculum and Guidelines for Undergraduate Degree Programs in Information Systems [4]. This result is encouraging and is consistent with the level of coverage that was evident in the currently available textbooks with copyright dates from 1995-2000. It is worth noting that there were most likely textbooks with copyright dates in the 1995-2000 range that are not currently offered. One potential reason for this may be the lack of project management coverage that those textbooks offered.

This leads to the second question that was posed by this research regarding whether Systems Analysis textbooks have historically been a source for project management teaching materials consistent with the learning objectives expressed in the IS 2002 Model. Unfortunately, we were unable to answer this question due to the lack of access to older Systems Analysis textbooks. When the research was originally conceived, it was envisioned that these textbooks, or at least their table of contents, would be readily available for examination. In reality they were not.

Given the focus on current textbooks and their level of project management learning objective coverage, there are still unanswered questions that would provide important information to faculty seeking to integrate Project Management course content into their Systems Analysis courses and to textbook authors and publishers regarding trends in project management coverage within Systems Analysis textbooks. Unanswered questions remain regarding the mapping of existing textbook coverage with the project management learning objectives specified in IS 2002. Is the existing coverage complete and comprehensive or are only certain learning objectives being covered? Do textbooks integrate the project management learning objectives into the systems analysis and design process, examples, and case studies or are they merely presented as a set of 'facts' to memorize for an exam? The answers to these questions require a more thorough examination of each of the textbooks so that their content can be closely mapped to the specified learning objectives.

This research does not present arguments in favor of or against continuing the current practice of including Project Management learning objectives coverage in the Systems Analysis course. It merely reports on current practices which may serve as a harbinger of what is currently occurring and of what might be expected to continue to occur in the future, unless unchallenged, as a means to foster professional dialogue and discussion regarding how educators can best integrate the concepts promoted within the IS 2002 Model Curriculum into our undergraduate information systems degree programs.

## REFERENCES

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