

Chapter 1.31

System Conversion: Teaching vs. Reality

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ABSTRACT

This article summarizes the coverage of conversion in 17 current textbooks from major publishers—10 for introductory MIS and seven for systems analysis. It compares this coverage with current practice, as determined by (a) studies of 74 organizations by the author's students and (b) conversions reported in the trade press. Differences between typical textbook coverage and practice are documented, and recommendations for remedying the situation are made.

Unfortunately, this is not the case. What's more, the underlying problem is not limited to conversion, although it provides an excellent example and is used in this article for that purpose. Anyone familiar with the field of information technology can find other equally good examples within his or her own experience.

There are discrepancies between what textbooks say about conversion and what MIS managers do (or should do). Authors, publishers, MIS faculty, and IS managers should be aware of these and should take appropriate corrective action.

INTRODUCTION

Conversion is central to the implementation of any information system. One would expect that such an important part of the system life cycle would have been studied extensively and that textbooks would reflect current best practices.

DEFINITION AND DISCUSSION OF CONVERSION

Conversion can be defined as the process of moving from use of one information system to general use of its replacement throughout an organization.

Conversion involves several steps. It may involve replacing hardware, installing new software, or importing a database to a new DBMS. People must learn new software and procedures. Working with people is harder than the technical side, since one cannot run a program or plug in a box and be done with it. People, unlike hardware and software, have feelings and preferences. It is necessary to move them emotionally off the old system and onto the new.

This may surprise those whose conversion experience has involved primarily personal productivity software. How could anyone become so attached to Release n of, say, Excel, that it interferes with moving to Release $n + 1$? However, enterprise software conversions are not so simple. People subconsciously associate much of their professional value with their knowledge of the old system. A new hire knows as much about the new system as they do—or more. While they may not be aware of these feelings, they exist and can lead to various (perhaps unintended) negative behaviors up to and including deliberate sabotage. Managers must handle them appropriately.

The following four approaches to conversion are in common use today or have been in the past:

- **Direct conversion:** The entire organization stops using one system and begins using the other immediately thereafter.
- **Parallel conversion:** Both systems are used with identical inputs. Results are compared until confidence in the new system permits removing the old one.
- **Pilot conversion:** Part of the organization uses the new system until it is seen to be working satisfactorily. The rest of the organization then starts to use it.
- **Phased conversion:** Part of the new system is introduced and used until it is seen to be working satisfactorily. The next module is then introduced.

Combinations of and variations on these are possible.

COVERAGE

In MIS Textbooks

Ten introductory MIS textbooks (Haag, Cummings, & McCubbrey, 2004; Jessup & Valacich, 2003; Laudon & Laudon, 2004; Malaga, 2005; McLeod & Schell, 2004; O'Brien, 2005; Oz, 2004; Senn, 2004; Turban, McLean, & Wetherbe, 2004; Turban, Rainer, & Potter, 2005) were examined for this study (an eleventh by Laudon and Laudon [2005] was removed from the sample, because its coverage was nearly identical to that of Laudon and Laudon [2004] by the same authors). With the exception of Jessup and Valacich (2003), all are copyrighted 2004-2005. Their coverage of conversion is shown in Table 1.

Systems Analysis Textbooks

Seven systems analysis books (Dennis & Wixom, 2000; Harris, 2003; Hoffer, George, & Valacich, 2005; Kendall & Kendall, 2003; Satzinger, Jackson, & Burd, 2004; Shelly, Cashman, & Rosenblatt, 2003) also were examined. (Two more, Dennis, Wixom, and Teagarden [2002] and Valacich, George, and Hoffer [2004], were removed from the sample, because their coverage was nearly identical to Dennis and Wixom [2000] and Hoffer, George, and Valacich [2005] by the same or overlapping groups of authors). They were slightly older than the MIS texts, with one from 2000 and the rest from 2003-2005. (The smaller market for systems analysis books reduces pressure for frequent revisions). As befits their subject, these books devote more space than introductory books do to conversion. Table 2, therefore, gives it in pages, not lines.

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