



Chapter XX

**Assessing Computer
Literacy:
A Comparison of Self-
Assessment and
Actual Skills**

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ABSTRACT

The ubiquity of the Internet in our daily lives and the pervasiveness of computer technology in K–12 education today suggest that incoming college students should be better prepared to use computer technology than their predecessors. This chapter presents the results of a study to determine the incoming computing skills levels of business students. The study also measured the difference between the students' self-assessment of these computer skills and an actual assessment of their computer skills. In discovering what level of computer literacy our students actually have, and pinpointing areas where students lack proficiency, we can look to develop curriculum to address the weaknesses. Our goal would be to look at developing a curriculum model that provides flexibility in tailoring content to accommodate the evolving literacy of students, ultimately providing a richer educational experience for our students.

INTRODUCTION

With the increasing prevalence of computers and computer usage throughout society, one might hypothesize that there would be an increase in overall computer literacy among business students. Trends in education show that students are being exposed to, and using, business application software at relatively early ages. Students in primary school, for example, are using PowerPoint® to make class presentations and are using word processing to generate and edit their homework. Middle school students create worksheets and charts in Excel®. The most pervasive early exposure computer experiences seem to be coming from the Internet.

Given their exposure and experience with computers at a relatively early age, many students arrive at college feeling sufficiently computer literate. Olsen (2000) reported that in Fall 2000, colleges saw at least half of their freshmen arrive with their own computers. Olsen (2000) also noted that these students are proficient at using Windows®, word-processing software, the Internet, and electronic mail. However, she also reported that students had a lower proficiency with spreadsheets, databases, and presentation software. Interestingly, although students feel sufficiently computer literate, what many faculty members discover is that most students' self-perceptions of their computer competency, at least currently, do not match the skill sets often expected in their college study program or the skills sets expected in the business world.

Most business schools provide computer literacy skills via their "Principles of Information Systems" or "Introduction to Computers" class. This class usually serves two main purposes: to teach students fundamentals of information technology, i.e., computer concepts; and to teach students various business-oriented software applications. This course is typically offered at the freshman/sophomore level and is usually required of all business majors.

This chapter reports on a study designed to assess university business students' actual computer skills and to measure the difference between the students' self-assessment of these computer skills and an actual assessment of their computer skills. The measure of actual computer competency is thought to be particularly valuable as a tool to help business schools and MIS departments make informed information systems curriculum decisions and to provide a mechanism for tracking the evolving computer skills of beginning business students. Comparisons between self-perceptions and actual skills will be helpful in determining strategies for educating and motivating students whose self-perceptions are higher than their actual skills.

BACKGROUND

Over time, the definition of computer literacy has evolved from simply a basic understanding of terminology, to understanding how to write computer programs, to understanding how to use specific computer applications. Certainly, defining a specific level of computer literacy is dependent on the specific context of the situation in which it is applied. Van Vliet, Kletke, and Chakraborty (1994) conducted a study to determine if self-appraisal tests are a valid predictor of computer literacy. They defined computer literacy as "the ability to use microcomputers confidently for obtaining needed information, solving specific problems, and performing data-processing tasks. This includes a fundamental understanding of the operation of microcomputers in general, as well as the use of several types of applications

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