Chapter 5.16
Misuse of Online Databases for Literature Searches

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ABSTRACT

Online library databases are the primary method for finding relevant literature in many fields. These databases either primarily have abstracts or have the entire article online (i.e., full-text). This chapter describes how students use and misuse abstract and full-text databases when conducting literature searches. Findings from two studies indicate (1) students overestimate the usefulness of full-text databases, (2) students do not know which type of database is the best tool for a particular situation, and (3) students favor technology that is easier for them to use. By understanding the implications of these findings, it is hoped instructors can create lectures and assignments that increase students' information literacy levels. Additionally, this chapter provides an example of how people, in general, will use new technology that is easier but is not necessarily more useful.

INTRODUCTION

Instructional technology has been a benefit to students, allowing them to access more information more quickly. There is no question students use the available technology such as the World Wide Web; however, there is a question as to whether students use it well. This chapter highlights examples of when students do not use instructional technology well and the importance of proper education about instructional technology. Specifically, this chapter focuses on online literature search databases (e.g., PsycINFO, ERIC) that are used in college and university libraries across the country. This chapter describes two studies that examine whether students properly use this instructional technology. These studies provide recommendations to instructors and college librarians about online databases, and more importantly, these studies illustrate some

problems that students and others can have in using instructional technology.

BACKGROUND

There are two main types of online literature search databases: abstract and full-text. In abstract databases, abstracts are available for almost all articles in a discipline, and some, but not all, may also be available as full-text documents. In full-text databases, the database is composed entirely of full-text articles; however, the database is likely to be limited. In fact, the highest reported percentage of relevant articles from a discipline appearing in a full-text database is only 46% (Chapman, 2001) and many are less than 10% (Carlson, 2001; Herring, 2001).

Not surprisingly, students have an affinity to use full-text databases because articles may be printed while at a computer, possibly at home. Whereas with abstract databases, the students have to physically locate and copy the article in the library or complete an interlibrary loan request and wait days or weeks for the article.

Many teachers complain students use full-text databases too much and ignore abstract databases (e.g., Carlson, 2001; Herlily, 2000; Littrell, 2000). One survey (MacDonald & Dunkelberger, 2000) found some students exclusively used full-text databases. By only using full-text databases, many instructors believe students will miss important references. In addition, instructors may worry that solely using full-text databases can lead to beliefs that literature reviews are very easy and articles from full-text databases are equal to if not superior to other articles (Laskowski, 2002).

The technology acceptance model (TAM) predicts user acceptance of new technology (Davis, 1989). TAM is based on the social psychological theory of reasoned action (Azjen & Fishbein, 1980), which predicts behavior in general. According to TAM, user acceptance is predicted by two main factors: perceived usefulness and perceived ease of use. Usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320), and ease of use is defined as "the degree to which a person believes that using a particular system would be free of effort (Davis, 1989, p. 320). In terms of literature search databases, usefulness relates directly to the number of articles that are available. Abstract databases are therefore more useful because they are more complete. Ease use is determined by how quickly and easily a person can obtain articles. Given search functions are similar between abstract and full-text databases, full-text databases are easier to use because of the speed in obtaining copies of articles. In addition, some researchers have included in TAM subjective norms (i.e., what important others think of the technology) as another predictor of user acceptance (Venketesh & Morris, 2000). Many teachers provide norms favoring abstract databases for large literature assignments but these expectations may be poorly communicated.

It is easy to predict full-text databases will be rated higher in ease of use, and previous studies have indicated full-text databases will have higher levels of user acceptance (MacDonald et al., 2000). However, it is not as clear whether students will perceive abstract or full-text databases to be more useful. Students may recognize abstract databases by being more complete, are more useful. On the other hand, students may assume full-text databases are more useful because it is the technology they favor.

Actually, the usefulness of abstract vs. full-text databases depends on the type of assignment. For example, full-text databases would be just as useful for an assignment to find a single article

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