Chapter 1.19
Learning IT:
Where Do Lecturers Fit?

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ABSTRACT

Lectures are the traditional method of content delivery in undergraduate information technology degrees, yet concerns have been raised about their effectiveness. This paper addresses the role of lectures within information technology degree programs from a student perspective; it examines the factors that influence lecture attendance and student perceptions of the usefulness of a variety of possible lecture activities. Overall, the results suggest that students see the lecturer as contributing significant value to their learning experience through the lecture setting. Students appear to value the expertise of the lecturer and find activities that can best make use of the lecturer's expertise the most useful. The results also suggest that students recognize the importance of active learning within the constraints of traditional learning settings.

INTRODUCTION

The traditional lecture is one of the most common forms of teaching and has long been the primary method of formally introducing subject material to the student population (Kumar, Kumar & Basu, 2002) as well as providing opportunities for lecturers to guide students on how to study the course's content (Khan, 1996). Yet, the lecture is also considered to be one of the least effective forms of instruction for students (Bligh, 1972; Felder, 1992; Johnston, Moffat, Sondergaard & Stuckey, 1996). Some of the problems reported with the lecturing approach are that lectures can promote passivity, feelings of isolation (Isaacs, 1994; Rosenthal, 1995) and boredom (Mukherjee, 2000). This could make them ineffectual as an approach to learning.

Despite these concerns and the increasing availability and popularity of online education

(McCormick, 2000; Peffers & Bloom, 1999), the lecture is the traditional method of learning in undergraduate information technology (IT) degrees and is still the standard for IT courses (Griffiths & Oates, 2003; Lynch & Markham, 2003). This raises the question of what the role of lectures can and should be within an IT degree program. The study described in this paper meets Khan's (1996) call for more research on students' perceptions of the importance and benefits of attending lectures and explores the opinions of a group of IT students; examining the factors that influenced their lecture attendance and their perceptions of the usefulness of a variety of possible lecture activities.

BACKGROUND

The majority of on-campus IT students today are assumed to attend lectures, which provide the main method of introducing IT content to students. However, lecture attendance is rarely mandatory and varies from course to course, with anecdotal evidence suggesting that there is a trend toward lower attendance. This lower attendance may reflect students' dissatisfaction with lectures as a tool for learning but may also reflect the changing nature of student life with students facing many competing demands on their time and requiring flexibility in learning.

Many lecture sessions take the format of traditional talking head lectures. One concern associated with the passivity that a lecture can encourage is that students who are not actively participating (whether physically or mentally) have a reduced level of concentration after the first 10 to 15 minutes of a lecture (Stuart & Rutherford, 1978), after which the amount of information retained by the student declines (Bligh, 1972). McKeachie (1986) reports that after a lecture, a student recalls 70% of the information presented in the first 10 minutes, but only 20% of the information presented within the last 10 minutes of lecture time.

Schank (1998) asserts that it is a difficult task to listen while someone else (i.e., the lecturer) talks, with the best case scenario being that a student will think about what has just been said and then miss the points that follow in the lecture. What is required for learning to take place is for students to stop listening and process what they have just heard before continuing with further points in the instruction (Rodger, 1995; Schank, 1998). Schank (1998), goes so far as to state that "lecturing is antithetical to learning" (p. 23).

In addition to problems with concentration and information retention, traditional lectures do not easily accommodate discussion, yet dialogue and discussion are considered to be important elements in the promotion of higher-level cognitive processing (Mannison, Patton & Lemon, 1994). Levels of effectiveness in learning are believed to be directly related to the participation of the student, with students tending to retain much more of the material when their engagement with it is high; that is, when they are active learners rather than passive members of an audience (Dale, 1969).

Not all lecture sessions are alike. Lecture sessions may be utilized in a number of ways. In addition to the traditional talking head session, today's IT lecture can involve multimedia demonstrations (Fagin, 1994; Makkonen, 1998; Robling & Freiseben, 2000), interactive case-study analysis (Mukherjee, 2000), role-playing exercises (Lynch & Markham, 2003; McConnell, 1996), in-class problem solving (Rodger, 1995), as well as more unorthodox lecturing approaches such as class singing, as suggested by Siegel (1999). What these approaches have in common is an attempt to introduce active learning to the lecture situation.

One of the most common modifications to the traditional lecture format has been online availability of lecture notes. In order to reduce the amount of time students spend taking notes