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Problems with Lecturing

■ David W. Johnson, Roger T. Johnson and Karl A. Smith

While direct teaching may be appropriately used, there are also problems with direct teaching that must be kept in mind. Much of the research on lecturing has compared it with group discussion. While the conditions under which lecturing is more successful than group discussion have *not* been identified, a number of problems with lecturing have been found.

The first problem with lecturing is that students' attention to what the instructor is saying decreases as the lecture proceeds. Research in the 1960s by D. H. Lloyd, at the University of Reading in Berkshire, England found that student attention levels during lectures followed the pattern of: a) five minutes of settling in, b) five minutes of readily assimilating material, c) confusion and boredom with assimilation falling off rapidly and remaining low for the bulk of the lecture, and d) some revival of attention at the end of the lecture (Penner, 1984). The concentration during lectures of medical students, who presumably are highly motivated, rose sharply and peaked 10 to 15 minutes after the lecture began, and then fell steadily thereafter (Stuart & Rutherford, 1978). J. McLeish, in a research study in the 1960s, analyzed the percentage of content contained in student notes at different time intervals throughout the lecture (reported in Penner, 1984). He found that students wrote notes on 41 percent of the content presented during the first fifteen minutes, 25 percent presented in a thirty-minute time period, and only 20 percent of what had been presented during forty-five minutes.

The second problem with lecturing is that it takes an educated, intelligent person oriented toward auditory learning to benefit from listening to lectures. Verner and Cooley (1967) found that in general, very little of a lecture can be recalled except in the case of listeners with above aver-

age education and intelligence. Even under optimal conditions, when intelligent, motivated people listen to a brilliant scholar talk about an interesting topic, there can be serious problems with a lecture. Verner and Dickinson (1967, p. 90) give this example:

"...ten percent of the audience displayed signs of inattention within fifteen minutes. After eighteen minutes one-third of the audience and ten percent of the platform guests were fidgeting. At thirty-five minutes everyone was inattentive; at forty-five minutes was more noticeable than fidgeting; and at forty-seven minutes some were asleep and at least one was reading. A causal check twenty-four hours later revealed that the audience recalled only insignificant details, and these were generally wrong."

The third problem with lecturing is that it tends to promote only lower-level learning of factual information. Bligh (1972), after an extensive series of studies, concluded that while lecturing was as (but not more) effective as reading or other methods in transmitting information, lecturing was clearly less effective in promoting thinking or in changing attitudes. A survey of 58 studies conducted between the years of 1928 and 1967 comparing various characteristics of lectures versus discussions, found that lectures and discussions did not differ significantly on lower-level learning (such as learning facts and principles), but discussion appeared superior in developing higher-level problem-solving capabilities and positive attitudes toward the course (Costin, 1972). McKeachie and Kulik (1972) separated studies on lecturing according to whether they focused on factual learning, higher-level reasoning, attitudes or motivation. They found lecture to be superior to discussion for promoting factual learning, but discussion was found to be superior to lecture for promoting higher-level reasoning, positive attitudes and motivation to learn.

Fourth, lecturing is limited by the assumptions that all students need the same information presented orally at the same time and at the same pace, without dialogue with the presenter, and in an imper-

sonal way. Regardless of whether students have different levels of knowledge about the subject being presented, the same information is presented to all at the same time and pace. Although students learn and comprehend at different paces, a lecture proceeds at a single pace--the lecturer's. Even students who listen carefully and cognitively process the information presented will have questions that need to be answered, and lectures typically are one-way communication situations with large numbers of classmates inhibiting question asking (Stones, 1970). If students cannot ask questions, misconceptions, incorrect understanding, and gaps in understanding cannot be identified and corrected. Lectures can waste students' time by telling them things that they could read for themselves. Lecturing by its very nature makes learning impersonal. There is research indicating that personalized learning experiences have an impact on achievement and motivation.

The fifth problem with lecturing is that students tend not to like it. Costin's 1972 review of literature indicates that students like the course and subject area better when they learn in discussion groups than when they learn by listening to lectures. This is important in introductory courses where disciplines often attempt to attract majors.

Finally, there are problems with lecturing as it is based on a series of assumptions about the cognitive capabilities and strategies of students. When instructors lecture they assume that all students learn auditorially, have high working memory capacity, have all the required prior knowledge, have good note-taking strategies and skills, and are not susceptible to information processing overload.

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