University of Waterloo STAT 231 – W. H. Cherry

EM9337: The Globe and Mail, September 20, 1993, page A13

TEACHING / Good universities have updated their courses, encouraging the skills graduates need

in the job market. But more needs to be done.

University lectures: They don't work

BY JAMES McSHERRY London, Ont.

STUDENT once came to see me because he was worried about his inability to stay awake during lectures. Seems he usually fell asleep after the first 25 or 30 minutes. My response may not have been of immediate help. I reassured him that I'd had the same problem when I was a first-year medical student, but with diligence and perseverance I'd got it down to five minutes by the time I reached my third year. He left the office with a puzzled expression on his face and I'm still not sure that he got the message.

I don't see that lectures have much point nowadays. After all, our present system of university education is still based on the original medieval model where the lecture was the basis for instruction because the lecturer had the only book on the subject in the country, maybe the world. Lectures were then the only practical way of ensuring that the same message was available to all aspiring disciples, those being the days when the photocopier was a gang of monks with quill pens and the fax machine was a hairy gent who ran round the country carrying messages in a cleft stick.

One of my own professors once defined a lecture as the process by which information passed from the notebook of a speaker to the notebook of a student without encountering resistance in the minds of either. I didn't write that down at the time, but it's been stuck in my mind (become encoded, facilitating entry into long-term memory and recall, in today's jargon) ever since, although I can't remember who said it.

As my children are so fond of saying, "how come" we think of buildings full of lecture halls every time we think of a university, once we have cleared the preliminary imagery from our minds – ivy-covered walls, choirs singing *Gaudeamus igitur* in the back-

ground, affable young ruffians blocking the entrance to the beer store, and similar? If the purpose of a university is to teach and that of a student to learn, how come we still use the method least likely to satisfy either agenda?

Lectures are highly economic for the institution – one lecturer, one room, one blackboard, lots of students, lots of tuition fees. They're not so good for the lecturer: difficult to maintain actual contact with individual students; the larger the class, the smaller the number of assignments that can be set and marked, the harder it is to test the higher levels of cognitive achievement and the more difficult it is to delegate marking to teaching assistants.

LECTURE courses probably do very little for most students, given that lectures traditionally last 50 minutes and the attention span of the average person is only 20 minutes. Good research tells us that young men are thinking of sex two-thirds of the time and young women think of it at least half the time, so that gives an uphill task to anyone trying to persuade students that their houses don't exist if they're not there to see them.

Large classes mean that professors set fewer assignments, so students have fewer opportunities to find out how they're doing before the final exam delivers the ultimate verdict. Large classes also mean exams that tend to place undue emphasis on recall of factual knowledge, high-school stuff, instead of testing students' abilities to do the higher cerebral thing – deduce, apply and integrate – that universities are all about.

My point? Novelist C.S. Forester once likened British generals in the First World War and their blind adherence to outdated military strategies to a bunch of savages who thought that screws were like nails and could be drawn out of a piece of wood if only sufficient leverage could be applied. They was-

ted all their efforts on devising ever-stronger levers, not realizing that a little rotation would do the trick.

The Ontario university system seems to me to be set on a course aimed at collision with reality. University graduates get hired for their educational accomplishments, and get fired for lack of interpersonal skills and the ability to function in the workplace. Good teachers already know how to adapt the standard lecture format in a way that captures students' attention and stimulates learning. Judicious use of carefully prepared audio-visual material helps; so does classroom discussion and debate. Even the occasional display of professorial enthusiasm isn't completely out of place.

Good universities have adapted their courses to take advantage of new knowledge on teaching and learning, and how the academic mission can be enhanced by using modern technology, encouraging the very skills their graduates will need to find and keep jobs post-NAFTA. But more needs to be done.

Public policy on higher education, best described as the educational equivalent of the "Big Bang" theory, getting the greatest possible number of graduates for the least possible number of dollars, appears to be based on medieval principles that served the exigencies of their age and are of questionable value nowadays. If students are to be asked to pay more of the cost of their university education, let's make sure they get their money's worth before that university education becomes a social irrelevance. We need more university degree programs that offer co-operative work experience and we need to give students the flexbility of blending community college with university courses. Sleeping at lectures is another luxury today's students can't afford!

James McSherry teaches family medicine at the University of Western Ontario and has three children at university.

- ☐ Briefly state Prof. McSherry's main thesis in the article EM9337 reprinted above.
 - In point form, summarize the arguments Prof. McSherry uses to make his case.
 - In point form, summarize his suggestions for improvement.
- 2 Using one of the arguments and one of the suggestions for improvement that you identified in the previous question, describe briefly, in a FDEAC cycle framework, how each might be properly investigated.
- Discuss briefly the *statistical* issues raised, in the context of the Prof. McSherry's article EM9337, by the statement in the third paragraph of the middle column: *Good research tells us that young men are thinking of sex two-thirds of the time and young women think of it at least half the time,*