This study sought to determine what a group of first-year English as a Second Language (ESL) university students learned from a series of lectures in English, how the students learned what they appeared to learn, and what features of the lecturer's presentation most affected the learning of the students. Twelve international ESL business students at an Australian university and their instructor in an economics course participated in the study. Students were given pre- and post-tests based on key points covered in the lectures, which were audio- and video-taped. The lecturer's and students' notes were also compared, and students responded to questionnaire based on their perceptions of the lectures. The study found that the students learned relatively little from the lectures themselves, but relied almost exclusively on copying the instructor's overhead transparencies of the key points in the lectures. An analysis of the lectures found that they presupposed a great deal of background knowledge on the part of students of Australian history, current events, and colloquialisms, something that international ESL students would not have. (Contains 35 references.) (MDM)
THE BUSINESS OF LISTENING AT UNIVERSITY
(Or: Do International students learn by not listening to lectures?)

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1. Introduction

The lecture has had a very long history in tertiary teaching, and as McLeish (1976) points out it can be traced back 2500 years. Despite the fact that the effectiveness of lectures has been in question since the Middle Ages (McLeish, 1976), and despite the technology now available for the transfer of information, lectures remain a central element in university teaching around the world (Cannon, 1992). Perhaps because lectures have been in existence for so long, they have been taken for granted.

The privileged position of lectures has come into question in recent years as universities around the world have become less elitist, and as increasing numbers of international students have travelled to countries such as the USA and Australia to undertake their tertiary studies through the medium of a second language (cf Chaudron and Richards, 1986; DEET, 1993). Given the numbers of international students concerned, and increased emphasis on quality teaching and learning in universities (cf Baldwin, 1991), research into learning from academic lectures by international students is becoming increasingly important.

2. Background

There has been a good deal of research into factors which influence the comprehension of academic lectures, and these factors can be conveniently grouped into two categories: student-centered and teacher-centered. Some of the research into student-centred factors affecting comprehension has considered the effects of age (Seright, 1985), sex (Boyle, 1987), and background knowledge (Long, 1989). Teacher-centred factors have been found to include semantic and syntactic cues (Conrad, 1987), speech rate and pausing (Conrad, 1989; Blau, 1990; 1991; Griffiths and Beretta, 1991;), and discourse markers (Chaudron and Richards, 1986).

While much of the research is of great interest, extreme caution must be exercised in extrapolating the findings from the research to the university lecture. For example, some of the research is based on short, scripted "lectureettes" (Chaudron, 1983; 1985; Chaudron et al, 1986; Chaudron and Richards, 1986; Long, 1985). Other research makes use of taped materials originally designed for note-taking practice for non-native speakers (Dunkel, 1988). A significant body of the research is based on experimental manipulation of variables such as speech rates and pausing (Conrad, 1989; Blau, 1990; 1991; Griffiths and Beretta, 1991). While
there has been some research on the listening strategies of native speakers (NSs) (Nicosia, 1988) and non-native speakers (NNSs) (O'Malley, Chamot and Kupper, 1989), there has been very little on the visual component of presentation (Mueller, 1980). In recent times there has been increased interest in research on NNS learning behaviour in authentic academic lectures (Benson, 1989; Fahmy, 1990; Fahmy and Bilton, 1990; Flowerdew and Miller, 1992), but such research remains a small proportion of the overall research effort in this field.

A key difficulty with much of the research in this area is that learning from lectures has been seen as a problem of listening comprehension, an area which has been relatively neglected in research (Richards, 1983), either because it has been seen as difficult to study (Kasper, 1984) or because it has been seen as a similar process to reading comprehension (Carrell, 1984).

Further difficulties with interpreting much of the research on learning from lectures by NNSs is that it rests on three implicit assumptions:

1. that academic lectures last for 50 minutes or less
2. that lecturers provide only aural input
3. that students learn by listening to that input and processing it in various ways (eg by taking notes)

3. The study

The study reported in part in this paper was designed to subject these assumptions to close examination. In particular the study sought to answer the following questions:

* What does a group of first year international students learn from a series of authentic economics lectures?
* How do the students appear to learn what they learn from the lectures?
* What features of the lecturer's presentation of authentic economics lectures affect the learning by international students?
The subjects of the study were a group of twelve female international students undertaking the first year of a Bachelor’s degree in Business at a metropolitan campus of a large Australian university. The average age of the group 23.4 years, the two oldest being 39 and 27, and six being 21 years old. Seven of the group came from Hong Kong and had Cantonese as their L1. A further Hong Kong student claimed both Cantonese and Mandarin as L1. One student from Malaysia had Hokkien as her L1, and the two Indonesian students had Indonesian as L1. One student came from a small Pacific Island nation and claimed that her first languages were the local island pidgin and two dialects. Ten of the twelve students were supported in their studies by parents or relatives, while the 27-year old from Hong Kong was funding her studies from her own savings, and the Pacific Islander had an Australian Government scholarship.

The economics lecturer was female, held a tenured position, and was a native speaker of Standard Australian English.

The process followed in the study was as follows. Before each lecture a pre-test was administered. The pre-test was based on an interview with the lecturer who was asked to specify the key points she hoped students would learn from the lecture. These key points formed the basis of the questions. Following the lecture, which was audio- and video-taped, a post-test was administered. Subjects were also asked to complete a summary and a questionnaire on their perceptions of the lecture, and the responses to the questionnaire were probed in an interview. Later, edited extracts of the video-taped lecture were replayed, and subjects were asked to respond to these “prompted recalls”. The subjects’ notes and the lecturer’s notes and overhead visuals were photocopied and analysed, and the prompted recalls were audio-taped and transcribed.

4. Some lecture extracts

It is clear that some of the lecturer-centred factors in lecture comprehension were apparent in the lectures. For example, a great deal of background knowledge about Australian history, both remote and recent, is assumed, as can be seen from the following two examples:

so money can be anything which we all . accept as payment . so if we think about . history . in Australia in its early settlement days we had rum . as a form of money
we've had gold and silver, and we've now got paper money and of course paper has no intrinsic value (5/5)

eighty-nine/ninety was even worse, and you had the re/emergence of the banana republic statements. umm of. eighty-six/eighty-seven (5/3)

The lecturer also assumes that the audience has topical knowledge of current political and economic affairs gained from reading the quality newspapers or gleaned from current affairs programs on radio or TV:

basically what you want to do there is increase the quality and the flexibility of the labour force and that's what most of the the government policy's about today. okay the aim is to increase the quality and flexibility of the labour market. get rid of the bottle necks. get rid of the structural unemployment. and you can do that by retraining, relocation, job information et cetera. and that's the kinds of things that you hear them talk about in the um (2) um economic statements and in their budget things. (6/9)

okay so when you think about what I'm doing here in theory. think about the current environment and when you get to write essays or umm questions. you should be adding in the data that's relevant. okay you're living through it at the moment. unless you're blind and deaf you must know something about what's happening on the TV and in the newspapers. (28/3)

In one lecture the lecturer assumes that everyone is aware of the details of the recent collapse of a financial institution in the state:

now that works okay. as long as everybody doesn't want to convert their money to gold at once. and you can see the parallel with pyramid. think about what happened eighteen months two years ago. (3/7)

it just happens. that building societies are not backed by the reserve bank. and hence pyramid went under. ahh state bank victoria. they suggested if it hadn't've been taken over. that it would have went under as well. because of the tri-continental problem. okay they would not have been able to finance. or service the two point three billion ahh debt that tri-continental had basically handed the reserve bank on a/ahh sorry the state bank on a plate. (3/7)

In another lecture the lecturer assumes that the audience is made up of local residents whose parents have mortgages through local banks. In the case of the subjects of this study this is clearly a false assumption.

there's very few interest rates that are controlled. the only interest rate controlled are those housing ra/housing loans. taken out prior to nineteen eighty-six. which probably would be most of your parents. okay unless they've bought and sold a house in the meantime. okay so go and ask your parents whether they're on a pre-nineteen eighty-six home loan with the bank. (4/5)
In other cases, the unplanned nature of the lecturer's speech becomes clear when she loses the thread of discourse. In these cases, we can see that she has planned the topics about which she will speak but she has not planned the words she will use to speak about them:

Okay now you can have bottle-necks. Ah or union restrictions. In the labour market (2) just trying to think of a bottle-neck (2) I've brought the wrong one over. Umm let me think of a bottle-neck (3) basically your labour market's not going to clear because of some. Ahh restriction either by the government or by the union. (6/8)

Okay because/as the dollar has increased in price. It doesn't require as many dollars to buy the same amount of yen. So you would have. You would get less. Is that right. Less yen or more yen? More yen. Maybe more yen. More yen. (5/2)

Now trade policies are expenditure switching. Okay they're expenditure switching policies because they switch your demand from overseas goods to domestic goods. Okay so they switch what you do. It has no impact on the price. It has. Well it could have with tariffs. Umm bu/ it has no impact on your demand. Sorry it does have an impact on your demand. It switches your demand from overseas goods to domestic goods. But it doesn't impact on the level of economic activity. Okay s/ it's just expenditure switching. So you switch from one type of good to another. I just want to differentiate between expenditure switching and expenditure changing. And you could easily get confused between the terms so s/ I suppose that's why I'm s/ trying to stress it. (5/9)

The lecturer makes frequent use of metaphorical or colloquial language which may not be familiar to international students, as can be seen in the following examples.

It means that a hundred dollars in the bank. Today. Is not worth a hundred dollars. In umm twelve months down the track. (3/3)

Okay so we've looked at two ideas and so far they're both down the drain. (2/1)

5. Some tentative findings

It would appear from the examples provided in the previous section that there are many obstacles to comprehension provided by the lecturer's assumptions about background and topical local knowledge, her use of colloquial or metaphorical language, and the unplanned nature of her speech. However, this statement rests on the basic assumption that the subjects are actually listening. Before turning to this question, some general comments are in order.

a. Some general comments
The economics lectures lasted for approximately 90-110 minutes, with a brief five-minute break after about 50 minutes. The economics lectures are not unusual in this regard as in this particular faculty, undergraduate lectures in business law and management also occupy a two-hour time slot.

Despite the expectations of the lecturer, the subjects did not read ahead in the text-book (Waud et al, 1992) to prepare for the lecture. Subjects stated that they knew they should read ahead to prepare for the lectures but simply did not have the time because of the work-load on them created by their full time-tables and the regular assignments. Others stated that the book was too difficult for them to cope with. Whatever the reasons for not reading the text before the lectures, it is clear that the subjects could not access their prior knowledge of the topic(s) in comprehending the lecture.

b. Did the students listen?

The key question is whether students learn from lectures through a process of listening comprehension. Before answering this question it is important to set out two key factors about the style of presentation of this particular lecturer, in particular her speech rate and style of presentation:

The economics lecturer is perceived by the subjects to speak very fast. The actual speech rate of the lecturer varies from approximately 140 words per minute (wpm) to 190 wpm. According to Peters (1972) the normal rate of speech varies between 125 and 200 wpm, and Pimsleur Hancock and Furey (1977) state, on the basis of a study of radio news broadcasts, that the normal range varies between 130 and 220 wpm. These figures tend to suggest that the lecturer would fall in the normal range, albeit possibly at the higher end, but that her speech rate would not be considered inordinately fast. However, the subjects' perceptions may be influenced by another feature of the lecturer's style, that is the visual co-text.

In the course of the lecture the lecturer presented up to 24 overhead visuals, some of which were relatively detailed. The subjects (and most other listeners in the large audience) attempted to copy the overheads verbatim into their note-books, but it appeared to this observer that for many audience members, including the subjects of this study, insufficient time was allowed for the transcription process. It may be that the subjects' perceptions of a very fast speech rate may arise from a
moderately fast rate of spoken delivery, in combination with a fast rate of presentation of overhead visuals, and the perceived need to copy the overhead visuals into their note-books.

The style of presentation of this lecturer meant that students were presented with two texts to process - the oral text and the written text. Many subjects commented that they could listen or they could write, but they could not do both, and all opted to copy the visuals verbatim. Incomplete notes were compared with those of friends who could write more quickly, with the result that shortly after the lecture all subjects had complete sets of virtually identical notes. These notes became the basis for revision for the assessed tasks and the examination.

Observation of the lectures indicated that the subjects were involved in copying the overhead visuals, to the apparent exclusion of any other activity. In other words, they were so busy copying the overheads verbatim into their note-books that they could not listen at the same time.

The prompted recalls served to emphasise the fact that although students had heard the lecture before, they had not actually listened to it. Students frequently commented in response to the video-taped replay of extracts of the lecture that the lecturer spoke too fast, and despite intense concentration some were unable to catch anything. If subjects were able to say anything about the video-taped replays, the comments were rarely more than an attempt to reproduce the gist of the extract.

While the students were not enthusiastic about the lecturer because of her perceived rate of presentation, they generally respected her knowledge of the specialist field. Subjects considered the lecturer's overhead visuals very valuable because they enabled the subjects to take "strong" notes, which became the basis for their revision.

c. Some tentative answers to the study questions

What did the students learn from a series of economics lectures?

In general terms the pre-tests indicated that the subjects knew very little about the key topics before the lecture, largely because they had not done the set reading. However, the subjects learned relatively little from the lectures as measured by the pre- and post-tests. In the case of 12 of the 49 questions the
students made some gains. However, for 30 out of 49 questions the subjects made no or minimal gains, and for 7 of the 49 questions the subjects performed less well after the lecture than before it. Three of the questions were not actually covered in the lectures and these have been excluded.

How do they appear to learn what they learn?

From this study it appears that, given a choice of either listening or copying overheads, the subjects have elected the copying strategy. This could be seen as a criticism of the lecturer, but it can also be seen as a strength of this lecturer’s style. Given that listening to a lecture delivered at a rate in the normal to high range presents serious comprehension problems for NNSs, copying the visuals at least provides students with the opportunity to gather a written record of the lecture in which they can place confidence, and which they can learn by rote if necessary. For the reasons set out above, the subjects do not do the set reading before the lecture.

What features of the lecturer’s presentation appear to affect the learning?

As is clear from the preceding paragraph, it appears that it is the lecturer’s visual materials which have most influence on the subjects’ learning from the lectures. However, the tutorials were not studied, and significant learning may occur in the smaller groups the tutorials provide. This question would need to be taken up in a further study.

6. Conclusion

It is difficult to draw firm conclusions from research of this nature, but a number of statements relating to lecture styles, discourse analysis and ESP materials appear to be warranted.

If we are to understand lecture audience behaviour we must have video-tapes of authentic lectures, and we must take into account all features of the lecturer’s style of presentation, particularly any visuals provided. Particular lecture styles may present students with the choice of two "macro-strategies" - listening or copying. Because of the difficulties presented by listening to academic discourse in real time, it is perhaps natural that NNSs may elect to adopt the strategy most likely to lead to success in examinations. Much more needs to be known about the different
styles of lecturers and the possible impacts of these styles on student learning.

Analyses of lecture discourse must take into account the fact that some lecturers present both aural and visual input, and both must be accounted for in the system of analysis. This has major implications for the theory and practice of discourse analysis.

ESP materials designed to develop the listening comprehension of international students based on short scripted self-contained "lecturettes" may not be helpful to students whose lecturers speak for 90 minutes and provide a substantial amount of visual information. More detailed knowledge of lecturers' styles and students' learning behaviours will help us to develop more appropriate ESP materials.

Learning from lectures is limited and results from an interplay of lecturer style and audience coping strategies. To see learning from lectures as deriving mainly or solely from processes of listening comprehension is too simplistic a view of a highly complex process. Much more needs to be known about lecturer behaviour and how NNSs learn from lectures if we are to improve the quality of our teaching and the learning of our students.

7. A postscript

Of the 12 students, ten passed the subject at the end of the semester and two failed. Of the two who failed one was the 39 year old from the Pacific Island nation, and the other was the 21-year old from Malaysia. Of the ten who passed, nine gained a pass, and one a distinction. This was the 27-year old Hong Kong student who was paying for her course from her savings. Given that the learning from lectures appeared to be so limited, but most subjects successfully completed the course, the matter of how students learn from their university courses is obviously highly complex.
References


Richards, J C (1983) "Listening Comprehension: approach, design, procedure" TESOL Quarterly 17 (2): 219-240
