

# ESOL STUDENTS' NOTETAKING IN LECTURES

Marilyn Lewis

University of Auckland

## Abstract

Along with text books and class handouts, notetaking during lectures is one of the ways in which students have a record of course content. The notetaking practices of ESOL students during lectures at one university were investigated in three ways. The notes of 13 students were analysed for their form, organisation and amount of information. Half of these students then commented on their strategies and beliefs in relation to notetaking. While the organisation of their notes paralleled the practices described in the literature, there was considerable range in the number of information units the students noted. There was also a mismatch between their actual practice and their beliefs about good notetaking. Implications are drawn for teachers of EAP classes.

## Notetaking in lectures

Lectures are said to serve a number of purposes in higher education. According to Ramsden, (1992), they can introduce new topics, show the relationship between topics, hold students' interest, stimulate thinking and a wish to know more, pass on knowledge at the level of the listeners, and present memorable examples. They are "the pre-eminent method of teaching in most subjects in on-campus institutions" (152). This paper is not concerned with advice about how to deliver good lectures. Rather it starts from the premise that lectures, good and bad, are a part of student life and that good notetaking is therefore an important skill.

Research into students' notetaking during lectures focuses on a number of aspects including:

- the discourse of the academic lecture
- problems of non-native speakers in listening to lectures
- beliefs about the importance of notetaking
- the nature and practice of lecture notetaking
- students' later use of their notes

Studies of the discourse of academic lectures note features which may present a challenge for all students. Dudley-Evans and St John (1998) list five distinguishing features of monologue: phonology, the speed of delivery, real time processing, notetaking in real time and deducing the speaker's attitude. Nattinger and deCarrico (1992) studied the discourse of academic lectures and noted the relatively small amount of interaction that occurs in many lectures compared with other types of listening. They found that lecturers



used eight "macro-organisers": topic markers, topic-shifters, summarizers, exemplifiers, relators, evaluators, qualifiers and aside markers.

Other studies focus on listening problems for various groups of students. Bell (1993) used an authentic videotaped lecture to compare the listening skills of three groups of students: one native speakers of English (NS) and two non-native speakers (NNS). She examined their ability to distinguish between the eight "macro-organisers" identified by Nattinger and deCarrico (1992). She found that while NS students achieved high levels of understanding in most categories, the opposite was the case for NNS. In a different study jokes, one type of aside which are popular with those who understand them, were noted as particularly frustrating for non-native speakers of English (Gravatt, Richards, & Lewis 1997). Jordan's (1997) list of problems for non-native speakers of English also includes the difficulty of combining information from spoken and other sources such as the whiteboard and overhead transparencies.

A third aspect of lecture notetaking studies concerns beliefs about its importance. Gravatt, Richards, & Lewis (1997) found that lecturers in 65% of the courses believed that good notetaking skills were essential. This percentage was even higher in the Arts subjects. Flowerdew (1994) has a more qualified view. He points out that the importance of notetaking depends on how many handouts are supplied and whether students choose instead to use highlighting in their text books as an alternative.

Other studies examine the nature of notetaking from lectures. Jordan (1997) listed four important skills, the first of which echoes the understanding stage described above:

- Distinguishing between important and less important items
- Timing writing so as not to miss other important points
- Writing concisely and clearly in words and symbols that make sense later
- Deciphering notes later during the recall phase.

In the Gravatt, Richards, & Lewis study (1997:46) lecturers believed that students "copied down everything from overheads and the board but nothing from the spoken part of the lecture", but the study did not examine students' notes. The non-correlation between quantity and quality is noted by Dunkel (1988). She found that for both first and second language speakers of English "writing down as much as possible" did not appear to bring successful encoding of the lecture. In advice to students Waters and Waters (1995) speak about the importance of organisational features in notetaking, including linear and diagrammatic notes and of cognitive features. They recommend taking two kinds of notes, those given in the talk and those reflecting connections with other information students know or are studying. Both Dunkel studies (1988 and 1989), which compared the notes of NS and NNS concluded that what seemed to lead to success was writing



"large amounts of spoken discourse ..., transcribing content words such as names, dates and statistics, using abbreviations and symbols but only a few structure words".

Finally, studies have examined students' later use of notes. While the impression may be that students attempt to write down every word the lecturer says, there is not necessarily a correlation between "quantity of notes and quality of understanding" (Rost 1990:125). Chaudron, Cook, and Loscky (1994) measured success in notetaking through comprehension tests with the same results. High lecture note quality need not equate with students' understanding of them. They also found that some forms of abbreviation are so cryptic that even the students who have written them fail to recover the meaning later. Benson (1989) compared the notes of one NNS with the lecturer's notes and those of an NS student. He spoke of the importance of background knowledge in interpreting lectures and concluded that learning needs to extend beyond comprehending lectures. Dunkel, Mishra, and Berliner (1989) investigated the later effects of students' notetaking. Their results, along with the studies of others whom they quote, suggest that the opportunity to review notes is more important than the quality of the notes themselves.

### **Methods for research into students' notetaking**

A number of methodologies are suggested for notetaking studies. Oxford (1996), whose interest is in learner strategies, recommends including social and affective aspects in questionnaires. She points out that this type of assessment has direct benefits for students by alerting them to the power of strategies. Benson (1989), whose study is mentioned above, used interviews, observation during notetaking and analysis of notes.

For the analysis of notes Dunkel (1988) recommends five indices: the total number of words and notations, the number of information units, the number of test questions which could be answered from the notes, the completeness of the notes and finally their efficiency. Chaudron (1994), echoing Dunkel, recommends "the importance of including more content-based measures of note quality" (p.89). Quantitative studies based on information units need to start from an understanding of how to define these. Gray (1991), in a study of secondary school students' recall from listening, used Carrell's (1985) definition: "each unit consists of a single clause - main or subordinate - including adverbial and relative clauses. Each infinitival construction, gerundive, nominalized verb phrase and conjunct is also identified as a separate idea unit. In addition, optional and or heavy propositional phrases are also designated as separate idea units." Rost (1990) suggests a framework for comparing students' notes and the lecturer's content. He distinguishes between four types of notes: topic-relation, concept-ordering, focusing and revising. Topic-relation includes:

- topicalising (paraphrase from the spoken word)
- translating (use of L1)



- copying (verbatim from board or OHT)
- transcribing (verbatim from spoken word)
- schematising (inserting graphics, presumably the student's own).

Concept-ordering includes sequence cuing (listing or numbering items), hierarchy cuing (adding signs such as "main point" or "example"), and relation ordering (layout signs and symbols such as an arrow or =). These reflect the eight categories of discourse organizers of Nattinger and deCarrico (1992) described above. Focusing and revising apply to strategies used after the lecture.

For the present study the following questions were determined.

1. What is the notetaking practice of a group of ESOL students?
2. What are their self-reported practices and beliefs?

### **Developing the study**

The study was based on four sets of data: lecturer's notes, lecturer's overhead transparencies (designed to supplement the spoken word), students' notes and students' responses to a questionnaire. (See Appendix 1.) The subjects were students enrolled in two first year Commerce courses taught at the University of Auckland during the summer semester of 1998.

Lecturers on the Commerce summer semester courses were approached, since their programme traditionally has large numbers of second language speakers of English. The two courses were selected on the basis that these lecturers had notes they were willing to supply to us. During the second week of lectures, students in one of these, a first year Commercial Law course, were approached. The project was briefly explained to them and the ESOL students amongst them were asked if they were willing to lend the lecture notes they had taken in the first week to be photocopied and returned at the end of that two-hour class. The response rate was poor, with notes being obtained from only four students. This was insufficient to do a study and therefore the notes of these students were not used.

At this stage an additional element had to be introduced into the process. The other class, studying first year Management and Employment Relations (MER), had a built-in study skills component. The students were told that during one of these study sessions they would receive a one-hour seminar on the topic of notetaking, given by the researcher, who had recently taught a course on academic writing. They were also told that in addition to the note taking seminar, which was available for all students, any NNS students who lent their notes would receive individual feedback. This resulted in a much higher response rate; 13 students gave written permission for their notes from the first four lectures of the course to be photocopied. All the overhead transparencies were also ob-



tained from the lecturer.

The first analysis was a quick overview of the students' first day notes in terms of features which could be judged without reference to their later use and within the tight timeframe:

Distinguishing important and less important points (Jordan, 1997)

Writing clearly in words and symbols (Jordan, 1997)

Other organisational features (Waters, 1995).

As promised, individual written feedback was given to students the next day under these headings, reinforcing good practice and making suggestions for improvement. The feedback was part of the basis for answering the first research question.

Further details of students' notetaking practice were then sought through an analysis of the number of information units. These followed Carrell's (1985) criteria:

1. Each finite verb represents one information unit,
2. Where information is given, then paraphrased, it constitutes one information unit,
3. Each translation into the student's first language of a word contained in an OHT is an information unit,
4. Each translation of a word contained in the students' own notes is not an additional information unit,

Each item in a list, for instance a list of examples, counts as one information unit.

As a first step, the researcher and a research assistant independently analysed the notes from one lecture from one student, selected randomly. Results from the two raters were compared and discussed. There was general agreement but minor points needed to be clarified. For example, situations where 'and' was used were problematic, so that 'initiates and designs change and innovation' could be regarded as 2, 3, or 4 information units. By mutual agreement it was decided to call this 3. Modifications were made until we agreed on the total number of information units. Following this, we analysed the notes from a second student and again compared notes, and so on. This was done for four students, analysing two sets of material from the first lecture, two from the fourth. At this point it was decided that the inter-rater agreement was sufficiently high that it was not necessary to discuss the analyses one at a time. We then independently analysed all the remaining lectures for subjects 1 to 7, before meeting to discuss the results and agree on the number of information units. Subjects 8-13 were then completed.

The students' notes were then compared with those on the lecturer's overheads and the lecturer's notes. Despite the point made by Rost (1990) and Dunkel (1988) about the lack of correlation between the quantity of notes and their later usefulness, points not noted



from the overheads are presumably lost to the students, and therefore quantity was measured. It was decided to count the number of units noted from the spoken word over and above those on the overheads.

Answers to the second research question (students' self-reported practices and beliefs were elicited through a questionnaire which combined multi-choice and open-ended questions. It was administered four weeks after the course finished, which probably accounted for the low return rate (6/13). We had not wanted them to see the study as too burdensome by giving the questionnaire in the middle of an already concentrated summer course. The questions took into account Oxford's (1996) recommendation to include social and affective aspects. In summary, students were asked about

- their notetaking practice,
- the purpose of notetaking,
- their later use of their notes and the notes' usefulness,
- their advice to students and to lecturers and
- whether they would take notes differently in the future.

Finally, comparisons were made between the various data.

## Results

### *Q. 1 Students' actual notetaking practice*

#### Source of notes

A comparison between the two possible sources, the overheads and the spoken lecture as presented in the lecturer's notes, showed that almost without exception students had noted nothing that was unrelated to the overheads. (The exception is mentioned later.) It was then a case of noting how and how much they had noted from the overheads. First the layout features of the thirteen students' notetaking are reported using the headings from Jordan (1997) and Waters (1995). Then the students' notes are compared with the information on the overheads.

#### Distinguishing important and less important points

Eight students distinguished between headings and sub headings in a number of ways:

- the use of colours (1)
- the use of capitals (1)
- noting the lecturer's spoken question (1)
- headings stood out in the layout (2)
- underlining (3).



Conversely six failed to make distinctions as follows:

- failing to note the main heading (3)
- failing to distinguish between main and sub-headings (2)
- running the headings into the rest of the notes (1).

#### Writing concisely and clearly in words and symbols that make sense later

The following features appeared:

- use of symbols (abbreviations, annotations in L1, arrows (3)
- summary diagram (2)
- particularly clear script (2)
- quotation marks where they appeared on the overhead (1)

Conversely there were some negative features:

- quotations without quotation marks or source (2).

In addition there were a number of examples of misspelling. This might not matter, but in a few cases it could cause difficulties when students attempted to revise their notes and look up words in their text books. For example, one student had misspelt or misheard 'co-operate' as 'corporate' and another had written 'time concerning' for 'time consuming'.

#### Other organisational features

Nine students made good use of space but others had

- left no margins (2)
- noted unnumbered lists (1)
- left no space between sections (2)

One of the latter two had squashed everything into a very small writing pad with no space left unfilled.

#### Comparison between students' notes and the lecturers' overheads

Almost all the information units that were noted were copied verbatim from the overheads. The only exceptions to this were that one student had failed to copy anything from three of the overheads in Lecture 1, while another had written down the oral explanation of two terms presented on an overhead, but had not copied the terms themselves.

The numbers of information units identified by each rater, and the number agreed on following discussion, are given in Table 1. (Blank entries indicate that the student did not attend that lecture.)



|         | Lecture 1 |         |       | Lecture 4 |         |       |
|---------|-----------|---------|-------|-----------|---------|-------|
| Subject | Rater 1   | Rater 2 | Final | Rater 1   | Rater 2 | Final |
| 1       |           |         |       | 28        | 20      | 24    |
| 2       | 44        | 47      | 47    | 64        | 64      | 64    |
| 3       | 22        | 23      | 22    | 79        | 85      | 84    |
| 4       | 41        | 43      | 43    | 53        | 56      | 56    |
| 5       | 60        | 43      | 48    | 37        | 37      | 37    |
| 6       | 24        | 21      | 23    | 98        | 111     | 108   |
| 7       | 81        | 81      | 81    | 0         | 0       | 0     |
| 8       | 19        | 19      | 20    | 0         | 0       | 0     |
| 9       | 1         | 1       | 1     | 9         | 9       | 9     |
| 10      | 18        | 20      | 18    |           |         |       |
| 11      | 34        | 37      | 34    | 66        | 67      | 67    |
| 12      | 57        | 58      | 57    | 58        | 61      | 61    |
| 13      | 53        | 57      | 53    |           |         |       |

**Table 1:** Number of information units beyond those in the OHT.

As can be seen, the number of information units contained in the notes varied considerably between students, this difference being accentuated in Lecture 4. The number of information units noted by the students in the two lectures was only loosely correlated ( $r=-0.13$ ), i.e. students who had noted high numbers in Lecture 1 did not necessarily note high numbers in Lecture 4, and vice versa.

## Q2 Students' reported practices and beliefs

The second research question investigates students' self-reported practices and beliefs. Completed questionnaires were received from six students. They were asked, amongst other things, what they did in lectures, what they believed to be the purpose of note-taking and what advice they would give to fellow students and to lecturers. (See Appendix 1 for the full questions.) Answers to questions 1, 2, 6, 7 and 8 are dealt with in this article.

The first question was about their practices. Their answers are shown in Table 2.



|                                  | 1       | 2   | 3 | 4 | 5 | 6 |
|----------------------------------|---------|-----|---|---|---|---|
| ACTIONS                          | Y       | N   | Y | Y | Y | N |
| Everything                       |         |     |   |   |   |   |
| Paraphrase                       | Y       | N   | N | N | N | N |
| Important pts                    | N       | Y   | N | N | N | Y |
| copied OHT                       | S'times | All | Y | N | N | N |
| FEELINGS                         | Y       | N   | N | N | N | Y |
| Worried<br>about<br>missing bits |         |     |   |   |   |   |

Table 2 : Students' self-reported practices

In the following details the masculine and feminine pronoun are alternated, since the answers were anonymous. The first respondent said he wrote down everything that was said about the overheads, trying to paraphrase the lecturer's words. He copied the overhead only when he failed to understand the commentary, and worried about the amount he could not take down. The second student had a different tactic, copying all the overheads and trying to write down only what was important from the lecturer's comments. Like the first student, she worried about what she was not taking down. The third student copied overheads and tried to write down everything that was said, worrying about missing points. He was able to understand and take notes at the same time. Student four also said she could understand and take notes simultaneously, writing down everything the lecturer said. The fifth student attempted to write down everything that was said, but wished he could write down more. The sixth student's strategy was to write down only what was important. She too worried about what she was missing and said she was too busy writing to worry about the meaning.

The second question asked about the purpose of notetaking. The most popular answer was "to guide me when reading the textbook" (5). In addition, two ticks each were given for "to help me think about the topic" and "to provide me with a coverage of material needed for tests and exams." One student failed to understand the question. When the answers to this question were compared with the previous answers about their practices there was high consistency within the answers of individual students. For example, of the five who saw taking notes as a guide to reading the textbook, four reported making this connection after the lectures. All six used their notes in combination with the textbook when studying for tests and the final examina-



tion and all six students identified their notes as being 'quite useful' later.

Another question asked what advice on note taking they would give students starting at university. Students recommended the following strategies. Numbers refer to the number of mentions.

All six students made the point that selective note taking was important:

Don't try to write down everything but rather try to understand (4)

Note the key points of the lecture (2)

Three made suggestions about making links with the text book and their own existing knowledge:

Read chapters before the lecture (2)

Make connections with existing knowledge (1).

One had a mechanical suggestion:

Learn shorthand (1)

One mentioned cooperative learning:

Don't be afraid to ask other students when points are missed (1).

When asked what advice they would give lecturers in order to assist students' notetaking, the suggestions referred mainly to the oral delivery and to the overheads.

Speed and clarity of delivery:

speak more slowly (3),

give students time to copy an OHT before explaining or discussing it (2),

avoid difficult or technical words (2),

speak more clearly (1),

repeat or fully explain important points (1).

Clarity of the overheads:

either distribute or use OHTs showing the main points of the lecture (3),

use large print on OHTs (1),

use legible handwriting on OHTs (1).

In addition one student believed that lecture notes should be placed in the short loan section in the library.

When asked about which sources they used when studying for tests and examinations, all six ticked "your own lecture notes" and "the textbook". Nobody ticked "other people's lecture notes" but one added under "other" that he used previous years' examination papers. Only one student mentioned Benson's (1989) point about the importance of background knowledge in interpreting lectures.



### Discussion and implications

The first point to note is that this was a small study, from which it would be difficult to generalise. Furthermore a number of aspects of note taking were not investigated: the comparative practices and beliefs of NS students, the lecturer's intentions in his use of overheads, students' test results in relation to the amount of content they took down. With hindsight the questionnaire should have distinguished between notetaking from the overheads and from the spoken word. Within these limitations, the results could have implications for EAP teachers.

The first result was the non-noting of anything the lecturer said that was not on the handout, although the copy of the lecturer's notes showed that a great deal more was said. Is this practice widespread and does this matter? A comparable study of the practice (actual and reported) of NS students would make clear whether the problem is more widespread. Whether or not it matters depends on whether the lecturer's information is also in the text-book. If it is, perhaps NNS students could access it more easily there than by listening. This needs to be investigated further and on an individual basis, but Dunkel's (1988, 1989) studies suggest that noting spoken discourse is important in terms of later success.

The quality of the students' notes is difficult to comment on without knowing how useful these were later. While to the researcher the notes seemed to have features of layout and wording that would make them difficult to read, the real measure is whether or not they were useful to the students who wrote them. Almost all the students reported using their notes to guide them in reading the text book. It would be useful to have students "think aloud" while making a connection between the notes and the book. This type of study would probably best be done by a subject specialist who could probe the content.

Dunkel (1988) and Rost (1990) point to a non-correlation between quantity and quality of notes. Given the enormous range in the number of idea units copied from the overheads, as illustrated in Table 1, it could have been interesting to replicate the Dunkel or Rost studies by comparing the number of information units in individual students' notes with their end-of-course grades. Perhaps it is the case that the students taking the most notes are simply the fastest writers but do not understand the content at the time or find the notes useful later.

The present study was small and does not make great claims for its data collection and results. What it may suggest is that small-scale studies are manageable and can give information about students' notetaking practices within particular tertiary departments. Taping lectures and interviewing students would add other sources of data. Results could lead to EAP teachers' making the practices of both staff and students explicit.



Other surveys could investigate the link in different departments between spoken lectures, handouts and overheads. How different is practice and expectation from one department to another? What do staff within a particular department believe is the purpose of notetaking? Results could help determine policies on the use of overheads.

In summary, information about students' notetaking practice and beliefs needs to be more widely available. Some concerns could easily be attended to. Many of the findings of this study, however, relate to more fundamental issues such as understanding the spoken word and NNS students' ability to summarise it in the form of notes during real time.

## References

- Bell, A. (1993). "Listening to lectures". *Many Voices*. 6:11-13.
- Benson, M. (1989). The academic listening task: A case study. *TESOL Quarterly*, 23(3), 421-446.
- Carrell, P. (1985). Facilitating ESL reading by teaching text structure. *TESOL Quarterly*, 19(4), 727-753.
- Chaudron, C., Cook, J., & Loscky, L. (1988). *Quality of lecture notes and second language listening comprehension*. Technical Report No. 7, Center for Second Language Classroom Research, Social Science research Institute, University of Hawaii, Manoa.
- Chaudron, C., Loscky, L., & Cook, J. (1994). Second language listening comprehension and lecture note-taking. In Flowerdew, J. (ed). *Academic listening: Research perspectives*. Cambridge: Cambridge University Press.
- Dudley-Evans, T. and St John, M. J. (1998). *Developments in English for Specific Purposes*. Cambridge: Cambridge University Press.
- Dunkel, P. (1988). The content of L1 and L2 students' lecture notes and its relation to test performance. *TESOL Quarterly*, 22(2), 259-282.
- Dunkel, P., Mishra, S., & Berliner, D. (1989). Effects of note taking, memory, and language proficiency on lecture learning for native and nonnative speakers of English. *TESOL Quarterly*, 23(3), 543-550.
- Flowerdew, J. (ed) (1994). *Academic listening*. Cambridge: Cambridge University Press.
- Gravatt, B., Richards, J.C., & Lewis, M. (1997). *Language needs in tertiary studies: ESL stu-*



*dents at the University of Auckland. Occasional Paper Number 10, Institute of Language Teaching and Learning, University of Auckland.*

Gray, S. (1991). *Listening: Overlooked and undervalued*. Unpublished research project.

James, K., Jordan, R., Matthews, A., & O'Brien, J. (1991). *Listening comprehension and notetaking course*. London: Collins ELT.

Jordan, R. (1997). *English for academic purposes*. Cambridge: Cambridge University Press.

Nattinger, J., & deCarrico, J. (1992). *Lexical phrases and language teaching*. Oxford: Oxford University Press.

Oxford, R. (1996). Employing a questionnaire to assess the use of language learning strategies. *Applied Language Learning*, 7(1&2), 25-45.

Ramsden, P. (1992). *Learning to teach in higher education*. London and New York: Routledge.

Rost, M. (1990). *Listening in language learning*. London: Longman.

Waters, M., & Waters, A. (1995). *Study tasks in English*. Cambridge: Cambridge University Press.

Marilyn Lewis is a senior lecturer at the Institute of Language Teaching and Learning, The University of Auckland. Breon Gravatt was the research assistant for this project.



## Appendix

1. Which of the following did you do in your lectures for [name of course]?

- ☐ I tried to write down everything the lecturer said.
- ☐ I tried to write down only the important things the lecturer said.
- ☐ I copied all the overhead transparencies.
- ☐ I wrote down everything the lecturer said about the overhead transparencies.
- ☐ I did not try to write down everything the lecturer said.

Other (please specify.) \_\_\_\_\_

2. What is the point of notetaking in lectures?

- ☐ To save time so I needn't read so much.
- ☐ To help me think about the topic.
- ☐ To guide me when reading the textbook.
- ☐ To prepare me for further reading.
- ☐ To provide me with a coverage of material needed for tests and exams.

Other (please specify.) \_\_\_\_\_

3. How did you use your notes later?

- ☐ I rewrote them.
- ☐ I used them as a basis for reading the textbook.
- ☐ I read them at least once.
- ☐ I couldn't understand what I'd written.
- ☐ I didn't try to read them.
- ☐ I used other people's notes.

Other (please specify.) \_\_\_\_\_

4. How useful were your notes? (please circle)

Not useful      a little useful      quite useful      very useful

5. Which of the following were true for you? Tick the statements you agree with.

During the lectures....

- ☐ I wished I could take down more.
- ☐ I could understand and take notes at the same time.
- ☐ I was too busy writing to think about meaning.
- ☐ I worried about missing points as I wrote.
- ☐ I had plenty of time to write and listen..



6. What advice on notetaking would you give students starting a university course?

You should...

You should not....

7. What advice would you give to lecturers to help students' notetaking?

It would help me take notes if you...

It's difficult for me to take notes if you....

8. When studying for the tests and final exam, how many of these sources of information did you use?

☐ Your own lecture notes

☐ Other people's lecture notes

☐ The textbook.

Other (please specify) \_\_\_\_\_

9. Now that you have had a chance to think about your notetaking, will you do anything differently in future papers?

N.B. Lined space was provided for questions 6, 7 and 9.