Philip Shaw*, A

Intertextu
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st common type, followed by management of student
s provided us with categories which can be used for an
nce can be tested, and for observation of the references
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ecome an environment in which quite advanced
consequences of this development are the focus of
is that the cognitive demands placed on students by
mag... f two languages, rather than one, and by the fact that
language for most of the participants. This linguistically challenging situa-
to put students at increased risk of not mastering course content, and therefore
strategies acquire an enhanced potential for promoting student learning. It is
at are the focus of the present paper.

g to speculate whether this situation might develop into a sort of institutional di-
ch English is the accepted medium for some purposes (e.g., lecturing, textbooks)
language remains in use for others (for example, administrative and service encoun-
moment, though, Nordic higher education can best be described as a parallel-lan-
ronment, in which both English and the local language are used for a range of purpos-
choice is often dictated by immediate aspects of the local context, rather than a rational
nciples. For example, the arrival of a group of international students, or a new member
aching staff, may result in a rapid decision to hold a series of lectures in English. Similar-
lish-language textbooks may be chosen for a range of reasons: because there is no suitable
alent in the local language; because the English-language texts are visually more attractive
have more ancillary features; or because the teachers wish students to have this exposure to
fessional English (Pecorari et al. forthcoming b).

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It is worth noting that this situation is quite distinct from explicit Content and Language Integrated Learning (CLIL), in which the students' first language is a viable option for higher education, but instruction and reading are provided in a second language with the aim of improving mastery of that language. In the parallel-language environment in which our study is situated, the primary and formally stated aim of a content course is that students learn the facts, concepts and intellectual framework of the subject. While language-learning gains are perceived by teachers to be of benefit to their students, those benefits are serendipitous; language-learning outcomes are only very rarely identified as formal course learning objectives (Pecorari et al. forthcoming b). One unstated aim of exposure to English in this context is therefore bilingual scientific literacy in the sense that Airey (Airey/Linder 2008) intends.

The underlying principle here is that much vocabulary and other language is learned incidentally by exposure. It has been pointed out that in our first language we learn many words a year in childhood, mainly by exposure without particular attention to vocabulary development (e.g. Phythian-Sence/Wagner 2007). There is also considerable evidence for incidental acquisition of L2 vocabulary (e.g. Kim/Krashen 1998).

However, learning theory makes it clear that all learning implies some degree of attention and that increased attention or elaboration (Anderson 1995, Baddeley 1997) results in increased retention. Consequently, mere exposure as a language acquisition strategy for adults is now increasingly under question within second language acquisition theory. Laufer (2003) shows that more repetition and more attention than often naturally occurs is necessary for retention. A deliberate attention to the linguistic code, or 'focus on form' (Ellis et al. 2001), may be a more effective approach for certain kinds of language learning, including vocabulary items (Laufer 2003, 2006; Irvine 2006). This is consistent with Paradis' position (e.g. 2009), that vocabulary knowledge is not essentially implicit and procedural, like grammar knowledge, but explicit and declarative.

In the parallel-language situation as presently constructed there is a risk that some students will not acquire the scientific register either in English or in their L1. Exposure to the academic register and to technical terms in two languages, one in speech and one in writing, reduces students' exposure to each language and medium. Furthermore, the extent to which students in scientific and technical subjects read textbooks is unclear. Hence, exposure to forms in any one language is considerably attenuated, and a concomitant result is a decreased opportunity of incidental acquisition. This is especially true when dissimilarity of form means that the two exposures (i.e., exposures in two languages) do not reinforce one another. This raises the possibility that the quality of learning will be affected.

This attenuated exposure suggests that the aim of bilingual vocabulary development would be better achieved by teaching which draws attention to the items to be learned (in both languages) than by teaching which does not do so. As argued by Hellekjær (this issue), the quality of lectures in both the languages of the academy can be improved. It would be useful to know what measures lecturers could take to make vocabulary acquisition more efficient. Such measures may be at two levels. One is measures to encourage students to expose themselves to the L2 input by reading the books, which by no means all of them do at present (Pecorari et al. forthcoming a). As long as students who are less proficient in English are evading exposure to academic English by not reading the textbook (Ward 2000), there is little point in proposing strategies to optimize the effect of such exposure. However, once the students are reading the books, vocabulary acquisition would presumably be enhanced by measures on the second level, to encourage types of processing which are likely to lead to noticing and retention. Lecturers would do well, one can speculate, to include episodes of focus on reading (to encourage reading to maximize exposure), and episodes of focus on form (to encourage attention to the English-language vocabulary to be acquired).

There is a good deal of research into lecture texts (Bamford 2007, Crawford Camiciottoli 2007, Lee 2009, Biber 2006) but little has thus far addressed intertextual references. An exception is Ädel (2008), who looked at the quality of learning implied by intertextual episodes in lectures. The issue is important because lectures might be accused, as textbooks often are (Richardson

2004, Tadros 1993, Hyland 1999), of being highly monologic and thus misrepresenting knowledge as a monolithic agreed structure rather than the product of debate. Ädel's evidence, however, suggests that those recorded for the MICASE project were relatively open and allowed different voices to be heard. She asked, among other things, to what degree lecturers situate intertextually the knowledge and facts they are presenting. Using a fairly small corpus (the 'large lectures' in MICASE) she was able to look at (and filter) a wider range of indexical items: third person pronouns, proper nouns from a word list of the corpus, and a selection of nouns, such as *researcher**. She retrieved all instances and then filtered out all irrelevant items. She concluded, contrary to some previous work, that lecturers quite often attributed information to expert sources, that they did so in a non-evaluative way, and that the frequency of attribution varied across disciplines in lectures in a similar way to that in writing.

Lecturer speech acts which refer to expert sources may encourage students to consult those sources, and in any case they model appropriate attitudes to knowledge and disciplinary discourse. But in practice most student reading is likely to be of set texts presented by lecturers, and if lecturing practice is to be improved in this area the focus must be on such texts. The purpose of this paper is therefore to offer an initial description of the lecturer speech acts which refer to texts, and thereby, it is hypothesized, increase the chances of student exposure to those texts.

The paper has two goals. The first is simply to collect what may be called intertextual episodes from lectures and assess their frequency. The aim is to know how and how often lecturers draw attention to other texts in the students' learning environment (textbooks, websites, lecture notes, even slides). To do this it is necessary to carry out a survey which will identify a large proportion of the episodes in lectures which refer to these texts.

The second aim is to use this inventory of intertextual episodes as the basis for an ad-hoc classification which will enable us to investigate the likely effectiveness of the various types. That is, learning theory suggests that some episode types are more likely to increase student exposure to written texts and to enhance incidental acquisition than others (Laufer/Hulstijn 2001) and our aim is to classify episodes with a view to identifying the types of references whose effectiveness later experimental work can investigate. The classification is therefore oriented to degree or type of involvement rather than, for example, syntactic form or rhetorical function.

No corpus of lectures is available in Swedish, so the specific features of interlingual intertextual episodes cannot be investigated by this method. On the other hand, there are large corpora of English-language lectures and these enable us to develop categories which will provide a baseline to enable us to capture the characteristics of intertextuality in a smaller sample of Swedish-language lectures which is currently being video-recorded (Malmström et al. in preparation). Awareness both of the range of episode types which can occur (from this work) and of those which appear more frequently in the parallel-language environment than in the 'monolingual English' one (from work in progress) will enable us subsequently to observe the effects of different types of lecturer behavior, first naturalistically by recording lectures and pre-testing, and post-testing vocabulary knowledge and finally experimentally.

After a description used in section 2 of the method and corpus, section 3 describes the resulting inventory and taxonomy of episodes. Section 4, the discussion, deals first with the likely effects of the types of episodes found on reading and retention, in the light of vocabulary-acquisition theory. Then it considers other dimensions of the episodes which are likely to have positive effects, presenting a programme for further research. The final part of Section 4 makes preliminary recommendations for local-language lecturers which, it may be noted, are probably equally relevant for English-language lecturers (Hellekjær, this volume).

2.   Method

2.1.   Corpus search for intertextual episodes

The approach adopted for achieving the first aim was to search a corpus of lectures for keywords like *book, reading, coursepack,* or *notes,* and filter the results to find episodes in which lecturers draw attention to reading. This generated a list which gave an idea of the likely frequency of intertextual episodes, that is lecture segments in which the speaker referred to a text which students might be expected to, or were required to, read.

Two corpora of English-language lectures are available, MICASE (the Michigan Corpus of Academic Spoken English: Simpson et al. 1999, Simpson-Vlach/Leicher 2006) and BASE (British Academic Spoken English: Nesi 2009). MICASE includes transcripts of a wide variety of academic events from the University of Michigan, including 63 'small' and 'large' lectures from a variety of disciplines. BASE consists of 160 lectures from British universities, 40 from each of four broad subject areas: arts and humanities, social sciences, life sciences, and natural science.

To our knowledge there is no previous research on intertextual episodes and consequently we could only guess what form they would have. Scanning lecture texts suggested that a high proportion were likely to contain 'read' or a noun referring to some kind of text. In a pilot study we searched MICASE (using its own concordancing facility) for members of an intuitively developed list of words that were likely to occur in intertextual episodes. We read the hits from MICASE and their surrounding text and identified other suitable search words.

We then used Antconc (Anthony 2008) to search 120 lectures from BASE for the words which often occurred in intertextual episodes: *book*, text*, handout*, coursepack*, page*, chapter*, textbook*, section*, note*, slide** and *reading*.* Since we were looking for episodes in which a lecturer referred to a piece of text, not for uses of the words, it was not uncommon for two or more keyword in context (KWIC) lines to be part of one episode. For example the episode *this is on page two of your handout, at the end of section one* would generate three KWICs but these were merged and counted as one episode, since it was functional units, not words, we were concerned with.

2.2.   Classification of episodes

Our attention then turned to a classification which would facilitate testing hypotheses as to the effect these intertextual episodes might have. At the most basic level, the simple mention of a text may make it more likely that students will choose to engage with it. However, the likelihood that they will read a text, and that they will read it sufficiently attentively to learn vocabulary from it, may depend in part on the qualitative aspects of the reference.

Thus we hypothesized that qualitative features of intertextual references influence the likelihood that students interact with texts and vocabulary items and that testing members of appropriate categories would show which categories were effective. The episodes identified were therefore assigned to categories that reflected their properties with regard to attention enhancement and dialogicity, as proposed by Laufer and Hulstijn. Classification was an iterative and collaborative process, requiring gradual development and refinement of categories. Small samples of KWIC lines from BASE were analysed by individual authors, and category assignment was then agreed collectively. When this process had been repeated a few times, the result was a set of categories which were intersubjectively robust, and would allow discussion and a broad quantitative view of the types of episode that occur in lectures in English in an essentially monolingual environment. Last, we extended the search for episodes of what seemed the most relevant types to MICASE, using the search software that comes with the corpus, to assess the similarity of episode frequency and type across two academic cultures and discipline samples. In the next section we present the categories that were the result of this process.

3. Results

The initial corpus search described above resulted in a large unsorted list of intertextual episodes. The 120 lectures in the three disciplines in BASE turned out to contain 1568 intertextual episodes of various kinds. They fell into the seven preliminary categories illustrated in Figure 1. As mentioned above the next step was to develop a set of criteria to facilitate a principled investigation of whether these episodes were likely to enhance reading and vocabulary acquisition.
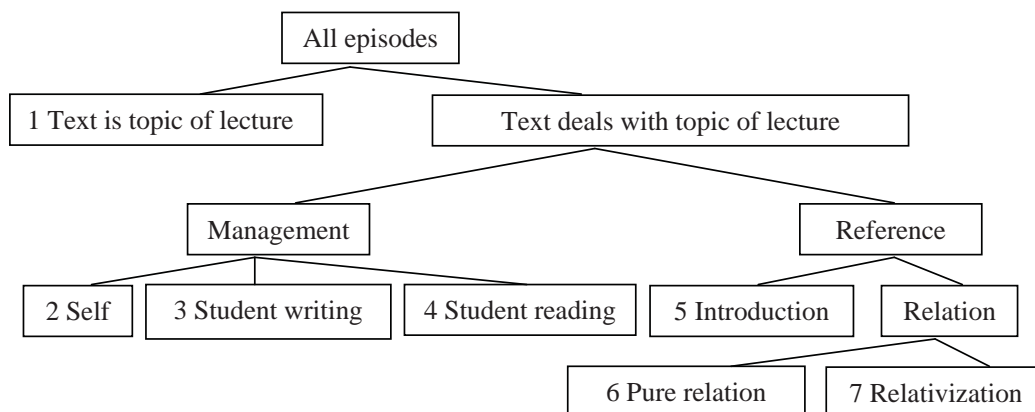

Figure 1. Seven preliminary categories of intertextual episode and their interrelations

An initial dichotomy was between text as topic of the lecture and text about the topic of the lecture. An example of the first comes from a lecture recorded for BASE[1] about the development of language-teaching methodology where the lecturer said:

(1) …. next week we're going to look [0.3] with me at language learning and how it's moved on how we've got from [1.2] books like this [0.4] in nineteen- [0.3] fifty-nine [0.4] i-, (BASE sslct003.txt)

The book in question in Example 1 is part of the subject matter to be discussed in the lecture. By contrast another lecturer recorded in BASE said

(2) … the other [0.6] thing i'm [0.2] going to recommend is [0.2] there's a one star next to the Bowen article in this book [0.3] now this is a book i recommended right in the first reading list Targeting Inflation [0.4] several copies available (BASE sslct010.txt)

The topic of the lecture in Example 2 is an economic issue, and the article and book are reading material that will enable the students to learn more about the topic. The two types of intertextuality are to some extent aligned with disciplinary differences. In most subjects most intertextual references are to the topics shared by the lecture and the books, handouts etc. But in some (literary studies, Bible studies, historiography) the books (etc.) referred to **are** usually the topic, and very many instances of intertextuality actually constitute the content of the lecture. Some disciplines are marginal between the two, as in the case of philosophy, where the topic is 'Wittgenstein's philosophy' for example, and the source texts are books by Wittgenstein presenting these ideas. In some the issue is controversial. Thus Richardson 2004 argues that economics is often presented as a consistent body of agreed knowledge, like chemistry, whereas it should be presented as a body of texts in fundamental conflict with one another, like philosophy.

Our interest in disciplinary vocabulary acquisition meant that we were mainly concerned with episodes referring to technical texts about the topic of the lectures. Intertextual episodes referring to the Bible, literary works, or EFL textbooks, where these texts were the topic of the lecture,

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1 The examples are copied from the BASE transcripts. Pauses are indicated by the length in seconds in square brackets.

were excluded because one does not learn theological language, like *eschatology,* or *sacrament*, from reading the Bible, literary-critical terms like *narrator* or *theme* from *Huckleberry Finn* or applied linguistics jargon like *communicative* or *interactional* from *English in Context.* References to texts which were the topic were excluded from the analysis at this stage, reducing the total examined from 1568 to 806. Figure 2 shows that the episodes excluded were predominantly from the humanities lectures.
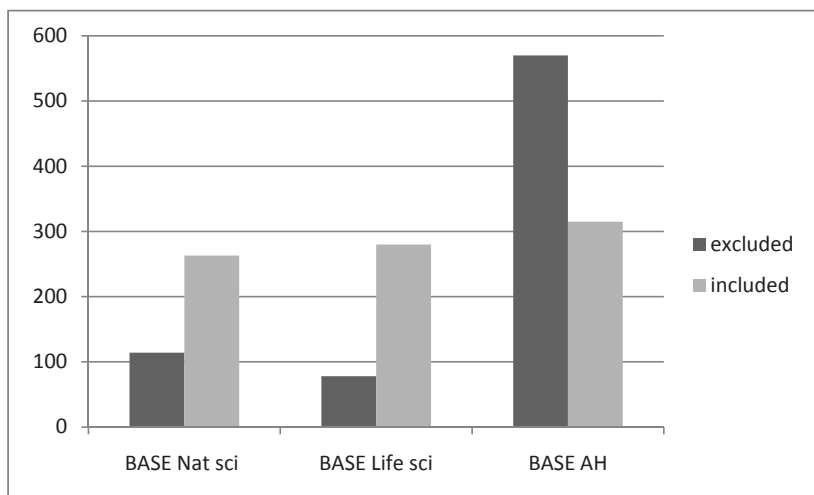

Figure 2. Excluded and included episodes from 120 BASE lectures

The second division is between episodes which discuss uses of the texts referred to (MANAGE-MENT) and those which relate content to texts. In all subjects one frequent type of intertextual episode discusses what texts should be read when or how, or what texts should be produced when or how. These were categorized as MANAGEMENT episodes. One subtype directed student writing in one way or another, as in examples 3 and 4:

(3) this isn't in your notes you might want to copy this down (BASE pslct027.txt)

(4) figures [0.2] which support your description this is very important to work the diagrams and your text together (BASE lslct010.txt)

These were classified as STUDENT MANAGEMENT WRITING. Another form of discussion of text use is lecturers' comment on their own choice or production of texts

(5) what i haven't done yet either [0.3] is revised er the reading [0.4] that i have on the web [0.3] site [0.2] i will do that before the end of term which i'm very much aware is Friday (BASE lslct011. txt)

Such examples were classified as SELF-MANAGEMENT. However, the most common subtype here was STUDENT MANAGEMENT READING, that is, episodes which direct student use of instructional texts.

(6) the next thing that you should be reading in the coursepack are the series of articles in the coursepack that deal with the history of the English language. (MICASE LES355SU009)

(7) it's a lengthy thing to read, whether you can derive something in one reading , uh, i- i- is uh you know something for you to judge (MICASE LES365JG029)

Of the three MANAGEMENT subclasses it is STUDENT MANAGEMENT READING that is of most interest for our applied purposes, since it does precisely draw students' attention to assigned reading. At this stage we did not consider the other two subcategories further, meaning that the number of episodes under examination was now 660.

Episodes not classified as MANAGEMENT either introduced a new source of information or referred to the content of a known resource In all subjects most intertextual references were to the books, handouts, slides websites, coursepacks etc. attached to the course of lectures, but in all there are occasional references to books (usually) outside this universe. Such episodes were classified as INTRO, as they introduced new material. Some fall into the category of expert attribution, like

> (8) ….. that was influenced [0.2] by a rather wonderful book by the literary critic and Palestinian Palestinian Edward Said [0.3] called Orientalism (BASE ahlct021.txt)

but appear here because the authority is presented through a specific text, which enthusiastic students might be moved to read. Others are simply encouragement to read a particular or even an unspecified book, as in Example 3.

> (9) i don't even know who the Abderites were [1.1] er [1.9] but if you're that interested i'm sure there's a book in the library somewhere and if you find out you can tell me [1.1] (BASE ahlct032. txt)

While these are not prototypical episodes encouraging students to read they do model reading as a source of information and we include them in our further investigation.

As noted above, in all subject areas the most frequent type of intertextual episode relates the material being presented to a handout or the textbook (REL). This is most often done neutrally (making the textbook canonical).

> (10) however if you read the reading, you'll know that something else is going on. …… (MICASE LEL565SU06.)

> (11) um, if you, wanna know about gene conversion... go to page um, two hundred and thirty, figure nine-five. (MICASE LES175SU079)

> (12) so in the D-N-A at the end of the trp operon way at the very end, the sequence coming would be A-T-T, A-A-A, i'm sure this is in your book, if you don't wanna write it down   (MICASE LES-175SU079)

Episodes like examples 10-12 were classified as RELATE. Much less commonly, there is some distancing from the textbook, allowing some plurivocality.

> (13) the promoter... is upstream, why don't we just call this P now because that's what your book is going to, so instead of writing minus-thirty-five minus-ten i'll just write P. (MICASE LES-175SU079)

In this case plurivocality comes from the concession that the notation is arbitrary and the book has chosen a particular symbol – rather than P simply being the correct symbol for the variable. Episodes in which there was judged to be some plurivocality of this kind were classified as RELATIVIZE.

Both REL types of reference draw students' attention to the relation of learning and reading. In the parallel-language environment it is worth testing whether corresponding episodes enhance acquisition.

Figure 3 illustrates the numbers of episodes of relevant types found in the three BASE subcorpora. Pure relation (RELATE) is much the most common, followed by management of student reading. Few episodes relativize the content of the text referred to, and it is quite uncommon to introduce potential new reading, except perhaps in the arts and humanities.
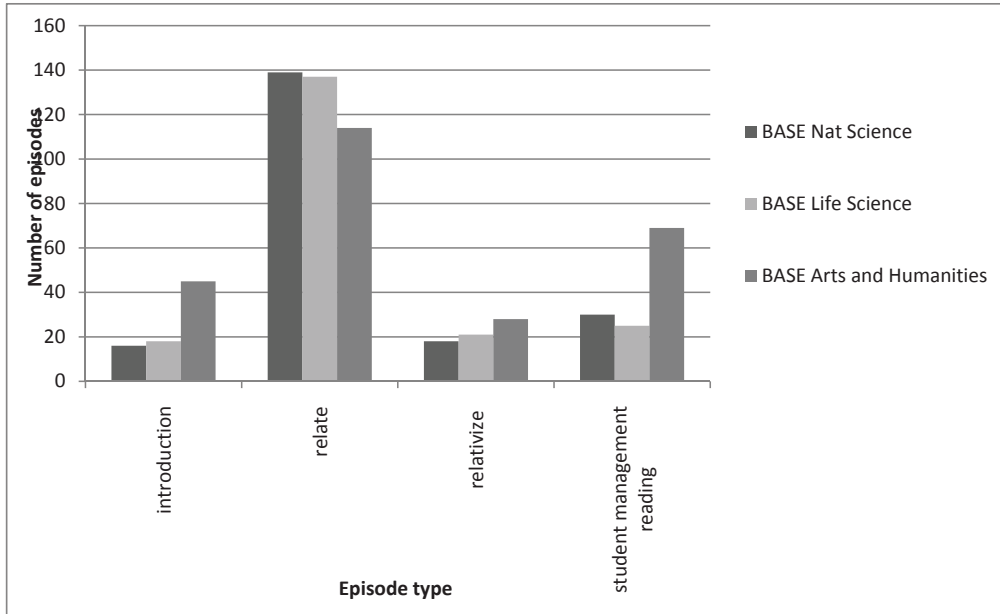
Figure 3. Intertextual episodes in lectures from three subject areas in BASE, by subject area and episode type

As noted above, the search was extended to the 63 'large' and 'small' lectures from MICASE. These are unevenly distributed among the same four subjects grouping as BASE (which took the groupings from MICASE). This yielded 506 episodes where the text was about the topic, 319 of which were in the four categories in focus here (some five per lecture), so that the absolute frequency of intertextual episodes is very similar across the two corpora. The mean number per lecture was 8.1, the standard deviation 8.9, and the median 6, that is there was a great deal of variation among lectures and a biased distribution. The maximum number of episodes per lecture was 30, the minimum (occurring in seven lectures) was 0.

Figure 4 shows the results of applying the classification above to the episodes from MICASE and BASE, in terms of percentages for easy comparison since the sample from BASE is twice as large as that from MICASE.
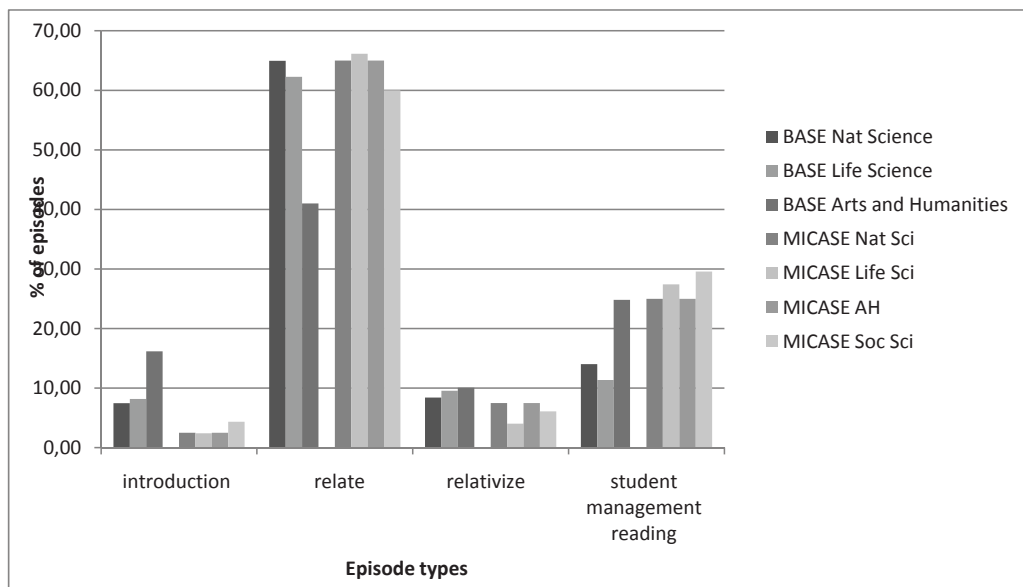
Figure 4. Intertextual episodes in lectures from three subject areas in BASE, by subject area and episode type

The most striking feature of Figure 4 is the similarity of the distribution in MICASE to that in BASE. Lecturers in the two academic communities (if indeed MICASE and BASE are not two samples from the same Greater US community) seem not only to refer intertextually with similar frequency, but also to use a similar mix of episode types. Furthermore, it appears that in both corpora the distribution across disciplines is very even. The one noticeable difference is the lower RELATE percentage for arts and humanities in BASE and this is largely due to a higher proportion of episodes assigned to other categories; the difference in absolute numbers is much less (Figure 3). One could also say that MICASE seems to have a rather higher level of management of student reading in all discipline groupings.

4. Discussion

4.1. Intertextuality episodes and incidental learning enhancement

As noted above, one of our aims was to use the inventory and classification to identify the types of references which are worth investigating for potential to increase student exposure to written texts and to enhance the quality of such exposure. The sheer quantity of intertextual reference is one factor that affects its effectiveness. In the 183 lectures examined there were 979 episodes in the categories which were judged to refer to other texts of the relevant types – those which students might read and whose content dealt with the content of the lecture. So each fifty-minute lecture had on average five or six episodes of the kind that might encourage reading one, every nine minutes or so. This was true quite regularly across disciplines and national or institutional educational cultures examined here, though there is variation from no episodes to 30 across individual lectures.

The average for the 183 lectures examined here may be taken to represent a norm for lectures at large, so that it may be said that those lecturers who refer to other texts more than the average (up to 30 times in MICASE) are doing so 'often' and that those who refer less are doing so 'sparingly' (or in several cases not at all). Furthermore, a lecturer who mentioned other texts for students to read thirty times in an hour would probably draw students' attention to reading by making it unusually salient – and if a high proportion of the references were to a particular text they would make that text salient.

Laufer and Hulstijn (2001) suggest that incidental acquisition is enhanced by motivation to read and understand, along with circumstance that lead to deep processing of and sustained attention to the vocabulary in question. If lectures aim to stimulate student reading, and to enhance its quality it would be useful to consider the potential effect of their references to texts. Of the seven types of intertextual episode identified in the previous section, four are good candidates for enhancing incidental learning of disciplinary and general-academic vocabulary. What can be tested is how they differ in their potential to enhance motivation and to generate deeper processing. At one level of motivation some episodes may encourage students to open the book and read; at the next some may make them read with greater engagement. Members of the latter category are especially likely to lead to more extended and deeper processing of targeted items.

In a lecture situation students are bound to have some motivation to read in order to learn the content they are pointed to. This need should be intensified by the STUDENT MANAGEMENT READING episodes which typically instruct students to read or show them how to get access to reading material. INTRODUCTION episodes should give a moderate boost to the most advanced students' motivation to read more widely. Lecturing in general, especially the many hours of intensive lecturing typical of science and technology courses in the early years of study, probably tends to reduce need and motivation to read. This is likely to be especially so for less advanced students, particularly when the lecture provides the necessary content neatly served up in the students' best language. But this effect can presumably be vitiated by RELATE episodes which point the student back to the text, encouraging reading, perhaps particularly by weaker students, when a section is misunderstood or notes are unclear (Pecorari et al. forthcoming a). RELATIVIZE episodes perform the same function but may have other effects as well. Where they evaluate the book positively, as in Example 14, one can assume that they enhance motivation.

(14) there's a great little description of what goes on on page seven hundred and sixty-three in your book if you wanna follow along. (MICASE LEL175SU098)

So we hypothesize that mere occurrence of an intertextual episode increases awareness of the reading material, and also motivation, with different types possibly affecting different student groups. Of particular interest in the parallel-language environment in which we hope to apply our findings are episodes that encourage more involved reading, but few were found, and this is perhaps an example of a function that does not 'naturally' occur in lectures. One group of RELATIVIZE episodes do draw attention to form and may set off or model deeper processing. Cases like Examples 15 and 16, in which the term rather than the underlying concept is in focus, and in which the canonical status of the textbook is questioned, might enhance acquisition for this reason, and should be one of the foci of future investigation.

(15) some textbooks call it metallation i think that's a confusing term because …. (BASE pslct003. txt)

(16) your book calls it adenylate cyclase, other books call it adenylyl. so don't be worried if you're seeing different, spellings (MICASE LEL175SU098)

In a parallel-language situation the equivalents may be discussion of the relation between an English and a Swedish term, and in fact the following, rather unusual, dialogue from the lectures we have recorded may be an instance:

(17) Student 1   Det finns det här *rough* and *smooth* öö

Lecturer   Det här är *rough*, så ska jag se om jag kan komma ihåg det på svenska …….*Knottrig*? Nej… Vad heter det på svenska?

S1   *Knottrig* OK

S2   *Kornig*

L   *Kornig* just det *Kornig* öö, och dom här [Ribosomes] är kornen

L   Jag kommer till *smooth* om ett litet tag. ……..[2]

It can be concluded that lectures in monolingual environments are sufficiently uniform in respect of intertextuality for generalizations to be possible, and for them to be likely to apply to lectures in Western environments across languages, where no particular attention is being paid to language issues (which seems to be the case in our recordings) . The generalizations that seem relevant in the present context are that their frequency of intertextual episodes is not particularly high, and that the types that occur naturally motivate students to read, some more than others, but do not in general create the cognitive conditions that are likely to enhance incidental learning.

4.2. A need for new categories

The categories developed thus far do not tell the whole story. The first complication is that the search words used turned up a large number of RELATE episodes which actually relate the content of the lecture to a text present in the lecture room – often a handout or a slide. There are actually only one or two references to associated pre or post-class reading about the topic in a typical lecture. Many 'here and now' intertextual episodes function more to structure the lecture than to guide student reading, as in example 18

(18) s main predator here which are lynx and this uh, let's see (and) the next slide(xx) here's a snow-shoe hare, this is in the summer, in the winter it turn (MICASE LEL175JU112)

The same applies to other categories, such as STUDENT MANAGEMENT WRITING. For instance, Example 3 above refers to in-class, here and now, writing, while Example 4 refers to project work out of class. This distinction between here-and-now intertextuality and out of class reading or writing cuts across the categories used hitherto. It is probably important where the medium of instruction is different from the language of reading, and possibly writing, and hence might repay attention in the wider context of this study. If Swedish lecturers follow the BASE/MICASE pattern, they do not often refer to the most problematic texts that may require most attention, at least if the implicit course aim of acquiring 'international' terms and vocabulary is accepted.

Another factor which can be hypothesized to reduce enhancement by intertextual episodes is that the categories are unevenly distributed across lectures. Episodes of management of student reading tend to be concentrated in a few more or less introductory lectures. University students have to navigate in a complex textual environment, but guidance as to what to read or write is not well spread out and the cross-references that might enhance use of and attention to required reading are not particularly frequent.

Our hypothesis is that processing of terms and vocabulary is enhanced by critical reading and a sense that knowledge is contested and constructed by different voices. So a factor that might be worth investigating in the intertextual episodes is the extent to which each one is monologic, with the two texts coming from the same source and saying the same thing, or dialogic, with different sources and even different content. Rather few episodes were classified as RELATIVIZE and by no means all that were have a strongly dialogic element, so dialogicity is probably another feature that cuts across the categories developed so far.

Another factor that emerges from qualitative inspection of the episodes collected is that the formulation of intertextual episodes can emphasise the active role of the student or downtone it. Examples of emphasis are Examples 19 and 20, which actually present the student as reader.

---

2 S1   There's this *rough* and *smooth* ..er…
   L   This one is *rough*, so I'll see if I can remember the Swedish …….*Knottrig* [nobbly]? No … What is it in Swedish?
   S1   *Knottrig* OK
   S2   *Kornig* [grainy]
   L   *Kornig* that's it *Kornig* er , and these [Ribosomes] are the grains
   L   I'll come to *smooth* soon. …..

(19) a signal into the cell which ultimately triggers, the division, of that cell. now, if you read the ,coursepack article closely, you will, perhaps recall or maybe not but, you should go- be able to go back and fi (MICASE LEL175SU106)

(20) if you read if you go into the Wellcome Library on the Euston Road read some of the old nephrology books (BASE lslct034.txt)

Examples of the second type, which obscure the student's role, are:

(21) es down to his distinction between ideas and impressions and what he does with it [1.1] so [0.2] this is [0.3] on the handout [0.4] er c-, [0.2] first talk about what the distinction is [0.2] why it's important [0.8] and what we might [0.5] thi,,,,(BASE ahlct037.txt)

(22) y, figure nine-five. and if you didn't understand the migration of the holiday junctions, um i think-pagetwo-twenty, the figure nine-point-two, is relatively clear. if you still don't understand it, email (MICASE LES175SU079)

Given evidence that many students read little of their textbooks (Pecorari et al. forthcoming a), this type of modeling or indirect instruction should make the episode more effective than mere mention of the location of the information.

These points lead us to think that a more detailed and multifaceted analysis of the intertextual episodes in the English-language corpora is necessary. It will probably involve a set of features characterizing the episodes rather than a set of mutually exclusive categories. The next step in our project is to develop and apply such a set of features, so that we can more clearly see what episodes occur in Swedish language lectures and, after empirical investigations of their effectiveness, make definitive suggestions for desirable practices in either environment.

4.3. Implications for learning and lecture quality and lecturer in-service courses in the bilingual environment

Students do not always read the books they are supposed to and if they do they do not always read them with the attention that would be necessary for 'exposure' to bring about its expected benefits. The process of remedying this situation is somewhat tortuous, since very little is known about any aspect of it. Our purpose in carrying out this investigation of lecturing in a monolingual environment was to use the availability of large standard corpora to start developing categories of intertextuality episodes. We are video-recording university lectures in Swedish and will be able to use these categories in the analysis of the much smaller corpus that will be available to us. The various categories of intertextual episode will then be tested empirically as to their effectiveness in encouraging incidental acquisition of terms and vocabulary in the parallel-language environment. The exercise in this paper has shown that there are indeed episodes which correspond to categories in models of incidental learning, and that a finer set of categories would probably enable more precise distinctions to be made.

Nonetheless even at this stage there are recommendations that can be made for the improvement of lecture quality. Attention to these issues seems rather simple and should improve the likelihood that students will read and the quality of that reading. Two 'naturally occurring' types of intertextuality episode satisfy theorists' requirements for some of the factors enhancing incidental acquisition (Laufer/Hulstijn 2001), that is they may increase involved exposure. The first are the moderately frequent episodes which involve managing student reading, mostly in the simple terms of saying what to read when. They are not oppressively frequent in the lectures we have analyzed and in many cases completely absent. It seems likely that such episodes have an effect on student reading and lecturers would do well to ensure that they include them. Hence pedagogy courses for lecturers teaching in a parallel-language environment might profitably suggest more frequent management episodes.

The other group that seems likely to increase reading includes those that simply state the intertextuality that must exist between required reading and lectures. Efforts could be made to in-

crease cross-reference to pre/post reading and again pedagogic units' checklists of desirable features could mention the practice.

Thirdly, lecturer practices may be able to encourage deeper processing, leading to better comprehension and in particular better retention of vocabulary and terminology. It seems likely that intertextual episodes that model evaluative processing of words and ideas or critical approaches to content encourage such processing, at least in some listeners. Lecturers' attention could at least be drawn to this issue.

Our observations of lectures in Sweden thus far have suggested widely differing frequencies and quality of intertextual episodes, with some lecturers focusing on the parallel-language situation and the complex intertextualities and others ignoring them. We look forward to having the tools to describe our findings and to assess whether these differences can be related to differences in students' implicit learning of terms and formal vocabulary in the two languages they are exposed to.

References

Ädel, Annelie 2008: *What uh the folks who did this survey found*: Expert attribution in spoken academic lectures. In *Nordic Journal of English Studies* 7, 3, 82-102

Airey, John/Linder, Cedric 2008: Bilingual scientific literacy? The use of English in Swedish university science courses. In *Nordic Journal of English Studies* 7, 3, 145-163

Anderson, Robert 1995: *Cognitive Psychology and Its Implications*, 4th ed. W. H. Freeman, New York.

Anthony, Laurence 2008: *AntConc 3.2.2*. [online]. http://www.antlab.sci.waseda.ac.jp/antconc_index.html

Baddeley, Alan D. 1997: *Human Memory*. Psychology Press, New York.

Bamford, Julia 2007: "i i just think that it's, definitely an invasion of privacy, that isn't necessary": Negative Evaluations in Academic Lectures. In *Textus* 20, 1: 17-36.

Biber, Douglas 2006: *University language: A corpus-based study of spoken and written registers*. Amsterdam/Philadelphia: John Benjamins.

Crawford Camiciottoli, Belinda 2007: *The Language of Business Studies Lectures. A corpus-assisted analysis.* Amsterdam/Philadelphia: John Benjamins.

Ellis Rod/Basturkmen Helen/Loewen Susan 2001: Preemptive focus on form in the ESL classroom. In *TESOL Quarterly* 35, 3, 407-432.

Hyland, Ken 1999: Academic attribution: Citation and the construction of disciplinary knowledge. In *Applied Linguistics* 20, 3, 341-67.

Irvine, Aileen 2006: Extensive reading and L2 development: a study of Hong Kong secondary learners of English. Unpublished PhD thesis: University of Edinburgh.

Kim Haeyoung/Krashen, Stephen 1998: The author recognition and magazine recognition tests, and free voluntary reading as predictors of vocabulary development in English as a foreign language for Korean high school students. In *System* 26, 4, 515-523.

Laufer, Batia 2003: Vocabulary acquisition in a second language: do learners really acquire most vocabulary by reading? Some empirical evidence. In *The Canadian Modern Language Review/La Revue canadienne des langues vivantes* 59, 4, 567-587.

Laufer, Batia 2006: Comparing focus on form and focus on forms in second-language vocabulary learning. In *The Canadian Modern Language Review/La Revue canadienne des langues vivantes* 63, 1, 149-166.

Laufer, Batia/Hulstijn, Jan H. 2001: Some empirical evidence for the involvement load hypothesis in vocabulary acquisition. In *Language Learning* 51, 539-558.

Lee, Joseph J. 2009: Size matters: an exploratory comparison of small- and large-class university lecture introductions. In *English for Specific Purposes* 28, 1, 42-57.

Malmström, Hans/Pecorari, Diane/Shaw, Philip/Irvine, Aileen (in preparation): Focus on form episodes in lectures in a parallel-language environment.

Paradis, Michel 2009, *Declarative and Procedural Determinants of Second Languages*. Amsterdam: Benjamins.

Pecorari, Diane/Shaw, Philip/Irvine, Aileen/Malmström, Hans (forthcoming)a: English textbooks in parallel-language tertiary education. In *TESOL Quarterly*.

Pecorari, Diane/Shaw, Philip/ Malmström, Hans (forthcoming)b: English for Academic Purposes as informal objective: Teachers' perceptions of supply and demand. In *Ibérica.*

Phythian-Sence, Caroline/Wagner, Richard K. 2007: Vocabulary Acquisition: a Primer. In Wagner, Richard K./Muse, Andrea E./Tannenbaum, Kendra R., *Vocabulary Acquisition: Implications for Reading Comprehension*. New York: Guildford Press, 1-14.

Richardson, Paul W. 2004: Reading and writing from textbooks in higher education: a case study from Economics. In *Studies in Higher Education* 29, 4, 505-521.

Simpson, Rita C./Briggs, Sarah L/Ovens, Janine/Swales, John M. 1999: *The Michigan Corpus of Academic Spoken English*. Ann Arbor, MI: The Regents of the University of Michigan.

Simpson-Vlach, Rita/Sheryl, Leicher 2006: *The MICASE Handbook: A resource for users of the Michigan Corpus of Academic Spoken English*. Ann Arbor, MI: University of Michigan Press.

Tadros, A. 1993: The pragmatics of text averral and attribution in academic texts. In Hoey, Michael (ed.), *Data, description, discourse: Papers on the English language in honour of John McH. Sinclair*. London: Harper Collins. 98-114.

Ward, Jeremy 2001: EST: evading scientific text. In *English for Specific Purposes* 20, 1, 141-152.