https://bulletin.vals-asla.ch · e-ISSN: 2813-7973 · p-ISSN: 1023-2044

Kelly, P. & Studer, P. (2010). Lecturer performance in second language lecture delivery: a case study of a physics lecture in Swiss university education. *Bulletin suisse de linguistique appliquée* (Numéro spécial 1), 143-156. https://doi.org/10.26034/ne.vals-asla.2010.0907

Lecturer performance in second language lecture delivery: a case study of a physics lecture in Swiss university education

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Im Zuge der Bolognareform wird europaweit wie auch in der Schweiz an Hochschulen zunehmend englischsprachiger Fachunterricht angeboten. Nicht nur auf der Masterstufe, sondern vermehrt auch auf der Bachelorstufe ist Englisch in den letzten fünfzehn Jahren als zusätzliche Unterrichtssprache eingeführt worden. Im Beitrag werden die Erkenntnisse einer Pilotstudie zusammengefasst, welche im Wintersemester 2006/2007 an der Zürcher Hochschule für Angewandte Wissenschaften im Bachelorstudiengang Aviation Engineering durchgeführt wurde. Gegenstand der Studie war es, den Gebrauch des Englischen in Physik-Vorlesungen unter Einbezug von quantitativen und qualitativen Daten sowie subjektiven und objektiven Rückmeldeschleifen zu untersuchen. Die Ergebnisse der Pilotstudie zeigen auf, dass sich die mit dem Wechsel in eine Zweitsprache als Instruktionsmedium verbundenen Verhaltensstrategien des Dozierenden von den Strategien in der Erstsprache unterscheiden.

Stichwörter:
English als Unterrichtsmedium in Höherer Bildung, CLIL auf tertiäre Stufe, Vorlesung, performativer Stil, metadiskursive Elemente, Emphase-Strategien

1. Introduction[1]

There can be no doubt that English is playing an increasingly dominant role in global tertiary education. More specifically in Europe, Coleman (2006: 6) maintains that it is "in the last fifteen years that English-medium teaching in European universities has shown exponential growth, initially in Masters courses but increasingly also in undergraduate degrees". Within Switzerland, the tertiary education landscape is undergoing fundamental changes with the implementation of Bachelor and Master degree programmes. In these programmes, there is an increasing focus on the preparation of students for the academic and professional contexts within which they will need to communicate in their futures (as opposed to wider cultural awareness-raising, as was often the case in the past). As a part of this development, programme directors are increasingly looking at the role of language(s) within their study programmes. This is true throughout Europe, as can be seen from the current

[1] We would like to acknowledge financial support from the Institute for Language in Business and Education at the ZHAW. We are grateful for the work of Hans Schütz, Annabarbara Pelli, Carmel Widmer-O'Riordan and Domingo Valero in preparing this paper.

establishment of a HELP (Higher Education Language Policy) network under the auspices of the European Language Council.

Given the dominant role of English as "the default language of international communication" (Brumfit, 2004: 163), there is a great deal of interest in the link between English and the 'content' courses, in particular the opportunities provided by English-medium instruction (EMI)[2]. For example, Wächter & Maiworm (2008) report a significant increase in EMI programmes throughout Europe since the Bologna declaration in 1999, particularly in the area of Engineering and Technology, where, in 2007, 27% of all programmes offered in this field were in English. Unfortunately, there is evidence that lecturers who agree to offer EMI courses do not recognise the amount of adaptation that this involves (see Klaassen, 2001).

This article reports the findings of a pilot study which was carried out in the School of Engineering at Zurich University of Applied Sciences during the winter semester of 2006/2007. The pilot study was conducted in response to the school's increasing interest in offering study programmes or courses through the medium of English. It focuses on the use of English in the delivery of content lectures based on a quantitative and qualitative evaluation of data recorded from classroom activity and taking into account both subjective and objective feedback loops. The paper argues that a change in language choice in lecture delivery motivates the use of performance strategies that differ from native language use.

2. Theoretical framework

The analysis of a bilingual or second language-mediated lecturing situation can be embedded in theoretical perspectives emphasising the relevance of individual performance style. Performance style is an established concept within the social psychological paradigm as it acknowledges the importance of subject-positioning within discourse (Harré & Moghaddam, 2003: 3). In a tertiary lecture situation, there is maximum exposure of the person delivering content to the student audience, and the delivery is entirely in the hands of the speaker. The speaker, therefore, finds him- or herself in the situation of having to mediate new and unfamiliar content to a student audience, a task that involves familiarisation strategies as much as strategies indicating salience or interpersonal rapport. Many lecturers routinely and intuitively employ such techniques – they divide topics into units, arrange them in ways that support their argumentation; they use linguistic cues and guiding strategies that

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[2] EMI is perhaps a more appropriate term in tertiary education than CLIL as the traditional lecture is conducted in a more monological and less interactional style than in primary / secondary school education.

indicate importance, or they engage the students by asking questions, conducting minimal classroom activities or, at times, by interspersing humour. While the use of such techniques is both individual and context-dependent, the introduction of a second language into the lecturing situation, which is a foreign language for most participants, presents an additional challenge to the lecturer as it increases the distance between the hearer and the content that is being delivered[3]. This effect seems to run counter to the purpose of a lecture, which is to 'customise' knowledge to the cognitive resources of students and to ensure a successful transfer of knowledge from the lecturer to the student. In this paper, we assume that this conflict is acknowledged and addressed by experienced EMI lecturers spontaneously by using certain techniques to compensate for the increased distance between student and teacher when lecturing in English.

The concept of social representation within the social psychological paradigm classically deals with asymmetrical expert-lay constellations (Moscovici, 1962; also Zgouris & Ackermann, 1966; Ackermann & Dulong, 1971; Jurdant, 1973, Farr, 1993, recently Cheng *et al.*, 2008). Bauer & Gaskell (1999: 165) argue that the "[…] circulation of knowledge from a core of experts or 'virtuosi' into the wider mass public involves the transformation of abstract and conceptual ideas into more accessible images, metaphors, concrete objects and habitual practices". Bauer & Gaskell (1999: 166) further argue that the transformation of knowledge from the expert to the lay audience is a creative process of knowledge reconstruction through social representations which "[…] mediate between the science world and the life world, bridging the 'gap' by transforming expert knowledge into hybrid forms drawing on both science and the life world". While the hybridity of a discourse or text type may be more pronounced in scientific contributions printed by the mass media than in a university setting, a lecture that is conducted in a language that is foreign to both lecturers and the audience may make language strategies necessary that establish 'common sense' between speaker and hearer in order to overcome the language barrier (cf. Bauer & Gaskell, 1999 on common sense; also Billig, 1988).

The types of common-sense strategies likely to occur in a lecture situation are limited due to discursive conventions in which a lecture situation is embedded. In highly conventionalised discourse or text types the speaker has little freedom to deviate from the commonly accepted norm; the speaker's role, first and foremost, is to fulfil (audience) expectations within the discursive framework provided. The introduction of a new language in a lecture situation

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[3] This highlights the 'significance of adaptation of methods in relation to knowledge of L2 medium language and thinking skills, not merely the linguistic skills of teaching staff' (Marsh & Laitinen, 2005: 2).

creates a deviation from that norm which is notable to both speaker and hearer. As a result, the speaker is likely to attempt to normalise the situation by reinforcing specific expectations commonly connected to the delivery of a lecture (cf. schema reinforcement in Cook, 1994). This can include text / discourse structural and organisational elements, such as the different content 'units' and the order in which they appear as well as various speaker interventions that remind the students that they are collaborating on a joint lecture 'project' (non-factual interventions, deixis, repetition, explanations; cf. Studer, 2008 for a similar discussion of the mass media; also Studer *et al.*, 2009a: 14 for a summary of discourse analytic research on foreign language lectures). In social psychological terms, these interventions 'anchor' what is novel (Moscovici, 1984). In the following, we will be looking at how spontaneous use of such common-sense strategies is made in standard lecture situations. For ease of presentation, we will distinguish between two broad classes of common-sense strategies found in the analysed lectures, i.e. strategies of reinforcement through redundancy or repetition (5.2) and deixis or metadiscursive devices as references to the lecturing situation itself (5.3). Both classes contribute to creating salience in the mediation of content to the audience.

3. Pilot design and data collection method

One way of providing a more appropriate estimation of the complexity involved in lecturing through English is to examine the language of experienced EMI lecturers and identify discursive aspects that appear to take on increased importance in this situation. The selection criteria for the observation of classroom interaction ideally follow a method of purposive sampling (cf. Patton, 1990, information-rich and typical cases) in which lecturers and students need to fulfil certain criteria to be included for analysis. In our case, the lecturer had to have a C2-level of English, while the students needed a B2/C1 command of English (cf. the recommendations made by Kling & Hjolmund, 2008). Moreover, both lecturers and students had to agree to the experiment. The lecturer, in particular, had to acknowledge the potential challenge of the changed demands of EMI (on the overestimation of one's teaching skills in EMI cf. Klaassen, 2001; also Marsh & Laitinen, 2005)[4]. For

[4] There were, in fact, two lecturers who took part in our study. One of the lecturers had no experience of teaching in English and kindly agreed at relatively short notice to do so. This lecturer clearly required more linguistic preparation and support from the beginning for his course to be successful. As it was, comprehension difficulties largely due to pronunciation problems meant that the course was very difficult for the students to follow and support mechanisms had to be put in place to ensure that the students could cover and understand the material required. We did conduct an analysis of his lectures and discovered a much smaller number of examples of the types of strategies we identified in the other lecturer's performance. However, the pronunciation (and voice projection) problems make it very difficult to say if the

the present analysis, both the lecturer and the class met the prerequisites recommended for successful EMI implementation. The participating lecturer, a native Swiss with extensive experience of living and working in North America, had over 10 years' experience in giving his Physics course in English to students in the School of Engineering.

The design of our study largely followed a phased approach (cf. Seidel *et al.*, 2003) which included an English test for students, a video analysis of lectures in each language, and follow-up tests (end of term exams) as well as interviews with the lecturer. In addition to these methods of data collection, attitude questionnaires were filled in by students and teacher before, during and after the test phase. The attitude questionnaires were inspired by Ager's (2001) attitude criteria towards language, such as the cognitive (knowledge about language), conative (readiness to do something about the language situation) and affective (emotional disposition towards language) dimensions (cf. also Studer *et al.*, 2009b).

For the purposes of this study, the lecturer gave his course in English and German to two different groups. Two lectures in each language were recorded on video and one lecture in each language was transcribed. The transcribed lectures demonstrated and explained the Bernoulli principle. The recordings were made by placing the camera behind the students and focusing on the lecturer. This made the presence of the camera as unobtrusive as possible so as not to distract either lecturer or students. The camera was largely stationary throughout the lectures for the same reason. In addition to the video evidence, the students in the English classes filled in questionnaires before and after their course concerning their attitude to being taught in English. The students were in their first year of study; there were 30 in the German class and 22 in the English class. Those in the English class had made this choice themselves. All had done an English language electronic entry test prior to beginning their studies and had scored in the B2/C1 range. They were almost exclusively native (Swiss-)German speakers. The analysis of the lectures is largely qualitative and deals with established areas of (L1) lecture research such as speed and density of speech, metadiscursive markers, information structuring, questioning and defining / explaining (see Nesi, 2001; Flowerdew, 1992; Chaudron & Richards, 1996; Thompson, 1998). Comparisons are sometimes made in this paper with observations made on the basis of large academic corpora such as MICASE (the Michigan Corpus of Academic Spoken English) and BASE (British Academic Spoken English).

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presence of more helpful linguistic and metadiscursive devices would have made any difference to the ease of comprehension of the students.

4. Summary of results of questionnaire evaluation and exam result analysis

When the students were asked in the middle of the course if they would choose to do the subject in English again, 100% said they would do so. 20% said they could follow the course only with difficulty (though that is typical for this subject, regardless of the language); 80% had no problem or few problems.

At the end of the course, all of the students felt that their expectations that their English would improve as a result of having the subject in English had been met to some extent. All said they would do it again in English and found the use of English a personal enrichment. Nobody felt that their mark would have been better if the course had been in German. This bears out the lecturer's anecdotal evidence that in previous years students who failed his subject in their first year would very often choose to do it again in English when repeating, thus ascribing their problems to the subject itself rather than the fact that the course was delivered in English. In fact, the students in the English class often had a higher average mark than those in the German class though it must be noted that those in the English class were generally students with a higher general academic level than those in the German class.

5. Performance strategies

5.1 Speed of speech

Our detailed analysis focuses on two specific lectures on a particular topic, one in English and one in German, given on consecutive days. On viewing the recordings, several areas pertaining to presentation style were identified as being potentially significant, largely on the basis of an immediate recognition of their frequency. These areas were subjected to quantitative analysis.

Firstly, the speed of speech was calculated by taking an average of ten minutes of transcribed free (i.e. uninterrupted by questions from / to students or by writing on the board) speech from each of the lectures. It should be noted here that the lectures were delivered in what has been characterised by Dudley-Evans & Johns (1981) as a 'conversational' style i.e. the lecturer does not read aloud but speaks informally, generally without notes. Although this style is often associated with a good deal of interaction with the students and although the class sizes were small enough to allow this, there was, in fact, little input from the students, particularly in the English lecture, apart from a brief opportunity to ask questions at the end. There was somewhat more student input (i.e. they asked and answered more questions) during the course of the German lecture, but still relatively little. This was probably because each lecture was accompanied by subsequent practical work during

which students had every opportunity to ask questions and discuss points with the teacher.

Taking an extract of ten minutes of free speech from one German and one English lecture, we observed that there was little difference in the English and German speech rates, as is shown in Table 1 below.

English	105 w.p.m.*	144 s.p.m.**	46% l.d.***[5]
German	98 w.p.m.	158 s.p.m.	41% l.d.
	*words per minute	**syllables per minute	***lexical density

Table 1

The lecturer's speed of speech in English is moderately slow according to the categories compiled by Tauroza & Allison (1990) in which moderate is defined as 100-125 words per minute. At first sight, it seems that the speed of speech is slightly lower in German but, as Tauroza & Allison (1990) reported, the number of syllables per minute may well be a more accurate gauge of speed. In this case, where we are comparing English and German, the relative lengths of words in the two languages must be taken into consideration, with German words generally having both more letters and more syllables on average than English words. If we look specifically at syllables, the lecturer's speed is slightly faster in German than in English. At any rate, there is little difference between the two. Both in terms of words per minute and syllables per minute, the rate of speech may be considered relatively slow, which may be particular to this lecturer or may be related to the difficulty of his subject or the fact that he is speaking to first-year students. His speech is also less lexically dense (in both languages) than the average (48%) reported by Nesi (2001) in her corpus-based analysis of science lectures.

The samples taken and reported above were taken from two lectures on the same subject. It is interesting to note that, speaking at a similar pace and with similar lexical density, one lecture in English was timed at almost 65 minutes whereas one lecture in German on the same topic was timed at just over 45 minutes. Even allowing for elements such as some general course information at the start, extra information at some points, and some time for questions at the end, the lecturer was taking longer to cover the same material in English than in German[6]. This would be in agreement with some evidence

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[5] The lexical density was calculated by dividing the number of words into the number of lexical words (as opposed to functional words) and expressing this as a percentage.

[6] While language can be assumed to be a contributing factor to the length of a lecture, the increased time taken for the English lecture in this study is likely to have been influenced by circumstantial or situational factors which may not be a consequence of switching into English,

that a switch in lecturing language may lead to "a loss of academic achievement per unit time" (Jochems, 1991: 315). How, then, is the extra time being taken up? We would argue that certainly some of this time is being taken up with a variety of methods being employed as reinforcement and metadiscursive strategies, many more in English than in German.

5.2 Reinforcement strategies

For the purpose of the analysis, we have divided reinforcement strategies into explanatory devices (including definition and translation), repetition and questions. In writing about science lectures, Flowerdew (1992: 211) identifies two main functions for definitions: "signposting the logical / discourse structure of the subject / lecture, or helping to maintain comprehension as the discourse progresses". He differentiates between formal definitions e.g. "An A is a B which C", semi-formal definitions in which "the term is identified by means of the presentation of a key characteristic or characteristics", and substitution in which "a word, word-part, phrase, or phrases, with a similar meaning, is substituted for the newly introduced term". He distinguishes between three types of substitution: synonym, paraphrase, and derivation. Our lecturer makes regular use of substitution in his English lectures, particularly synonyms and paraphrases (e.g.*; … smaller, less strong, weaker …*). Flowerdew (ibid.: 212) goes on to identify the frequency of 'some form of clear lexical signal' and cites the use of *we call / is called / are called / called, mean(s), or, known as,* and *that is*. Again, we find many examples of this in our lectures:

(1)

what is called a characteristic
I call that a Bernoulli pressure difference
The flow, meaning the volume flow, …

While there are some examples of this in his German lectures, the use of definition is much less frequent (e.g. there are only one or two examples of *nämlich = namely, mit anderen Worten … = in other words,* and any clause with *heisst = call*).

A further strategy used for explanation was that of translation (14 tokens in one lecture of approximately 64'). The opportunity to use this device obviously depends on the speaker and listeners being able to speak the same languages, which was the case here. The translations were sometimes of just one or two words but more frequently of whole sentences:

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such as the general mood of the lecturer and the students or the time at which the lecture took place on that day.

(2)

system behavior, uhm sogenanntes Systemverhalten
the piece of equipment that does exactly the opposite of a pump, that's a turbine. Eine Turbine, oder? ist eine Umkehrung einer Pumpe von der Funktionalität.

These are often quite precise translations even when the statements are relatively long:

(3)

We have studied the relationship between a fluid, a liquid flowing through a pipe, a horizontal pipe and the pressure drop. Wenn-ähm-eine Flüssigkeit durch eine horizontales Rohr fliesst, dann nimmt der Druck in Strömungsrichtung ab. Das haben wir gesehen.

He by no means translates all of the 'difficult' terms in his lecture. It may be intended to serve as a mental 'anchor' for students, positioning speaker and hearer within the system of L1, though it should be noted that he always uses it as a translation device and never only for the purpose of speaking in the students' L1. He often introduces his translation by using the German term 'Also', which would be similar to 'So' in this context in English, thus marking clearly his explanatory purpose. In a follow-up interview, the lecturer himself confirmed that these translation sequences were not planned beforehand but were introduced spontaneously in the lectures. When asked on what basis, he stated that he liked to translate new and important terms because a) he wanted the students to hear these in their native language and b) he wanted to make use of repetition, regardless of the language. Thus, he clearly identifies one of the functions of translation as being repetition of important points / terms. It is interesting that he makes more use of repetition in general in English than in German, perhaps intuitively feeling a greater need for anchoring, also when speaking in a foreign language. Sometimes these are exact repetitions, e.g. *First observation … First observation,* and sometimes the substitutions referred to at the beginning of this section. If we take the important content words in the two lectures on the same topic, we find that, even allowing for the differences in length of the two lectures and differences of expression between the two languages, key terms like *pressure, difference(s), speed* and *flow* appear more often than their German equivalents do (e.g. *speed* appears 58 times whereas any combination with *Geschwindigkeit* appears 22 times; flow(s) is used 99 times while the possible German equivalents are used 49 times).

Questions posed and answered by the lecturer may be considered another type of repetition as they frequently consist of grammatical (e.g. *What do we have? We have the highest pressure …*) or lexical forms (e.g. *Is it because of the pump? No, there's no pump in there)* being repeated. Thompson (1998: 146) has written about the different roles of the linguistics lecturer and the science lecturer, the latter being "a more omniscient being who answers

the questions s/he puts, while the language presenter is more frequently a raiser of issues for consideration". Thompson illustrated this with reference to the kinds of questions more commonly asked by the two types of lecturer, with the science lecturer being more likely to use content-oriented questions to introduce information. The function of the questions is not to evoke a response from the students but as another kind of metadiscursive device to prepare students for information that is to follow. The lecturer makes very frequent use of this device (e.g. *What kind of phenomena did we study so far?*) He does not expect or wait for a response from the students. This occurs much more frequently in his English than his German lectures. For example, he asks the same question as the above example in German (*Was für Beispiele von Phänomenen haben wir bisher untersucht?*) but actually waits for an answer. In English, even when the question would logically suggest that an answer was expected (e.g. *Is it clear to you that …?*), no answer is waited for and the monologue continues. In fact, 86% (44 out of 51) of his questions in the lecture in English are answered by himself whereas this is true of only 49.5% (16 out of 33) of his questions in the equivalent German lecture. It is perhaps surprising that there is much more lecturer-student interaction in the German lecture than in the English one. This finding supports that of Airey & Linder (2006: 558), who found that "students asked and answered fewer questions" when they were taught in English. The lecturer may well be wary of 'forcing' students to produce English responses.

5.3 Deictic references as metadiscursive devices

Macro-markers are defined by Chaudron & Richards (1996: 116) as "discourse signals of the relationship between successive episodes and moves within the lecture". Chaudron & Richards (1996: 123) found that "learners are evidently aided in organizing the major ideas in the lecture from the guidance of the lecturer's signals of major segments and emphasis". In addition, Maurenen (2001: 170), in talking about metadiscourse on the evidence of the MICASE corpus, identifies four main types, of which the first is when the lecturer refers to the ongoing discourse, and she sees the use of such reflexivity as "a way of imposing authority on the discourse". We can see this in our study in the way that the lecturer refers to the ongoing discourse: *I'd like to introduce two observations* […] *And now here's the new thing*: […] *First observation*: […].

He also comments on the ongoing discourse in German, e.g. *Ich zeige's Ihnen nachher noch in einem anderen Film (= I'll show you this afterwards in another film).* However, he does so to a lesser extent in German than in English. His English supports Swales & Malzcewski (2001: 149) who, in their study on discursive management and new-episode flags, reported on "the use of verbs governing *to*-clauses (such as *want, try,* or *like)*". They showed that such verbs were much more common in spoken academic discourse than in

conversation and posited the view that this may "have something to do with the didactic nature of the specialized corpus and the managerial exigencies of those didactic settings". Our lecturer makes very frequent use of such verbs, in particular *want* and *would like,* and is thus much more explicit about signalling his intentions in English than in German. As a result, the discourse structuring phase, which is one of the metadiscoursal phases identified by Young (1990), takes up more of the English lecture than the German one. It is clear that examples like *I would like to draw your attention to …* or *I'd like to ask you to think about …* have the effect of focusing students' minds on what is to come and preparing them to receive this information. It also helps them to distinguish between information that the lecturer considers relevant and less relevant stretches of the lecture.

Another element referred to by Swales & Malzcewski (2001: 153) is the use of *Let.* Their data suggest that "*let me* is considerably more metadiscursive than *let's*; about half of the former realize this function, while just under a third of the latter do so". This is somewhat difficult to compare with German as at times other linguistic forms may be used in German to achieve the same effect. For example, we would probably translate *Nennen wir das* as *Let's call that …* although the word for *let* does not actually appear in the German phrase. The main use he makes of this form in German is specifically in the phrase *Schauen wir uns mal …* (= *Let's look at …*), which accounts for three of the six uses of this structure in one lecture. He only makes one use of the phrase *Lassen Sie mich …* In English, he makes much more frequent (a total of 20 times in 64') use of a wider range of verbs with both *Let's* and *Let me* constructions (e.g. *Let's talk about …; Let me quickly describe how …*). This would appear to have a similar function to *I'd like to …* and *I want to ...* in that it signals to the students what is to come and prepares them to receive this information. In addition, the use of *Let's …* has an interpersonal function in identifying the lecturer with the group. In the absence of lecturer-student interaction in the form of questions and answers, as mentioned above, it is possible that the frequent use of *Let's* reflects the lecturer's intuitive effort to establish a community sense in the classroom.

In this respect, the lecturer also makes more frequent use of *we* than the German equivalent *wir.* In one English lecture, *we* occurs approximately once every 37 seconds whereas in the German equivalent, it occurs once every 54 seconds. Fortanet (2004: 63) has done research which suggests that "'inclusive we" is more often used in academic speech than "exclusive we" … in an effort of co-operation with the students". She posits two main functions of this use of *we*, namely "those related to the representation of a group, and those related to metadiscourse". In the latter category, she identifies the function of guide through the speech event and through the discipline as being the most common. When we analyse our lectures, we see that *we* is used in

an inclusive manner, even when it is logically incongruous (e.g. *… which we have introduced as …; We learned …*). The function of this would appear to be identification with the students and a sense of doing a task together. The use of *we* also has a clear metadiscursive function, orientating the students in terms of references to the lecture and the course (e.g. *And now today we want to study one more phenomenon; That's the issue we're dealing with now*). Again, this prepares the students for information to come.

In general, we observed that first person singular and plural pronoun forms were more frequent in the English lectures than in the German ones. In addition, there is an even greater difference in the relative frequency of the use of *I* and *You* in the English and German lectures. Comparing two lectures on the same topic (thus eliminating the possibility that the subject of the lecture could distort the picture), *you* is much more frequently used than *I* in German (46% of total personal pronoun use compared with 33%) whereas *I* is used almost exactly as frequently in English as *you* (36.5% as against 37%). If you add in the use of *Man* in German (e.g. *man sieht* …= literally translated *one sees*), then the use of pronouns other than *I* or *we* in German rises to almost 52% of the personal pronoun total. In English, *I* and *we* are also used more frequently than their equivalents in German to refer to what is being done in the lecture or will be done later. It is possible that a cross-cultural element is coming into play here as speakers or writers in relatively formal contexts in German have a tendency to place themselves in a less prominent position in the text (cf., for example, Reid, 1990: 191).

6. Conclusion

The aim of this study was to examine whether the performance features of a lecture in an EMI context were significantly different from those in an L1 context. To examine this, we looked at information-rich lectures in English and in German. We found that the English lectures displayed both a wider range of a number of devices as well as a greater frequency of use of some devices that appeared in both lectures. These included elaboration techniques (explicit explanations, synonyms, paraphrases, rhetorical questions and translation), as well as the use of deictic references as metadiscursive devices (verbs with *to* clauses, the use of *Let* as well as *we* and *I).*

It is probably the case that it is not any individual aspect that is of most importance in lecturer performance but rather the accumulation of these aspects that a lecturer needs to take into account. While a lecturer may well 'get away with' a narrower range of such strategies and/or the relatively infrequent use of some of them in his/her (and the students') L1, a switch to English for all concerned leads to the presence of a) a wider range and b) an increased number of these strategies, which may be of didactic importance. Lecturers in an L2 (in this case, English) need to be aware that they may well

need longer to convey the same information satisfactorily in the L2 than in the L1. We conclude that the findings of this pilot study warrant further research and indicate areas of future attention which may ultimately lead to recommendations for successful linguistic and content management in L2 lecture situations.

BIBLIOGRAPHY

Ackermann, W. & Dulong, R. (1971): Un nouveau domaine de recherche: la diffusion des connaissances scientifiques. In: Revue Française de Sociologie, III, 378-405.

Ager, D. (2001): Motivation in language planning and policy. Clevedon / Buffalo / Toronto / Sydney (Multilingual Matters).

Airey, J. & Linder, C. (2006): Language and the experience of learning university physics in Sweden. In: European Journal of Physics, 27, 553-560.

Allison, D. & Tauroza, S. (1996): The effect of discourse organisation on lecture comprehension. In: English for Specific Purposes, 14 (2), 157-173.

Bauer, M. & Gaskell, G. (1999): Towards a paradigm for research in social representations. In: Journal for the Theory of Social Behaviour, 29 (2), 163-185.

Billig, M., Condor, S., Edwards, D., Gane, M., Middleton, D. & Radley, A. (1988): Ideological Dilemmas. A Social Psychology of Everyday Thinking. London (Sage).

Brumfit, C. J. (2004): Language and higher education: Two current challenges. In: Arts and Humanities in Higher Education, 3(2), 163-173

Chaudron, C. & Richards, J. (1986): The effect of discourse markers on the comprehension of lectures. Applied Linguistics, 7 (2), 113-127.

Cheng, D., Claessens, M., Gascoigne, T., Metcalfe, J., Schiele, B. & Shi, S., (eds.) (2008): Communicating Science in Social Contexts: New models, new practices. Berlin (Springer).

Coleman, J. A. (2006): English-medium teaching in European higher education. In: Language Teaching, 39 (1), 1-14.

Cook, M. (1994): Discourse and Literature. Oxford (Oxford University Press).

Dudley-Evans, A. & Johns, T. F. (1981): A team teaching approach to lecture comprehension for overseas students. In: Teaching of Listening Comprehension. London (The British Council).

Farr, R. M. (1993): Common Sense, science and social representations. In: Public understanding of science, 2, 189-205.

Fortanet, I. (2004): The use of 'we' in university lectures: reference and function. In: English for Specific Purposes, 23 (1), 45-66.

Flowerdew, J. (1992): The language of definitions in science lectures. In: Applied Linguistics, 13, 202-221.

Harré, R. & Fathali, M. (2003): The Self and Others. Positioning Individuals and Groups in Personal, Political, and Cultural Contexts. Westport (Praeger Publishers).

Jochems, W. (1991): Effects of learning and teaching in a foreign language. In: European Journal of Engineering Education, 4, 309-316.

Jurdant, B. (1973): Les problèmes théoriques de la vulgarisation scientifique. Unpublished dissertation. Strasbourg (Université Louis Pasteur).

Klaassen, R. (2001): The International university curriculum: Challenges in English-medium engineering education. Unpublished dissertation. Delft (Delft University of Technology).

Kling, J. & Hjulmund, L.-L. (2008): PLATE – Project in language assessment for teaching in English. In: R. Wilkinson & V. Zegers (eds.), Realizing content and language integration in Higher Education. Maastricht (Maastricht University), 191-200.

Marsh, D. & Laitinen, J. (2005): Medium of instruction in European Higher education: Summary of research outcomes of European Network for language Learning amongst Undergraduates (ENLU) Task Group 4. Jyväskylä, UniCOM, (University of Jyväskylä).

Maurenen, A. (2001): Reflexive Academic Talk: Observations from MICASE. In: R. C. Simpson & J. M. Swales (eds.), Corpus linguistics in North America: Selections from the 1999 symposium. Ann Arbor (University of Michigan Press), 165-178

Moscovici, S. (1962): Diffusion des connaissances scientifiques et techniques: études sur l'assimilation des connaissances sur la formation des adultes. Paris (C.E.R.P.).

Moscovici, S. (1984): 'The phenomenon of social representations'. In: R. M. Farr & S. Moscovici (eds.), Social Representations. Cambridge (Cambridge University Press), 3-70.

Nesi, H. (2001): 'A corpus-based analysis of academic lectures across disciplines'. In: J. Cotterill & A. Ife (eds.), Language across boundaries: BAAL 2000 Proceedings. London (Continuum), 201-217.

Patton, M. Q. (1990): Qualitative evaluation and research methods, 2nd ed. Newbury Park (Sage).

Reid, J. (1990): 'Responding to different topic types: a quantative analysis from a contrastive rhetoric perspective'. In: B. Kroll (ed.), Second Language Writing; Research Insights for the Classroom. Cambridge (Cambridge University Press), 191-210.

Schiele, B. (1995): 'The non-formal communication of scientific knowledge', Prospects XXV, 1, 87-99.

Seidel, T., Prenzel, M., Duit, R. & Lehrke, M. (eds.) (2004): Technischer Bericht zur Videostudie 'Lehr-Lernprozesse im Physikunterricht'. Kiel (IPN).

Studer, P. (2008): Historical Corpus Stylistics: Media, Technology and Change. London / New York (Continuum).

Studer, P., Pelli-Ehrensperger, A. & Kelly, P. (2009a): Mehrsprachigkeit an universitären Bildungsinstitutionen: Englisch als Instruktionsmedium im Hochschulfachunterricht. Winterthur: Institut für Sprache in Beruf und Bildung. (ISBB Working Papers).

Studer, P., Flubacher, M. & Kreiselmaier, F. (2009b): Language Policy-Planning and the Interactive Turn – the Case of the European Union, in Current Issues in Unity and Diversity of Languages. In: Collection of the Papers selected from the CIL 18, held at Korea University in Seoul, on July 21-26, 2008, ed. by Ik-Hwan-Lee and Chai-song Hong. Seoul (Linguistic Society of Korea), 566-578.

Swales, J. & Malczewski, B. (2001): Discourse management and new episode flags in MICASE. In: R. C. Simpson & J. M. Swales (eds.), Corpus linguistics in North America: Selections from the 1999 symposium. Ann Arbor (University of Michigan Press), 145-164.

Thompson, S. E. (1998): Why ask questions in monologue? Language choice at work in scientific and linguistics talk. In: S. Hunston (ed.), Language at work. Clevedon, UK (Multilingual Matters), 137-150.

Tauroza, S. & Allison, D. (1990): Speech rates in British English. In: Applied Linguistics, 11 (1), 90-105.

Wächter, B. & Maiworm, F. (eds.) (2008): English-Taught Programmes in European Higher Education: The Picture in 2007. Bonn (Lemmens).

Young, L. (1990): Language as behaviour, language as code. Amsterdam (Benjamins).

Zygouris, R. & Ackermann, W. (1966): Représentation et assimilation des connaissances scientifiques. Paris (C.E.R.P.).