More than Medium of Instruction:

The Bologna Process and Teaching in English

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INTRODUCTION

Chalmers University of Technology was early in starting to adopt the educational system to harmonise with the Bologna agreement. Programme structures have been re-designed, courses have been expanded or divided to allow flexibility in a modular system, learning outcomes have been discussed and teachers are beginning to look into the intricacies of using the group-related ECTS scale. However, the formal decision that all master's degree programmes must be delivered in English has remained a neglected topic.

In 2005, a series of interventions was designed with the aim of preparing teachers, programme coordinators, and deputy heads of departments at Chalmers for an international teaching and learning environment. This report outlines these interventions and discusses some of the teacher perspectives such as moving from an idea of the reform as 'translation of old models' to 're-thinking teaching and learning models'; exploring alternative learning perspective avenues; and adapting materials and assessment to an international context.

This report primarily focuses on teachers and demonstrates how English as the 'medium of instruction' affects the identity of teachers at Chalmers in at least three significant ways:

- 'Authority' - from first to second language teaching
- Teaching in English – testing the benefits of a learning paradigm
- New dimensions to teaching and learning activities

Educational development at Chalmers University of Technology – Teaching in English
In early 2005, with the background of the 2004 management decision that all master's degree programmes were to be delivered in English by the autumn of 2007, C-Selt invited departments to present proposals for projects relevant to preparing Chalmers faculty and the Chalmers organisation for this challenge. The drive towards internationalisation and mobility (and hence assumed quality enhancement) apparent in the Bologna Agreement is an obvious factor in the management decision. Thus, teachers are now looking at the inevitable prospects of having to deliver master's courses in English, a prospect that has been met with mixed feelings and reactions. The authors of this report were commissioned to carry out their

respective proposed projects and to do a survey of the teachers' concerns and needs in view of this reform.

The purpose of this report is twofold in the sense that our main priority is to offer a proposal for a future line of actions to prepare Chalmers for delivering master's programmes in English with improved learning quality. However, we also want to highlight some of the experiences currently available in the organisation and learn from these. Therefore, our report briefly describes the three-level intervention we have been involved in as part of our project in order to describe and justify our proposal of a structured set of methods and activities that would support Chalmers teachers and promote high quality learning in the new master's programmes.

We first briefly describe the benchmarking and the literature review that informs our proposal and our various sub-project activities. Our benchmarking shows that many European universities have come further in their reform work, and also that our proposal is grounded in a broad understanding of what 'English as the medium of instruction' entails. Our next section summarises focus group interviews we conducted with deputy heads in early 2006 as one way to investigate the attitudes toward the reform as well as to obtain the first component of a needs analysis from a management perspective. Our fourth section is devoted to an analysis of our intervention at programme level with the A:IDE programme, where we monitored the final phases of the programme development and the start-up phase. Next, we turn to the intervention for individual teachers and look at what we can learn from the pilot course 'Teaching in English' delivered in the fall of 2005 through spring 2006. Predictably, we close on a description of our three-step proposal where we recommend that the first step consist of a proficiency course for teachers, the second step a didactics-oriented course where teachers discuss not language proficiency as such, but rather means by which to adapt teaching and learning activities to the new environment of master's programmes delivered in English. The third step is aimed at building an institute for educational development at programme level, where teams work on projects over a year-long cycle. In this way we strengthen and promote educational development of the master's programmes through a Chalmers Master's Degree Conference and ensure that the knowledge and experience acquired in the projects is shared.

BENCHMARKING AND LITERATURE REVIEW

The Bologna reform, with its focus on student mobility and harmonisation of European higher education programmes, advocates multi-lingual universities that cater to students' language needs. Not only should the students acquire the proper discourse of their chosen fields in their native language, they should also be able to study their subjects in a second or foreign language. These goals have given rise to heated debates within the educational ministries and communities in Europe as to what languages to include. Although several universities in the bi- or tri-lingual countries in Europe, such as the Netherlands and Belgium, have been offering parallel courses and even programmes in several languages, for most of the European countries including Sweden, the foreign language in question is English.

Although a discussion of the ideological implications of English as the Lingua-Franca of Europe is beyond the scope of this report, it is nevertheless important to note that there is strong resistance to the dominant role of English in education. This resistance was manifest at the 2006 ENLU[1] closing conference in a workshop devoted to a discussion of the pros and cons of teaching through the medium of English. Participants representing diverse European states were overwhelmingly negative to a total conversion to English as medium of instruction at master's level. Thus, even though more and more countries are offering courses and programmes in English, it should be noted that the Chalmers policy of using English as the medium of instruction for *all* the master's programmes is thus fairly uncommon, and, in our view, needs to be problematised more than it has so far.

While our literature survey is limited by the project duration, two perspectives on English as a medium of instruction seem to recur. On the one hand, while we must be cautious we can still see that (too) many of the resources for teaching in English are primarily language-focused and implicitly (often explicitly) assume an instructional teaching and learning regime (Barr & Tagg). In fact, some of the material reviewed does not consider teaching and learning regimes at all, and the question of English as the medium of instruction then becomes one of

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[1] The European Network for the Promotion of Language Learning Among All Undergraduates

language proficiency for lecturing. For example, the oft referred to study by Flowerdew & Miller in Hong Kong with its explicit objective to study lecturing (Flowerdew & Miller, 1996) offers many crucial insights about lecturing in a second language and emphasises its effect on learning outcomes. Hyland's related study about the relative importance of English for specific purposes (ESP) support as perceived by the Hong Kong students is conducted on the same premises that the preferred teaching and learning activity (TLA) is the lecture (Hyland 1997). Hyland observes how "[t]he fact that many students struggle to master their subject disciplines with inadequate linguistic resources not only frustrates both students and lecturers, but also encourages learning strategies, such as classroom passivity, rote memorization, and copying from textbooks, which fuel this frustration". In other words, there is the awareness that the medium of instruction influences the effectiveness of a given TLA, the lecture, but nothing is in fact said to suggest alternative TLAs. Similarly, Miller's subsequent work at Hong Kong has unveiled many aspects of lecturing in a second language (LSL) and the 'LSL prism' (Miller, 2002) provides a comprehensive description of the variables affecting the learning outcomes for LSL.
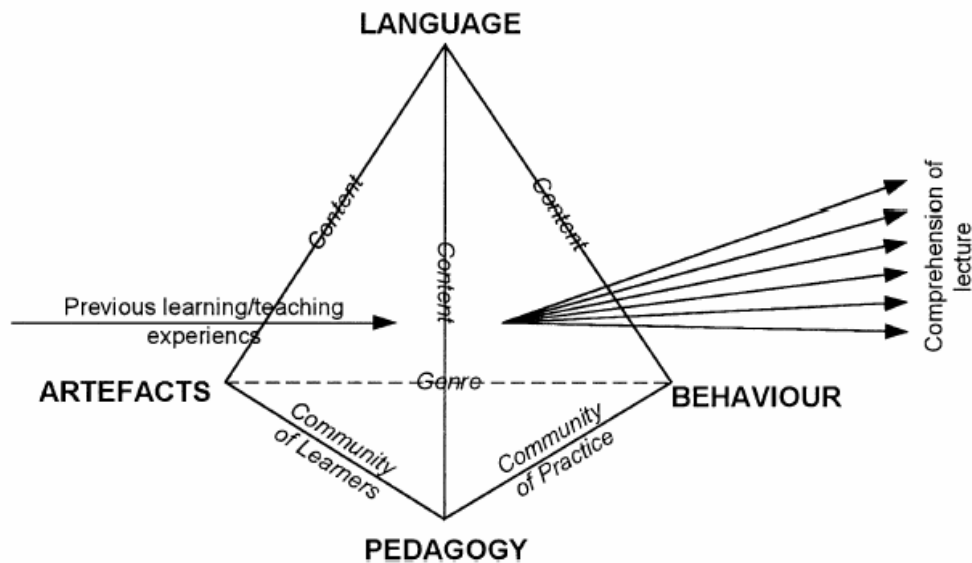

Figure 1. The LSL Prism (Miller, 2002, p. 149).

However, despite the obvious fact that the studies are conducted in Hong Kong in an academic tradition largely based on the lecture, one would still have expected the suggestion

to abandon lecturing in a second language and choose TLAs where learning outcomes are more likely to be attained.

Other studies on lecturing have a similar emphasis on the linguistic dimensions of lecturing in English as a second language (Camiciottoli, 2003) or lecturing in English where non-native students face problems negotiating basic linguistic assumptions made by native speakers (Fortanet 2004). A particular example of specific interest to the Chalmers context is a small-scale study in Sweden about physics lecturing in English (Airey & Linder, 2006). Not surprisingly, the authors find on comparing sections lectured on in English with corresponding sections lectured on in Swedish in comparable groups that the choice of language does have a seemingly negative impact on the lecture learning impact and the lecture atmosphere. Based on their observations and interviews they also list a set of fundamental learning strategies to enhance lecturing in English. These involve discussing the fact that lecturing in English involves differences; creating more opportunities for question-and-answer sessions both during and after lectures; being cautious about introducing new material during lectures; making sure students read material before lectures; and providing as much presentational support as possible (Airey & Linder, 2006, pp 558-559). Surprisingly, they never problematise the decision to lecture in the first place. To some extent this is to be expected and it may well represent the community expectation of dealing with the 'translation issues' as we turn to English. Yet, we feel such an approach is insufficient and counter-productive.

The second perspective, on the other hand, is one where the language issue has been approached from angles informed by pedagogical and communication oriented perspectives. In this respect, the Bologna reform has legitimated closer inquiry and intervention into the delicate topic of university lecturers' qualifications and aptitudes to teach their subjects in a foreign language. The aims of most of this research have been to map the current situation and, through interventions of various kinds, provide lecturers with relevant linguistic as well as pedagogical support and tools to enable them to exercise their creativity in adapting to new teaching situations.

A good example of this research and development is pursued in Finland, where the discourse about foreign languages (often English) as medium for teaching content i.e. teaching *in English,* where the language is viewed as mere vehicle for conveying content, appears to have been abandoned for a more modern view of language and content as intellectual partners, i.e. teaching *through* English. This view acknowledges the cultural and ideological undertones inherent in languages. Moreover, it draws on a socio-cultural theory of language as dynamic, composed of geographical as well as functional variations. Such a view offers new intellectually stimulating educational contexts for teachers and students (e.g. Tella, 1999; Lehtonen et al., 1999; Lehtonen & Lönnfors, 2001; see also Klaassen et al 2001).

Teaching content in a foreign language has thus generated increased interest in research done within the areas known as Integrating Content and Language (ICL) and Content and Language Integrated Learning (CLIL). The former is mainly associated with tertiary level while the latter applies primarily to elementary and secondary educations. To date two ICL conferences, in 2003 and 2006, have been held in Maastricht, where language teachers mainly, but also content teachers and programme administrators from all over the world have gathered to share experiences (see Wilkinson 2004). At the 2006 conference several papers reported on intervention research to improve teaching and learning through the medium of English (e.g. Klaassen 2006; Kurtan, 2006; Mellion, 2006; Pinayna 2006). Other interesting work for our purposes was reports on collaborative course development and team teaching of language and content teachers (e.g. Jacobs, 2006; O'Brian, 2006; Lönnfors et al., 2006; Räisänen and Gunnarson, 2006), a model which has been successfully tried out in the Technical Communication programme at Chalmers and is regularly practiced by the Centre for Language and Communication in its integrated courses in various programmes.

These dialogically oriented endeavours reinforce the perspectives that tackling lecturers' language proficiency alone does not suffice to facilitate student learning. Rather, language skills in combination with communication and pedagogical skills have to be worked at in tandem and be adapted to new teaching situations. In short, with a communication-oriented approach on the 'medium of instruction' we can begin to design learning activities where we compare how a given subject is conceptualised in the various languages represented in the student cohort. This not only allows for each student to develop an understanding of the

sometime slight differences in conceptualisation, but also yields a richer and more multi-faceted picture of the subject matter in the first place. With an integrated content and language approach, the potential for improving the students' communication and language skills is increased.

MANAGEMENT-LEVEL INTERVENTIONS

Apart from the individual sub-projects of the C-Selt internationalization endeavour, the C-Selt steering group requested a wider survey of needs pertaining to the transition from Swedish to English as medium of instruction. In order to incorporate the attitudes and views of as many of the departments as possible, it was decided to target the survey to the deputy heads of the departments. Part of the deputy heads' area of responsibility is to see to the overall running of the undergraduate education at their respective departments in terms of courses and available teaching staff. Furthermore, the deputy heads meet regularly twice a month to discuss outstanding issues concerning the undergraduate education.

We carried out the survey as a joint sub-project from January to April 2006. From our own conversations with some of the deputy heads and several program directors and teaching staff, we understood that there was a fair amount of turbulence and uncertainty concerning the reform. We therefore saw the intervention not just as a survey of individual departments' needs and attitudes, we also wanted to create a forum for dialogue in which different attitudes, opinions and experiences could be verbalised. We therefore decided to use focus groups as our survey method rather than individual interviews or a questionnaire.

Focus groups are centred around a group discussion focused on some kind of collective activity (e.g. Frey and Fontana, 1993; Bloor et al., 2001; Räisänen and Gunnarson, 2003). The researcher's job is to be a facilitator, to encourage the participants to talk by providing appropriate back channelling (signs of agreement, encouragement, interjections to get back on track) and to ensure that all the participants contribute to the discussions. In a study of organizational change, Barbour (1999, p. 118) found that focus groups were a versatile tool for studying change since they can "tease out shifts in perspectives and invite participants to

comment on these as they unfold." Moreover, as we found, the focus group process itself created a forum for reflection for the participants.

To be effective, focus groups should not be too large. The recommended number of participants is usually somewhere between 4 and 9. Since there were 16 deputy heads, we scheduled two focus groups. Some weeks prior to the focus groups, we visited a deputy-head meeting and described the C-Selt project in general and our focus group sub-project in particular. We gave them a brief description of the method and asked them to sign up under one of two dates. A week before each focus group we sent them a reminder and asked them as representatives of their departments to collect views on the reform from their colleagues.

In order to ensure that we addressed the issues and concerns of the departments, rather than our own, we carried out an in-depth interview with the chair deputy head, Claes Niklasson. We asked him to give his view of the reform, its advantages and possible drawbacks. We also asked him for his reflections concerning the teaching staff's worries and needs. Based on this interview and the preliminary findings from our individual sub-projects, we devised a list of discussion themes and a collective activity for the focus groups.

The focus groups were scheduled to take three hours in the afternoon, when there would be less likelihood for collisions with other meetings or teaching. Both focus groups were carried out following the same procedure. We had five participants in the first group and six in the second, altogether a fairly good representation. We started with a short introduction of the afternoon's activities and of ourselves. We then asked the deputy heads to introduce themselves and give a short description of their current and past roles as well as their experiences of master's programmes in English. Although the participants knew each other well, they were used to conversing in very different circumstances and we wanted to signal a shift from their usual mode of interaction. Moreover, we were not acquainted with all of them.

Even though our task was to gauge the attitudes and needs of the teaching staff, we wanted to avoid negativity. Our aim was also to generate a discussion of the possibilities that the new reform brought with it. We therefore designed a collective activity geared toward

highlighting and discussing the positive effects of the reform. In each focus group we divided the participants into two smaller groups and asked them to note down positive effects of the reform. We then asked each small group to choose the nine most important effects and to lay them out in the shape of a rhombus, showing ranking order and links. We observed the activity and then collectively reflected over the outcome.

The four rhombuses that resulted from this task emphasised three dimensions of the reform, namely quality, mobility, and change (Fig. 2). Within the overlapping fields of these three dimensions, the rhombuses showed similarities which stressed the development of better learning environments in various ways. On the whole, deputy heads of departments looked to the benefits of internationalization through teaching in English and pointed at how they expected to see quality enhancement as a result of international learning environments, international exchange or collaboration. They also agreed that improved mobility for students as well as the teachers was a marked advantage and that this mobility promised a greater recruitment area also for PhD-programmes. To the extent that the language aspect was emphasized at all in this exercise, it was seen as one of the synergy effects of the reform i.e. that students would also improve their English.

Figure 2. Schematised summary of the results from the focused task of formulating positive dimensions and challenges of delivering MSc programmes in English.

Interestingly, the deputy heads also saw the reform as an excellent opportunity to work for change at many levels of the university organisation with new learning environments, more room for creativity in course design, the opportunity of working with multi-cultural project teams and the more immediate motivation for preparing students for an international market present at the campus. At a humanist-cum-altruistic level, the deputy heads also saw the move towards internationalisation as a potential for improving relations on a global scale and working for greater understanding between various groups, cultures and disciplines.

Thus, the focused activity and ensuing discussion highlighted a number of positive expectations of the reform, which in many ways echoed the discourse of the EU commission and that of Chalmers management. When we delved deeper by eliciting the participants' individual views on a number of topics, our picture became a lot more nuanced and situated in the local concerns of the various departments represented by the deputy heads. The topics and some excerpt from the conversations are given in Appendix I.

The first topic concerned the reasons for the reform. Our assumption here was that there would be different understandings of these reasons. In turn, these understandings strongly influence the ways in which individuals or groups respond to change. As we anticipated, there was a wide range of opinions, many of which were also brought up in the focused task. One reason that we had not anticipated was that the reform would simplify administration since all the documentation would be in one language, English. Currently the praxis is that most Chalmers documentation is bilingual: Swedish and English. Interestingly enough, no one had any reservations as to the quality of the English. Another interesting response from one participant was that it was no use reflecting over the reasons for the reform since the decision had already been taken and must be carried out.

The second topic combined two important issues: "Why English?" and "What problems do you envisage." As mentioned earlier, there is an implicit belief in the synergy effects of improving students' English when programmes are delivered in English. This view is strengthened by the fact that Swedes are exposed to English from an early age and generally are considered to "be good at English." Furthermore, at Chalmers, for example, a majority of the textbooks are in English, and the issue of language is seldom problematised by content

teachers. They tend to adopt the first perspective on language described in the previous section. As expected, the answers to the first question were rather utilitarian, highlighting benefits such as improved English, and the opportunity to home in on synergy effects as the final year of a master's degree allows for some overlap with course work for PhD students. Although a small minority questioned the soundness of imposing English for all the Master's programmes, the majority accepted the decision as inevitable and, from their point of view, unproblematic.

Contradicting this unproblematic view, the second question concerning envisaged problems, elicited a wide range of mixed opinions, generating animated discussions in the groups. Now, both groups talked about a decrease in content quality due to limitations in teachers' and students' English proficiency. Moreover, there was also the fear that the students' Swedish would deteriorate, especially their scientific discourse. The deputy heads commented on the unnaturalness of speaking English to Swedish students, especially broken English. In these discussions we discerned a clear bias toward Swedish students. It was more or less taken for granted that the Swedish students' English was "unproblematic" whereas that of other nationalities was not. However, there were also interesting differences in the discussions of the two focus groups. In one group, many of the departments represented had long experience of international master's programmes, which resulted in them sharing their experiences and insights. They advocated that more must be done to enhance multicultural interaction and encourage learning across cultural boundaries. In the other group, the concerns centred on the teachers' own worries about their abilities to interact optimally with the students, e.g. get them to contribute in class, give them appropriate feedback orally and in writing, and understand their English. The discussion concerning these worries resulted in the group problematising the role of English: should it be a tool or should it be a goal. Although the problem was not resolved, the fact that it was brought into the open and discussed indicates that there may be a need for a structured forum in which these issues can be ventilated.

The next topic dealt with what the teachers needed in order to be adequately prepared for the reform. A unanimous opinion was that more time and more resources were needed. The time aspect is of course too late to do anything about except hope that the next time around planning will be better. Lack of resources and the effect this is having on the teachers was a

serious point of discussion in one of the groups. The consensus was that already now teachers were suffering from exhaustion. The discussion then dwelt on ways in which the teachers' burden may be reduced by ensuring that the students were better equipped to learn. In one of the groups, one of the deputy heads advocated that the current reform should be seen as a perfect opportunity to critically review traditional teaching and learning models and create new "learning platforms." At the same time there was unanimous agreement in the group that, due to lack of time and resources, the typical procedure is to simply carry over the old teaching style and material to the new situation through translation.

The other group was much more concrete in formulating the teachers' needs. Apart from tools such as nomenclature and phrase dictionaries, and help to translate their teaching materials, they desired feedback on their performance, pedagogical as well as linguistic. Both groups agreed that attending a remedial language courses was not a universal solution, rather the interventions need to be tailored to the varying needs of the programme and staff. The students' lack of written and spoken proficiency in English was a topic that recurred throughout the discussions. Teachers do not consider it their job to comment on the students' language, partly because it is time-consuming and partly because they feel they lack the linguistic knowledge. This reservation applies mostly to English but also to Swedish. With a content and language integrated approach to learning in combination with extending the resources of the Centre for Language and Communication these problems can be overcome.

A number of issues were brought up in the focus groups, which, although not directly linked to the "teaching in English" concern, nevertheless have an important impact on the teachers' attitudes toward the reform. Most of these issues concerned management's way of dealing with the reform. We have already noted the short-term planning and the shortage of resources. Another critical point that was brought up several times was the unclear decisions concerning the division of roles and responsibilities across the various programmes. Many of the deputy heads were critical of the cumulative effect of a long period of changes at Chalmers.

The focus groups provided the deputy heads with an opportunity to exchange views and opinions in a different forum than the one they were used to. Through our intervention, they

were also able to explore and verbalise thoughts that hitherto had remained implicit. The overall reactions to the sessions were positive. They thought that it had been a stimulating and interesting exercise that had given them other insights into the issues discussed. One outcome that seemed to surprise them, and certainly surprised us, was how little they actually knew about each others' disciplinary practices.

PROGRAMME-LEVEL INTERVENTION: THE A:IDE PROGRAMME

In the autumn of 2004, the department of Product and Production Development at the school of Mechanical Engineering, Chalmers, launched a new international Master's programme to be taught in English entitled Automotive Industrial Design Engineering (A:IDE).

In the spring of 2004 the head of the Technical Design division approached Christine Räisänen (CR) at the Centre for Competence and Knowledge Building in Higher Education (CKK) and requested coaching for the teachers at the division. The specific aim of the coaching was to prepare them for lecturing in English. He felt that the teachers needed a language course that would boost their self-confidence.

In view of the impending Bologna reforms and the C-Selt preparatory initiatives, the A:IDE programme was considered an opportune case study, which, combined with the pilot study initiated by Magnus Gustafsson, would provide appropriate examples for the design of further teacher intervention activities (see http://www.adm.chalmers.se/Intern/GRUL/cselt) Therefore, instead of offering the teachers one-on-one coaching as requested, CR proposed a programme consisting of a needs analysis of all the involved teachers, observations of some of the developmental activities, and a series of seminars based on the existent needs of the target group.

Table 1. Methods used in the intervention study

Method	Type	Time	Actors
Needs analysis	Interviews	1 to 2 hours each, late March '04	Head of dept, programme director, 7 prospective teachers
Observation and intervention*	2 brochure-design meetings	6 hours, late March	2 teachers + brochure designer
Observation,	Lecture in	3 hours, April '04	Prospective teacher currently teaching a

video recording*	Swedish		course in the Swedish Technical Design programme. (about 25 students attended)
Observation*	Workshop	Full day, end April	All the interviewees
Student survey*	Interviews	1 hour each, August '04	The new cohort of 8 students
Observation and video recording	Lecture in English	3 hours, September '04	The new cohort of 8 students
Text analysis	Programme descriptions	2004 – 2006	All the genres describing the programme and applicant requirements
Text analysis	Student applications from 2004 and 2005	2004 – 2006	64 applications including letter of purpose and enclosed material
Intervention	4 dialogue seminars	4 hours each, 3 in the spring, 1 in the autumn	On average 6 of the 9 staff. A core group of 4 attended all the seminars
Intervention	One-on-one coaching	1 to 4 hours per individual	Requested by three participants
Student survey	Interviews	1 hour each, August '04	The new cohort of 8 students

* The initial stages of the study, the interviews and observations, were carried out by CR and Carina O'Rourke.

Table 1 shows an overview of the various intervention methods used in this study. The main part of the study was carried out in 2004 and 2005. The observations formed the basis for the choices of methodology for the interventions. A more careful analysis of the data gathered and an evaluation of the interventions were carried out in the autumn of 2005 and the spring of 2006. Although this study covered many more aspects than teaching through English, the following account only discusses those aspects related to the language issue.

Needs analysis

To ensure that the requested intervention would actually fill the needs of the teachers in question, a needs analysis in the form of in-depth interviews was carried out (e.g. Jordan 1997). Another reason for the interviews was to find out what expectations the teachers had of the future students, e.g. how they envisioned an international cohort of students, and how they were preparing themselves for the transition from Swedish to English as the medium of instruction. Experience from similar studies in Europe has shown that there is a belief among content teachers that the use of English as medium of instruction will automatically improve students' English (e.g. Klaassen 2001, Lehtonen et al. 1999).

Results of the needs analysis: Unsurprisingly, in answer to the first question about their needs, the results showed that there were a variety of needs, but that language coaching for lecturing in English was the least prioritised. On the contrary, most of the teachers felt rather confident of their English and did not foresee any problems in moving from Swedish to English as the medium of instruction. In support of this claim, several of them wanted to conduct the interview in English, and indeed demonstrated a high level of fluency and ease. One of the programme developers felt that teaching in English would be no different from teaching in Swedish. He did not think that there was any need to discuss the issue of the language and was rather impatient with the questions. Other teachers admitted that they may need copy-editing of the translations of their course descriptions and materials. Only one of the teachers indicated some uncertainty; he said that his English was rusty and that he was worried about his limited vocabulary, which could hinder his ability to convey the complexity of the content. Like the deputy heads, the prevalent strategy for moving from Swedish to English was translation, which reflects a transactional view of communication and teaching.

Even though lecturing in English did not seem to be the barrier anticipated by the head of the division, other issues, which could negatively affect teachers' performance, were brought to the surface. There was a lot of uncertainty as to who was responsible for what pertaining to the programme. Although there was a programme director for A:IDE, he was employed on a 20 percent basis to do the job. This meant that he was at the department only two days a week. Moreover, the role of programme coordinator had shifted several times, which caused confusion and affected continuity. Therefore teachers felt that they had very limited information about the new programme; some of them did not even know at this late date (end of March) whether they would be teaching or not.

At the time these interviews took place, the application date had still not expired. It was therefore of interest to ask the teachers what kind of students they expected. All of them envisaged a cohort consisting mainly of Swedish and maybe some European students. They expected the foreign students to be very similar to Swedish engineering students, albeit with possible differences in background knowledge and levels of English. They would probably be

used to attending lectures and would lack critical reflection. This seems to be a rather negative view of students and strengthens the belief in the appropriateness of lectures. Concerning the students' level of English, the teachers had not given it much reflection. They did not consider that the language would be a barrier since "everyone speaks English." The programme director considered language to be a powerful tool and a "carrier of progress." By using English as the medium of instruction the students' will simultaneously learn the language, and the teachers' English will improve automatically. The opinions elicited in the needs analysis coincide with the opinions of the deputy heads during the focused activity.

Observations

In order to obtain as situated a picture of activities involving the use of English, we observed the unfolding of such activities rather than relying only on hearsay from the interviews. All the activities observed were recorded.

Brochure-design meeting: One of the activities that was taking place as this study was initiated was the designing of a programme brochure in English. This activity was carried out jointly by the programme director, the programme coordinator and a consultant. We observed the two final meetings.

At the first meeting two samples of the brochure, based on previous discussions, were presented by the consultant for consideration. The aim of the meeting was to choose one of the samples for publication. The format of both brochures was a folded A4. The inside contents were identical; only the front and back differed. The discussions focused mainly on the graphic contents and layout of the cover pages. There was no discussion of the communicative purpose or the language, nor had the brochure been sent for copy-editing

Our view of the brochure was that it suffered from information overload and lack of focus. Furthermore there were a number of mistakes, making it difficult to comprehend certain passages. We pointed out the flaws that we perceived, which generated a collective discussion and a re-wording as well as re-design of the brochure. Our dialogue partners were surprised by the fact that there were flaws in the language and in audience analysis. The features we highlighted had not occurred to them. The result, shown at the following meeting was dramatically improved, and has been further improved since then.

Lecture in Swedish: According to the literature and based on long experience of teacher courses, the language is only one aspect influencing teacher performance and student interaction. Far more critical aspects concern the teacher's assumptions about teaching and learning and the teaching style adopted. A good place to begin an intervention is therefore to address these issues in the native language before moving into the foreign language. An effective tool to capture a teacher's performance is the video camera. In this study we wanted to devise and test a method to capture both teacher performance as well as student reactions. We therefore rigged up two cameras in the classroom, one on the teacher and one on the students. The two films were then assembled, enabling the viewing of both parties simultaneously: either with the focus on the teacher and a split screen showing the students or vice versa.[2] The results were extremely positive.

The pedagogical use of a video camera is an old teaching tool, which remains rather controversial. One of the counterarguments advanced against the use of video filming in the classroom is that it inhibits the teacher and the students. However, in our case the teacher told us that after the first few minutes he completely forgot about the camera, as did the students. What the film showed, apart from the particulars concerning the teacher's behaviour and teaching style, was the ways in which students responded to the various episodes of the lecture. In this case, the lack of teacher interaction with the students was made very obvious as well as the fact that only the same small group of students volunteered comments or questions. When reviewing his performance, the teacher could clearly see where he was losing the students and where he could have elicited their interaction and reflections. For example, he started formulaically from his own viewpoint as lecturer, delivering lecture xx in a series, rather than addressing the concerns or interests of the students. He did not avail himself of a large number of instances when he could have co-constructed knowledge together with the students, thus drawing on their own experiences. The film served as a powerful tool for dialogue and reflection on lecturing styles and techniques, not only for the teacher in question, but also for all the colleagues in the group.

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[2] The method with the split screen has been presented at a seminar for teachers at the department of English, University Jaume 1st, Castellon, Spain, where they have since adopted it for teaching and research purposes.

Lesson in English: The same method was used in the autumn of 2004 to record an English lesson in the AI:DE programme. Since there were so few applicants accepted to the first programme, the class only consisted of 8 students. The teacher in this case was the one who had voiced uncertainty about his English. In contrast to the Swedish class, these students remained silent throughout the class. The reasons for their silence could be two-fold. Since they were so few, they may have been more aware of the video camera and felt inhibited. Another reason may be that they felt inhibited by the language. All of the students, but one, were native speakers of Swedish. Several teachers of other international programmes at Chalmers have noticed that their students are far more prone to silence in an English-speaking classroom than in a Swedish-speaking one. Yet another contributing reason for their silence may be that the teacher did not directly elicit any interaction. Later, when viewing his own performance, the teacher was critical of his performance on this point. He noticed that he ought to have encouraged dialogue from the students.

A positive aspect for him was to see and hear that he performed better in English than he perceived he did, which raised his self-confidence. This is an important factor since many of the teachers lose confidence when they have to perform in English, even though they may be fairly fluent. Seeing themselves perform above expectations boost their confidence and stimulates them to improve their teaching styles, and maybe even to improvise. By the same token, teachers who overestimate their language competence or their pedagogical abilities may receive an eye-opener that may lead to improvement. What these two class-room observations indicate is that there is a need for intervention activities that encourage teachers to take an integrated approach to teaching and learning through English.

Student interviews

We also interviewed students. In the admissions process, only 11 of the 42 applications were deemed to "more or less" fulfil the stipulated requirements. According the programme director, most of the applicants did not know what they were applying to. Eight students actually enrolled and were all interviewed a few weeks into the programme. One of the students was non-Swedish with English as a foreign language. At this early stage the interviewees could not say much about the programme as such, but they were positive about the classes thus far, especially since the teachers had time for each individual student. Their

reasons for applying varied, from a particular interest in automobile design to a wider interest in design as such. One of the students chose the programme because he did not get accepted to his first choice. Like the teachers, none of the students considered English to be a barrier since most of them had studied abroad in an English-speaking country. While such confidence may be encouraging, it may also prove counter-productive for language improvement.

More interesting here are comments by the non-Swedish student. His interest in automobile design and a desire to study abroad led him to seek an appropriate programme. After much effort, he found the A:IDE web pages, which he thought were "terrible". The text was difficult to understand and he was not sure what was required in the application. On the positive side, though, he was enthusiastic about the programme and felt that he "was in the right place".

Text analyses: programme descriptions and students' letters of application
A natural step in the intervention process was to analyse the programme description on the programme website. As anticipated from working with the brochure, the programme description gave rise to more questions than it did answers. To begin with there were a large number of language mistakes, which are unforgivable in a description of an international programme to be taught through the medium of English. These mistakes could have easily been avoided had the description been sent to a copy-editor. By the time our intervention started the description was already in circulation. The most serious flaws with the description, however, were its lack of organisation and coherence. Inflated and vague use of terminology rendered it impossible for a student, especially one whose native language is not English, to grasp what the focus of the programme was, as shown in the following examples:

> *The aim of the Automotive Industrial Design Engineering programme is to contribute to an integrated view upon vehicle design by educating developers with a broader view on product development [.…] Examples of tasks would be to work with concept development, studio engineering, industrial design, requirements management, with ergonomics, to work as project managers. The proposed programme addresses the development of complete vehicles and*

> *grasps the whole process, from industrial design, engineering design, on to*
>
> *manufacturing.*

The motivating and instructing features characteristic of this type of written communication remain implicit in these descriptions and the prospective student is never addressed. The lack of organisation, misleading headings, high level of abstraction and the mixing of description and instruction in the 2-page section entitled "How to apply" make it difficult for applicants to know what exactly is required. For example under the heading "Special entry requirements!" the following is stated:

> *A background in design engineering or industrial engineering is required*
>
> *including courses in computer aided modelling, drawing and form. Acceptance*
>
> *is also based on submitted work samples. These consist of **five free drawings,***
>
> ***paintings or photographs of sculptures or models**. These free work samples*
>
> *give a picture of the applicant's artistic abilities and development possibilities.*
>
> *(Emphasis in the original text)*

This clinically impersonal and ambiguous excerpt is then directly followed by erroneously placed information concerning the evaluation criteria and process. The individual course descriptions are very short and equally vague and abstract.

The reason for dwelling at such length on the programme description is that it gave us a good indication of what the student applications would look like. Furthermore, from the literature and exchanges with colleagues doing similar work as us in other universities, teachers want help in writing their course description and material. An effective way of raising programme administrators' and teachers' awareness of the need to pay more attention to the formulation of programme descriptions could then be to compare them with the corresponding student applications. The programme director and coordinator had voiced surprise at the fact that so many of the applicants "did not seem to know what they were applying to." We therefore decided to use a comparison of the two genres, programme description and student application, as a mediating tool for intervention.

A text analysis of all the 2004 applications showed that many of the applicants' cover letters had taken their cues directly from the course description. In other words, they had tapped into the vocabulary and syntax of the descriptions, as in the following example which is almost a

verbatim reproduction of the description: *My intention to study at Chalmers is to broaden my horizon as regards to industrial automotive design.* Following this excerpt the candidate lists his areas of interest using the same formulations as in the programme description. The instructions given to the applicants was that the cover letter should "explain why you want to join this programme and what you expect from your studies at Chalmers" rather than for them to highlight their particular abilities or qualifications. As a result, most of the cover letters lacked sufficient concrete details that would normally facilitate short-listing according to the individual's actual qualities or interests.

Intervention: Dialogue seminars and one-on-one coaching

One of the main assets of this study was the possibility of following the development and initial running of a programme. Intervention in this case was highly situated and immediately related to the problems at hand. Many of these problems, such as the communicative inefficiency of the website, was at the time not seen as a problem by the practitioners. Likewise, the use of English as a medium of instruction had not been reflected on or problematised in any other respect than that some lecturers may need to brush up on their English. As we have seen from the needs analysis and the focus groups, the idea that the students' English would automatically improve also prevailed among these practitioners. Little consideration had been given to the possibility of a multinational and multicultural cohort of applicants and its consequences on teaching and learning styles. No strategies had been discussed for dealing with the probability that students would have very different levels of pre-knowledge both in term of the content as well as English. What transpired from the interviews and observations was that teaching among many of these practitioners, at least those who bore the largest responsibility for the programme, was mainly seen as a transactional activity, with little reflection on learning regimes.

The obvious lack of collective critical reflection concerning the role of English made our choice of intervention method obvious. These particular teachers considered themselves to possess a good grasp of English and had extended experience of lecturing. We felt that it would be insulting to them to offer a course on lecturing in English. More than a remedial course in English, these teachers needed a structured forum for collective conversations, where the communication and pedagogical problems we discerned could be ventilated and

possible solutions could be tested. We wanted to provide the participants with a method that they and others in similar circumstances could use to raise the quality of their work and minimise frustration.

The theoretical base for our choice of method is grounded on the work of several scholars. Drawing on Schön's notion of fostering "reflective practitioners," we wanted the teachers to reflect on their actions and underlying assumptions by reviewing their motives and activities so far (Schön 1983, 1987). The programme description and the applications provided us with excellent mediating tools for this work. We also wanted them to reflect-in-action, i.e. while they were carrying out their work. Revising the description and peer reviewing each others' lectures and course material collectively provided the tools for this exercise. Another valuable inspiration for our work was Göranzon's concept, "the dialogue seminar," in which participants under the guidance of a moderator use reading, writing, dialogue and reflection collectively to share ideas and create new ideas and actions (e.g. Göranzon and Hammarèn 2006). We also drew on Isaaks' notion of collective conversations for collective meaning making, especially in conflict situations (Isaak 1999). We therefore proposed four dialogue seminars that would be carried out in English and would focus on crucial aspects of the programme such as revising the programme description, reflecting on the aims and consequences of using English as the medium of instruction and reflecting on teaching and learning styles, see Appendix I. Each seminar would entail preparation in the form of reading and writing, the outcome of which we would then share in the seminar. Three seminars were carried out in the spring and one in the autumn just before the launch of the programme.

Dialogue seminars

Seminar 1: This preparatory seminar was planned as a dialogue space for exploring the participants preconceived notions and definitions of concepts that are key to their endeavour.

Preparation: The participants were asked to formulate in writing what they saw as:

The goal of the programme?

The characteristics of the targeted students?

Why English?

Typical teaching and learning activities planned?

Seminar: The topics above were discussed: each participant read his/her formulation and the others commented in turn. These comments lead to further discussion.

One of the key issues of the Swedish, and new English, design programmes was that they would professionalise the role of design engineers. However, there was much confusion among students as well as staff as to what the role of a design engineer really entailed. Moreover, we thought it was important that the practitioners had a common view of what the title of their programme meant and that they could formulate it. Therefore, we asked them to define the terms "industrial design," "technical design" and "design engineer" separately on post-it cards and to read their definitions out load. Each definition was discussed and an attempt at finding common definitions was made.

The participants were introduced to a process-oriented view of communication and the value of peer feedback. We also introduced them to some genre theory using the programme description as an example. Together we discussed it on a general basis: its function, intended audience, its communicative aims, rhetorical and linguistic realisations. We talked about the three rhetorical features of course descriptions: motivation, description and instruction.

Outcomes: In this first seminar, the participants became aware of the divergence of their interpretations of key concepts. The discussions that followed were intensive. It also became obvious to them that they had different assumptions concerning the programme, much due to lack of dialogue.

Seminar 2: This seminar used "writing to learn" in order to reflect on written production

Preparation: Participants were asked to do a close critical reading of the programme description and to note the genre characteristics and rhetorical features. They were also asked to submit a course description of their own.

Seminar: After a discussion of each participant's close reading, which gave them the opportunity to highlight the flaws in the description, we spent several hours going through the text and comparing relevant parts to the applicants' letters. We used the genre terminology introduced in the previous session in order to give the participants a common set of terms to use later on in their own continued work. Another issue that was discussed was the link between the

programme as a whole and the participants' individual courses, as well as the link between the individual courses. These links had not been explicitly discussed until this session.

Outcome: The reflection-on-action and in-action made the participants, especially the programme director, acutely aware of the links between genres in a genre chain. The vague and superlative formulations in the description were transferred to the applications. Reflecting on the divergent meanings that were discussed in the last session, the conclusion had to be that if the programme administrators and staff had problems with concepts, it is not so strange that the applicants sometimes "did not seem to know what they were applying for." Although, as most of the participants admitted, this session was painful, they all thought it had been very useful and relevant. Our reading of their own course descriptions made us decide to have another session at a later date dealing with the formulation of course descriptions.

Seminar 3 This seminar was devoted to teaching and learning styles and how to give constructive feedback.

Preparation: The teachers were asked to prepare the first 15 minutes of their first class using English. We did not specify what type of class it should be. By this time it was known that there were only 11 accepted applicants, so we expected the teachers to take this into account in their preparations. We also asked them to reflect on their teaching styles and the various learning styles of the applicants.

Seminar: The teachers gave their lesson, followed by comments from their peers. The rest of the session was spent discussing different class situations in terms of appropriate teaching style. We also discussed students' learning styles from a cross-cultural perspective, and brainstormed possible teacher responses.

Outcome: Only a core group of four attended this meeting. These were maybe not the people who needed this session the most! As expected, we saw different teaching styles, which generated a lengthy discussion. One of the most common observations when doing this exercise with teachers of science and technology is that they tend to launch straight into their topic without any preamble. Since these teachers were asked to simulate their *first* class, one would have expected

them to at least introduce themselves and create a rapport with their audience. In an international classroom, one simple method would be to show the students where you come from in Sweden. In terms of the topic, it is a good idea to frame the topic before launching into the theory. This can be done by first relating the topic to the real-life situation of the students and by ensuring that there is a common understanding in the classroom concerning the key terms used. A dialogue with the students, rather than a monologue may be a better way to start a class. The video recording described earlier is an excellent tool for this kind of dialogue seminar. It enables the teachers to reflect-on-their actions as well as on the students' actions. Another method for improving teaching styles is through feedback from critical friends (see our proposal later on).

Seminar 4   Based on the participants' requests and the one-on-one coaching of work with course descriptions, we decided to revisit written production.

Preparations: The participants were asked to do a critical survey of on-line programme and course descriptions and to formulate clear, concrete sentences under the following headings:

  a. Specific needs for new designing capabilities: why and for what?

  b. Overriding goal of the programme

  c. Objectives of the programme

  d. Learning outcomes: what special capabilities will these students acquire? What needs will they fulfil on the market?

  e. What jobs can they expect and how can they define and promote their capabilities (This is very important for their future professional identity)

  f. Formulate a definition for the kind of design this programme will teach? In order to do this you need to differentiate between the different design concepts that are invading the market, and to clarify them.

Outcome: This was probably the most useful and most difficult session for the participants. They were forced to lower the level of abstraction of their formulations, which required them to be concise and specific. This was not easy. They were also asked to think of their readers. Most of their formulations were highly technical and academic, assuming knowledge that we did not think the applicants would

possess. The most concrete outcome of this seminar was a completely new programme description.

One-on-one coaching

As we have seen, the biggest worry of these teachers, like most of the teachers at Chalmers facing the Bologna reform, is the translation of their teaching materials from Swedish to English. However, from the coaching sessions, it became clear that translation was not an ideal solution since the writers had difficulties extirpating themselves from Swedish syntax. When they were asked to formulate themselves directly in English, they generally fared much better. What was interesting with these sessions was that the problem was not only the written language, but rather the communicative features of the material. What is a logical structure in Swedish may not be so in English.

Apart from the teaching material, we worked with the programme director on the revisions of the programme description and on the letter of rejection to applicants. Letter writing in a foreign or second language is very often a problematic issue as seen in this case as well as in other teacher courses. Letter writing is culturally conditioned, which means that a polite letter in Swedish may, and often is, impolite in English. Yet there is a surprising unawareness of these differences among teachers. If all the master's programmes are to be run in English, it is important to highlight such cultural differences for course administrators as well as teachers.

Summary and closing remarks concerning the A:IDE study

The purpose of this study was twofold: to learn from the planning and initial running of a new international programme, and to design and test intervention methods and tools. The first intervention was a needs analysis of the participants and the situation in order to ensure that the methods we designed would be appropriate. The needs analysis filled another important function in that it challenged the participants to reflect over issues that had hitherto remained implicit. As we had anticipated, the perceived needs of the staff as seen by the head of department did not correspond to the actual needs of the participants. The most acute need, as we saw it, was time and space to meet and discuss each others' assumptions about the

programme and about key concepts. Through the dialogue seminars we tried to provide the time, the space and the mediating tools to facilitate the construction of shared meaning.

INDIVIDUAL TEACHER-LEVEL INTERVENTIONS – 'TEACHING IN ENGLISH'

In terms of English as a medium of instruction in relation to students, we are in a privileged position at the Centre for Language and Communication since we have combined long experience of developing and running language and communication courses at all levels at Chalmers, from undergraduates to PhD and faculty courses. At the Centre for Language and Communication we consequently meet a large number of students each year and it is no surprise to us that very many of them have more or less severe problems with reading, listening, writing and communicating in English and that their vocabulary is sometimes very limited. In other words, we see in our various courses that one crucial aspect of teaching in English is to become aware of the problems students face and have a repertoire of ways to promote learning beyond merely improving one's own proficiency level. In this sense teachers' English proficiency is perhaps less decisive an aspect on the students' learning outcomes than their toolbox of effective teaching and learning activities.

Although Swedish universities have had a rather late awakening both in terms of research and practical interventions, this need to prepare teachers has been observed elsewhere. The Language and Communication department at the Royal Institute of Technology has developed and run an ambitious set of four intervention courses aimed at improving teachers' interaction with students through the medium of English. Similarly, Stockholm University has also developed a course for 'teaching through English' for the teachers who find themselves in international learning environments. However, the sub-project delivered by the Centre for Language and Communication as a pilot course for teachers had a slightly different objective than these courses. First of all it had to meet the project objective of providing a proposal for a set of actions at Chalmers. Being directed at the level of individual teachers, we believed that what we needed first of all was a pilot intervention from which we would eventually isolate two or three types of interventions that would be feasible and sustainable in the future organisation of interventions for faculty. Rather than a set course to be developed, our pilot course, therefore, was intended to result in a better sense of what

'courses' will be needed in the future and how should additional interventions be designed to best cater for the needs of the university and its master's students.

A needs analysis for teaching in English

Our project proposal was to design and deliver a pilot course for faculty at Chalmers who were already teaching in English or needed to prepare for teaching in English. Part of our proposal, predictably, was to do a university-wide needs analysis to design a more appropriate course. With limited resources we settled for an online questionnaire which we eventually were unable to use since management decided against such a needs analysis. Instead, we had to settle for using our questionnaire only on the participants in the actual pilot run of the course.

The questionnaire and the follow up interviews indicated to us the task we were facing. In the cohort for the pilot course, work experience at Chalmers ranged from 4 months to 20 years; academic backgrounds ranged from associate professors to teachers without Bachelor degrees; approximately half the group were already involved in courses delivered in English whereas the other half had no or very little experience of English in a learning environment. In short, roughly half the group were attracted to the course primarily for the prospects of improving their English while the other half took an interest in the course more as educational development to improve their teaching and learning strategies.

Course design and the assumptions guiding the design

Despite much of the discourse of language proficiency and translation issues (see above), the design of the pilot course 'Teaching in English' (TiE) was based and designed on a firm commitment to the learning paradigm (Barr & Tagg, 1995). So, relying on some basics for quality teaching in higher education we assumed a TiE course would be implying constructive alignment in a more pronounced way than for a first language environment (Biggs, 2003). We also sought to emphasise strategies and learning activities that would help promote learning in terms of variation, critical changes, and competence (Bowden & Marton, 1998). We similarly used as a starting point our belief that the complexity of teaching in English as a second/foreign language to a cohort of students with English as their only shared language of communication would require a broader set of teaching and learning activities in

order to meet learning outcomes. In all, this means that in our design we departed from the translation strand of the literature we came across during our preparations.

On the other hand, while we may want to introduce a larger and more varied set of teaching and learning activities (TLAs) and may want to question the decision to lecture, there is no denying that a teacher's perceived level of language proficiency will be enormously influential for the sense of comfort in the teaching and learning environment. In an actual learning situation, the level of proficiency also influences the ability to supervise and guide students in the process of learning in terms for instance of articulating questions or participating in discussions. Similarly, a teacher's level of proficiency informs the choice of assessment scheme and the assessment of learning outcomes. Within the context of TiE, we saw this aspect of language proficiency very clearly since there were participants in the group who felt very strongly that what they needed was language training.

Our outline of the course (Table 2), therefore, provided a presentation of the intended content of the course in a balanced fashion that would suggest both the hands-on elements and the more conceptual or transformational dimension of the course.

Table 2. Teaching in English pilot course Fall 2005 / Spring 2006

Session	Content of session	Assignments
1	**Introductory matters** • 'What is teaching in English' • Oral diagnostic test • Feedback on written text Language material available	Bring a course description to the next session Prepare a short (5 minute) presentation of one concept in the description
2	**Setting a learning framework** • Writing a **course description** • Giving **instructions explanations** and writing **assignments** • Feedback on diagnostic test (oral) Giving a mini-learning activity	Writing a course description Giving a mini-lecture and writing a review of it
3	**Modes of learning / teaching** • Reading in a foreign language • **Lecturing** • Visualisation Giving a mini- learning activity	Writing lab instructions Writing an assignment description
4	**Seminars, discussions, and tutorials** • Turn-taking and guiding • Listening / monitoring • Register Giving a mini- learning activity	Setting up a discussion or seminar module in a course. Bring a writing assignment to the next session.

5	**Criteria, feedback (assessment)**	Writing the criteria for an
	• Assessing oral presentations	assignment
	• Assessing written work (theses)	Bring a student
	Giving a mini- learning activity	administration case to the
		next session.
6	**Student administration**	
	• Role plays	
	• Simulations (phone, e-mail)	
	• Linguistic misunderstandings	
	• False friends in English and Swedish	
	Giving a mini- learning activity	

This outline offers a superficial overview of how the design reflects our learning philosophy as well as our endeavour to accommodate the course design to the input from the questionnaire and interviews. In combination, also, with our literature review and limited benchmarking our design of TiE sought to promote:

- Articulation of learning outcomes
- Critical reading
- Writing and communication for learning
- Student activity
- Student-student activity
- Peer learning
- Adapting modes of assessment
- Constructive alignment (in the context of TiE)

While these are straightforward components of high quality learning environments in higher education institutions (at least in publication) we assumed that the community expectation at Chalmers was to see in a more immediate or even instrumental way how the course would address the specific needs of individual teachers facing teaching in English and this influenced the actual design of the layout and presentation of the sessions.

Course evaluation

The pilot run of TiE did not close on a regular summative course evaluation. Instead, we used formative evaluation techniques during the course where each seminar was briefly commented on by the participants through various writing assignments. This was done in order to adjust the pilot course as quickly as possible in view of the feedback we received.

Reviewing this input in retrospect we see that the course setup was largely effective in that participants have expressed

- An insight that their TiE strategies suffer a lack of informedness and reading background
- An insight that more time will likely be needed to prepare students for lectures, tasks, and assignments
- An intention to re-think their courses in order to introduce more seminar activities
- An intention to use their now larger toolbox to create more variation in lectures
- A similar or related intention to introduce more deliberate peer learning activities
- Some of the participants also express the need for a regular language proficiency course and that TiE was not enough of a language course for their needs

In addition to the formative evaluation of the course, we also conducted post-course interviews with the participants who volunteered to participate. Apart from fairly vague positive remarks about the course and the activities in it, these interviews unanimously stress two crucial points. On the one hand, they all point out that the single most important aspect of a course like TiE is timing. In other words, they want to be able to sign up for the course when they are also in the process of delivering their own courses. They also stress the importance of credits. In the pilot run of the course participants did receive letters to certify their participation but they did not receive any credits nor were they awarded any time off. Needless to say, such circumstances have very negative impact on one's level of ambition and participation.

PROPOSAL FOR A THREE-TIER SET OF ACTIVITIES FOR TEACHERS AND PROGRAMMES

The focus group interviews, the A:IDE findings and the pilot run of the course 'teaching in English' teach us many things, but the two most important ones are that teachers must be credited the effort of taking a course and that given the demanding schedules of our teachers, any course efforts need the motivating environment of proximity to a live situation where as large a part as possible of the course discussion can be (next to) immediately tested by participating teachers.

Therefore we need a design that is flexible enough to allow teachers to make the most of it and the three-step design we propose for Chalmers consists of

- "Academic Writing and Speaking in English as a Second Language" -- A preparatory 2-credit language proficiency course
- "Academic Teaching in English as the Medium of Instruction" -- A 3-credit seminar for adapting teaching and learning activities to English as the medium of instruction
- A programme or course team institute for educational development projects beyond the individual teacher's activities

"Academic Writing and Speaking in English as a Second Language" -- A preparatory 2-credit language proficiency course

- o Course runs over 1 or 2 quarters to suit as many teachers as possible
- o Offered twice every term to 15-20 teachers each time
- o Consists of approximately 20 scheduled contact hours and additional supervision
- o Offered in a blended environment (e-learning as well as traditional pedagogies)
- o Learning outcomes involve English grammar proficiency; written and oral proficiency for learning situations; textual and genre analysis for feedback and assessment situations
- o Includes master's course relevant assignments such as mini-presentations, course descriptions, articulation of learning objectives, assignment instructions, exam questions, and design of visuals
- o Should include diagnostics as well as a screening test (for fluent or proficient teachers' exemption from the course)

This course is a language proficiency course for teachers. There is currently at Chalmers a writing course for PhD students with some overlap with a future proficiency course for teachers. However, the writing course for PhD students is not a proficiency course and participation in the course can not guarantee exemption from the teachers' proficiency course. Yet, for individual researchers in the writing course, it will be possible to use the PhD writing course as an equivalent two-credit course to access the second course in the three-step setup for teachers if they also have the pedagogy course required in the PhD-programmes. The course would also offer PhD students an effective proficiency course if their proficiency level is insufficient for them to benefit from the PhD seminar.

"Academic Teaching in English as the Medium of Instruction" -- A 3-credit seminar for adapting teaching and learning activities to English as the medium of instruction

- Seminar group(s) of approx 15-20 teachers meeting for one term
- The course will require critical friends observation including an e-learning platform to establish a future forum for critical friends and all participating teachers
- The series of seminars offered to a specific group but select parts of seminars should be offered also as open workshops
- The course aims to raise awareness of issues involved in teaching in English, for example, how to adapt teaching styles to a multilingual group; how to choose appropriate alternative teaching and learning methods in view of learning outcomes and teaching in English, how to facilitate seminars, discussions, and tutorials in a second language environment; and using alternative modes of assessment for teaching in English purposes.
- Seminars on learning objectives, reading preparations, lecturing, visualisation, writing-to-learn, peer learning opportunities, e-learning opportunities, assignment design, feedback, supervision, assessment schemes, self and peer assessment, and teacher-teacher support

Much as is the case for the first course, there will be teachers who feel they do not need this course and accreditation of experience must therefore be available. For similar purposes, it should also be possible to access the course through taking the

tests of the proficiency course and submitting an appropriate portfolio of teaching experience in an international context.

A programme or course team institute for educational development projects beyond the individual teacher's activities

- o Annual institute for 20 participants initiated during the fall and reported a year later
- o Getting together in groups of two to three representatives of courses or programmes to design, prepare, pursue, and deliver educational development projects in master's programmes
- o Start-up with a lunch-to-lunch mini-conference to help energise projects and provide project planning
- o Three to four meetings with the entire group
- o Individual teams are supervised and supported on request
- o Write up for continuous meetings with the group and in a final case study on closing the first round of the project
- o Chalmers Master's Conference would be a good forum to share and distribute these types of projects to teachers and students alike

To the extent that there is a problem with this step, it is the difficulty for the departments to predict the scope of projects and consequently the internal costs of pursuing the educational development projects. Another and possibly related difficulty with the third step is to reward the participating teacher-researchers. There is no obvious scope to the intervention and hence talk of credits is perhaps not the way to go. Participation in the projects will obviously count toward a teaching portfolio of high quality but even so, Chalmers may want to design a system of rewards that truly helps motivate teacher-researchers.

Collaboration with other educational development activities at Chalmers
The three steps are to a varying extent language oriented and they all help promote educational development at Chalmers. In a future scenario where these steps are delivered, they can be seen as supporting the courses already offered by the Centre for Competence and Knowledge Building in Higher Education in the Diploma of higher education. There is a

difference in emphasis between the courses and activities, but the philosophy is similar and many aspects have the potential to mutually enhance each other. So for instance, there is already an element of constructive alignment in the diploma and the corresponding emphasis on alignment in TiE means that teacher-researchers who participate in both courses or in overlapping seminars will have a good sense of direction.

Costing the three-step design

Step one, the two-credit proficiency course, is demanding in supervision, individualization, assessment, and feedback but the content is comparably predictable. The 7- or 14-week course will cost 5 000SEK per participant in addition to the cost for department time off from teaching/administration/(research). Estimated time demanded: 80-100 hours.

Step two, the teaching and learning activities seminar, is demanding in preparation and delivery as well as in feedback and follow-up. The 14-week seminar will cost 7 500SEK per participant in addition to the cost for department time off from teaching/administration/(research). Estimated time demanded: 150-200 hours

Step three, the project institute, is participant generated and involves scaffolding projects and generating a peer learning environment and a scholarly approach to educational development. It is demanding in project support and supervision and will occasionally require external developers and their contributions. The 12-month cycle including away-days and campus conference will cost 15 000SEK per participant in addition to the cost for department time off from teaching/administration/(research). Estimated time required: project specific, impossible to estimate, structured events require 60 hours.

CONCLUDING REMARKS

The three-part intervention supported by C-Selt has resulted in many important insights and we believe we can design an effective series of activities to help prepare teachers at Chalmers for delivering master's educations in English. In many ways, our proposed line of action remains similar to that presented previously at mid-project reporting to C-Selt: three linked,

but different types of activities for teachers at individual, group, and programme or team level.

The three components in our proposal are all informed by our benchmarking, our literature review, the focus group interviews, the activities with the AIDE programme, and the pilot run of the course 'Teaching in English,' and imply that Chalmers and its teachers face potentially radical change in at least three ways on delivering programmes in English

- 'Authority' - from first to second language teaching
- Teaching in English – testing the benefits of a learning paradigm
- New dimensions to teaching and learning activities

These three dimensions of delivering programmes in English suggest that what Chalmers needs is *not to do things better, but to do better things* (Elton, 2005).

Authority

Switching from a first to second language will affect the degree to which teachers feel comfortable and the degree to which they feel that their authority can be linguistically mediated. However, this assumes a teacher identity based on a transmission model of teaching rather than an interactive model of learning. The comments about change and developing learning environments in the deputy head interviews as well observations in the A:IDE programme delivery suggest that the reform offers a golden opportunity to change the learning environment from one of transmitting teacher authority in a field to one of improving student learning. Similarly, efforts in TiE have been geared towards finding more effective ways of promoting learning and in that process empowering not only students, but also teachers in their new role.

The benefits of a learning paradigm for 'Teaching in English'

If we seek to empower students through learning rather than instruction/transmission and we thus build mutual respect based not on authority, but on expertise and competence, then we have begun to explore the benefits of a learning paradigm. The need to create new learning environments at Chalmers was brought up several times in the focus groups with the deputy heads of department. More than courses in English spoken and written proficiency, they wanted to see us as facilitators to help teachers test new teaching activities. In the work with

the A:IDE programme, we saw the benefits of creating a legitimate forum for collective reflection and sharing experiences. Such forums need to be created not only within departments, but also across departmental boundaries. Step three of our proposal, the project institute, would fulfil this need and enable staff to test ideas and share good practices. To build the special competences and expertise needed to create a flexible and stimulating learning environment using English (or Swedish) as the medium of instruction, we used the notion of 'writing-to-learn' (communication to learn) in the pilot course and the A:IDE dialogue seminars to explore the possible change of emphasis to activities, assignments, methods, and assessment.

New dimensions to teaching and learning activities

The most obvious new dimension of TLAs for TiE is that suddenly our teachers will have to adjust activities to their international cohorts. The deputy heads indicated a vague but very strongly felt awareness of this dimension of the reform and the sub-project in A:IDE accentuates this need to rhetorically analyse everything from recruiting material to teaching material in view of audience motivation, communicative purpose, and the descriptive level required. Here again, writing-to-learn has proven a powerful tool. In specific learning situations, the local (Swedish) examples have only limited learning impact and the learning environments and activities instead need to invite a more deliberate use of student-to-student activities to explore the full diversity of the given field and its international potential.

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Appendix I

Excerpts from the focus groups

Themes	Focus group 1 (060130)	Focus group 2 (060202)
What are the reasons for the Bologna reform?	• Raise universities' competitive edge • Mobility • Enhanced study environment • Give added value to universities and studies • Management decision (which we must accept)	• Better equip students for international workplace • Increase possibilities for international exchanges • Increases student recruitment • Simplify administration through the use of only one language
Why English?	• The market commands it • No problems with English as such, but the quality of the content may/will decrease	• A practical and equality aspect: same language for all • Possibility to coordinate master's and doctoral levels, creating a link between the two levels
What difficulties do you envisage?	• The students Swedish will deteriorate • Unnatural to speak English with Swedish students • Study material has to be translated, no time and no resources • Representatives from Swedish industry will refuse to lecture • Wide spread in students' English proficiency • Wider problems that just the language issue • How do we deal with a multicultural environment	• Decrease in content quality • Negative effects for Swedish students • Unnatural to speak English with Swedish students • Deterioration of students scientific Swedish discourse • Difficult to comment students' work in English • Is English a goal or is it a tool? • My English has deteriorated in our broken-English environment • Students tend to ask less questions in English • The teachers do not understand the students' English
What are the teachers' needs?	• Widespread of needs: courses, translation, etc… • The teaching staff is close to burn-out. We need more resources • Teachers need to be better prepared so they may feel calm • Diagnostic testing of students should be reinstated and obligatory • We need to create new learning environments rather than fall back on old models	• Teachers need feedback on their teaching • Create writing labs for teachers and students • Coaching by experts • Help to adopt other modes of teaching than lecturing • A dictionary geared toward teachers' needs • Coaching in how to give constructive feedback in English • An official forum for exchanging ideas and experiences • Help in designing student evaluation forms • Sending teachers on a language course is not a solution, they need situated help in

		their local contexts
Critical issues that give rise to frustration	• Ambiguous and fuzzy decisions concerning roles and the division of responsibilities • Too many changes are taking place at once • Blurred messages • The new Master's programmes will hold 2nd citizen status vis-à-vis the old engineering degree • Difficult to understand the logics behind the reorganisation • Lack of resources • Lack of reflection on the part of the management concerning pedagogy and the pedagogical implications • Too many power struggles • Enforcement is not congenial to a good work environment • There is widespread uncertainty concerning the reform • Lack of precision in the goal formulations of the new Master's programmes	• Lack of resources • Lack of time • More time is needed to prepare for the change to English • What about our public commitment: we cannot use English in our communication with industry, the media, regulatory instances, etc.
Concerns about the students	• Swedish students need to be more open to other ways of seeing the world • Where do our students end up: how many actually seek work abroad	• Our students must become better writers in both English and Swedish
Other topic brought up in the discussions	• The management has stated that foreign students should be in minority (controversial statement, which runs counter to the ideological underpinning of the reform) • The bachelor and Master's programmes have no official (real) directors • Recruitment of new teachers must be more rigorous. Their English proficiency must be tested. • We have to ensure that the teachers are working toward the same goals and that they possess the whole picture, rather than just fragments consisting of their own courses • The teachers have to be made to feel responsible for the whole programme • Teachers with the "wrong" attitude must be exchangeable	• There should be an EU standardised test for all the students applying to Master's programmes • There are big problems with students' and teachers' oral performance • There is a wide divide between disciplinary fields; people cannot speak to each other • The Swedish language must not deteriorate • We should take this chance to re-think our courses, programmes and pedagogy and do something better

Appendix II

Course description for Teaching in English

(All course information can be found at http://my.chl.chalmers.se/claroline)

Purpose
This series of seminars is aimed at teachers at Chalmers who will be or have been involved in teaching in English. The course aims to raise awareness of some of the issues involved in teaching in English, for example, how to adapt teaching styles to a multilingual group. The course will also help develop participants' own English language skills.

Objectives
By the end of the course participants will have:
- Discussed the possible changes they need to make when teaching in English.
- Looked at different aspects of teaching e.g. lecturing, lab work, giving assignments, leading discussions and tutorials and assessing students from the point of view of teaching in English.
- Discussed a student perspective to learning in English
- Received detailed feedback on their own language proficiency through various written and oral assignments.

Content
As this is a pilot run of a future intervention, the content is flexible and can be adjusted to suit participants' needs.
The six workshops of the course deal with the following:
- A discussion of the challenges of teaching in English
- Writing a course description in English
- Assigning reading matter and designing reading guidelines in English
- Giving lab instructions and written assignments in English
- Lecturing in English to a multilingual international group of students
- Leading discussions and tutorials in English
- Designing assessment schemes for a course in an international context
- Assessing students in English
- Dealing with student administration in English
- Giving a mini learning activity to fellow participants and getting detailed feedback
- Potential language misunderstandings

Organisation
The course is divided into six 4-hour workshops, three of which will be held in study period 2 and three in study period 3. These workshops will be held on both the Lindholmen and the Johanneberg campuses. The final hour of each workshop will focus on language proficiency and there will be the opportunity for individual tutorials to receive feedback on tasks done and to do both oral and grammar practice.

Course literature
Photocopies will be handed out in the different workshops and articles for background reading can be found on Claroline.
Recommended reading:
Biggs, John. (2003) *Teaching for Quality Learning at University*. Second edition. SRHE & Open University Press, Buckingham.

Boud, David, Ruth Cohen and Jane Sampson. (2001) *Peer Learning in Higher Education*. Kogan Page, London

Falchikov, Nancy. (2005). *Improving Assessment Through Student Involvement: Practical solutions for aiding learning in higher and further education*. RoutledgeFalmer, London and New York.

Assessment
'Teaching in English' is a non-credit pilot series of workshops and seminars but to receive certificate of participation, participants should have:
- Attended 5/6 of the workshops
- Produced a course description
- Prepared a short (5 minute) presentation of one concept in the description
- Written a review
- Produced a writing assignment with criteria OR lab instructions with criteria.
Optional activities:
- Mini-learning activity
- Background reading