Academic literacies approaches for facilitating language for specific purposes

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Abstract

This paper offers a possible framework for working with language for specific purposes (LSP) in an integrated fashion, i.e. with disciplinary learning as the main lever to promote academic literacy. I suggest that a genuine literacies approach in higher education is already disciplinary by necessity and that even if we do not have an immediate disciplinary context to work in, we still need to work with the students' understanding of the communities they are active in. The framework draws on previous research on "literacies" and "generic skills" as the basic components and incorporates ways of adapting other frameworks such as peer learning and activity theory at the institutional level. The framework is applied on three cases at the Division for Language and Communication. The examples indicate how important flexibility in application is, and how the facilitation of learning under an umbrella concept like "academic literacies" is inherently dependent on learning philosophy. The examples also show how the consistent implementation of a framework philosophy requires versatile solutions of the constructive alignment puzzle in designing the environment, the activities, and the assessment of specific interventions. In combination with the three examples, the suggested framework offers a way of prioritising approaches for arriving at academic literacy.

Keywords: academic literacies, generic attributes, constructive alignment, peer learning, activity theory.

Resumen

Enfoques sobre la alfabetización académica destinados a facilitar el aprendizaje de una lengua con fines específicos

El presente artículo ofrece un posible marco para trabajar con las lenguas con fines específicos (LFE) de una manera integrada; es decir, mediante un aprendizaje disciplinar como palanca principal que fomente la alfabetización académica. Mi sugerencia defiende que un enfoque genuino de alfabetización en

un entorno de educación superior ya es disciplinar por necesidad y que aunque no dispongamos de un contexto inmediatamente disciplinar en el que trabajar, seguimos necesitando trabajar con el conocimiento de las comunidades en las que los estudiantes van a ser partes activas. El marco propuesto se basa en investigaciones anteriores sobre "tipos de alfabetización" y "destrezas genéricas" como componentes esenciales e incluye diversas formas que permiten adaptar otros marcos como por ejemplo aprendizaje entre iguales y teoría de actividades a nivel institucional. El marco se aplica a tres casos concretos dentro de la División de Lenguas y Comunicación de la Universidad Tecnológica de Chalmers. Los ejemplos señalan la importancia de la flexibilidad en la aplicación y cómo la facilitación del aprendizaje bajo un concepto amplio y general como pudiera ser "alfabetización académica" es intrínsecamente dependiente de la filosofía de aprendizaje. Los ejemplos también demuestran que la coherente implantación de la filosofía de un marco de trabajo exige diversas soluciones del rompecabezas de alineación constructiva llegado el momento de diseñar el entorno, las actividades y la evaluación de las intervenciones específicas. Junto con tres ejemplos, el marco que se sugiere ofrece un modo de priorizar los enfoques destinados a alcanzar la alfabetización académica.

Palabras clave: alfabetización académica, atributos genéricos, alineación constructiva, aprendizaje entre iguales, teoría de actividades.

Introduction

With increasing globalisation and mobility in education and in professional settings, the successful student is believed to be one who is able to bring learning from one area, discipline, or culture into another for a faster process of community socialisation, knowledge building, and (professional) identity formation. A central component to such mobility is language and communication. Thus, the conditions for higher education communication and language activities need to be reconsidered. This work of reconceptualising language and communication takes place in multiple areas or disciplines such as Content and Language Integrated Learning (CLIL)[1], Writing Across the Curriculum (WAC), Language for Specific or Academic Purposes (LSP/LAP).

In the LSP field, several researchers have noted how the requirements on learning environments have evolved to the point that communicative competence is at best a starting point towards symbolic competence (Kramsch, 2006); how the frequently applied genre approach is not yet sufficiently researched and adapted for second language students who need

also to develop a language awareness in addition to specific genres (Cheng, 2006); and how socially oriented perspectives on LSP (Belcher, 2004) accentuate our insufficient knowledge of (new) genres, the character of community-specific expertise, and our insufficient understanding of the meaning and impact of critical inquiry for LSP. However, while there are many good examples of LSP activities, what may still be missing is a sense of how to approach LSP at institutional levels.

Given these challenges and our specific context at Chalmers University of Technology, it seems that a first step is to collaborate more with discipline lecturers. Yet, discipline-informed LSP courses or side-by-side teaching of LSP and disciplinary content might be insufficient unless we also have conceptual tools with which to collaborate and to define outcomes for a modern LSP-informed learner profile. More importantly, the vision of such LSP-informed curriculum development requires an institutional commitment to the type of LSP profile meeting the demands of our new learning environments. Here, I will try to reiterate some of our arguments and approaches for LSP and discipline collaboration in our activities and interventions.

Situated at Chalmers University of Technology, which focuses on engineering education, we often encounter the argument that "communication" courses or interventions are needed because the professional profile requires such abilities. Although this is true and promotes the activities of the Division for Language and Communication (from now onwards, "the Division"), this argument partly misses the point. While the addition of communication learning outcomes into the syllabi certainly helps promote or at the very least prepare professional communication, learning activities also need to meet the LSP challenges and, as a consequence, help promote deeper learning strategies than disciplinary content alone does. Integrating communication learning outcomes promotes students' ability to observe, adopt, and where necessary adjust the discursive identity of their discipline (Jacobs, 2005; Fortanet-Gomez & Räisänen, 2008). So, the purpose of this paper is to offer learning philosophy components of a framework for pursuing the potential that genuine LSP interventions have in scaffolding disciplinary discourse and the concomitant rhetorical awareness of such discourses. Because my focus here is on a possible framework for the programme or institutional level, I will only briefly mention the L1 and L2 parametres as they relate to the examples I offer in the second half of the article. However, English is the lingua franca

for most of the research and education at master's level and beyond. For many L1 Swedish graduates, Chalmers is in effect a parallel-language university where discursive efficiency is required for both Swedish and English.

Some components in a framework for facilitating integrated language for specific purposes enhanced learning

In this paper, I limit my narrative to the combination of three of many starting points and approaches for discussing LSP and CLIL. This focus is an attempt to do justice to how these approaches inform the language and communication work we try to promote at the Division. As I draw on components as far apart as a UK paradigm of academic literacies and an Australian one of graduate attributes as well as on educational frameworks such as peer learning and constructive alignment, I mix terms and perspectives completely but I do so in the hope that it offers a fruitful perspective. I also do so because I find that the learning situations we find ourselves in do not lend themselves to description or analysis in single models. Our many students and student profiles, their various programmes and educational levels, and the various institutional cultures we find ourselves in result in very multi-dimensional facilitation situations for higher education. It is improbable that these would crystallise into valid one-model descriptions.

Academic literacy, graduate attributes, and reflective practices

Lea and Street's notion of "academic literacies" (Lea & Street, 1998 & 2004) is familiar to many higher education professionals. Having studied student writing practices at university both from the tutor and the student, they articulated a conceptual framework for their observations and their three-model framework has since become very influential in attempts to analyse what happens in specific educational environments and for designing educational programmes.

The first model is what they refer to as the "skills model" (Lea & Street, 1998: 158). This is the more instrumental view of literacy components as

isolated skills, which are expected as prerequisites for a specific course or level of education. The next model is the one they call "academic socialisation" (Lea & Street, 1998: 159). In this model, components viewed as skills are inserted in a social or disciplinary context but there is no emphasis on communicating between disciplines. Their third model is the most inclusive of the three and they refer to it as the "academic literacies model" (Lea & Street, 1998: 158).

The literacies perspective requires a more inclusive understanding of the communicative situations that a student faces. In the literacies model, the communication practices are seen as epistemologically integral to a culture and the multi-cultural nature of university is emphasised. In this sense, Lea and Street argue, the academic literacies model is inclusive of such mechanisms as identity creation, power relations, and institutional culture(s). More importantly, the academic literacies model is the only one of the three that provides a perspective enabling switching practices between the different cultures encountered (Lea & Street, 1998).

Even if one of the assumptions of Lea and Street's original project was to move away from an unreflective deficit-type, skills-oriented model of student writing, they do emphasise that the models are not mutually exclusive. Rather, the opposite is true in a sense that one model includes components from a previous model but employs them contextually. While there is certainly overlap between the models, in theory as well as in practice, it is possible to distinguish between them by adding further levels or layers to the framework.

One effective attempt at this expansion of the model is the one provided in the work by Roz Ivanic (2004). Ivanic added a meta-analysis of writing research and pedagogy resulting in a framework consisting of six discourses about writing and suggested their respective connection to pedagogical practice. In her more detailed framework, Ivanic articulates three discourses about writing that overlap with Lea and Street's skills model. These are the "skills discourse", the "creativity discourse", and the "process discourse" of writing (Ivanic, 2004: 227-232). Both creativity and process discourses could feasibly be put to use in different approaches but in Ivanic's framework they remain connected with skills rather than with socialization due to the implicit product orientation in all three discourses and the demotion of the social context of writing. This distinction in her framework is useful since it distinguishes between orientation and approaches for discourses about writing.

Ivanic's two following discourses correspond to Lea and Street's "socialisation" model. Her fourth discourse is called a "genre discourse" of writing (Ivanic, 2004: 232-234). From her description of this discourse, it appears that an understanding of genre largely informed systemic functional linguistics and explicit teaching of linguistic features in specific genres. The genre discourse and its social orientation is followed by Ivanic's fifth discourse which is the "social practices discourse" (Ivanic, 2004: 234-237). The emphasis in "social practices" is the purpose-driven writing that is also given a social context with a real-life connection. The close connection between the "genre discourse" and the "social practices" might explain why the social and rhetorical orientation in US genre discourse is not much articulated in the Ivanic framework. The US genre discourse as articulated, for instance, by Miller (1984) is potentially represented by the "social practices" discourse of writing in this framework.

The third model in Lea and Street's articulation, the academic literacies one, corresponds, to Ivanic's fifth and sixth discourses. The sixth discourse is "sociopolitical" and as such it relates closely to Lea and Street's academic literacy in that both ways of conceiving writing include exploring and negotiating power relations and issues of identity (Ivanic, 2004). Ivanic, like Lea and Street, suggests that the discourses are to a large extent cumulative and that the social and genre stances in the previous discourses are naturally activated also in a sociopolitical discourse. However, the crucial difference is that it is not possible to see genre, for instance, as a neutral tool to be used strategically in a communicative situation; rather, sociopolitical power relations in particular situations "dictate" genre usage. In this sense, the writer becomes a social agent in a social constructivist landscape of writing interaction.

Leaving the UK context and turning to the corresponding issues in Australian higher education, Simon C. Barrie has studied how Australian university policies emphasising the loosely defined notion of "generic graduate attributes" are understood and articulated by colleagues in the disciplines (Barrie, 2006 & 2007). Interviewing a controlled set of 15 informants (from five disciplinary domains (basic sciences, humanities, professional disciplines), Barrie was able to synthesise his data into a "concept of generic graduate attributes" (Barrie, 2006: 223). Much like Ivanic includes the pedagogical approaches in the discourses, Barrie includes the teaching and learning approaches as articulated by his colleagues (Barrie, 2007).

First of all, Barrie's concept overlaps with the Lea and Street and Ivanic models in content and focus but his phenomenographic approach and analysis gave rise to slightly different categories so the overlap is less immediate at a terminological level. The Sydney colleagues, thus, conceived of graduate generic attributes in one of four ways. At one end of a potential continuum, the attributes are seen as "precursory" (Barrie, 2006: 225). With such an understanding, a colleague would think of writing as a skill or set of skills that should already be established among students by the time they reach university or at least a specific course at university. So, Barrie's "precursor" corresponds to the initial skills model or discourse in the Lea and Street or Ivanic frameworks. With a precursor concept of the generic attributes, they become irrelevant since they ought to be established prior to disciplinary education at university.

The second level concept for the generic graduate attributes is the one where such skills are seen as complements to university education and outcomes of education. In this "complement concept" of the attributes (Barrie, 2006: 226), they are viewed as isolated compartmentalised skills but are indeed part of the learning outcomes of higher education. However, they are secondary to disciplinary knowledge and therefore the responsibility of other teachers or the students themselves.

The third level concept that Barrie's colleagues articulated, "translation", is more inclusive than the previous two concepts. Here the attributes are seen as characteristics that allow students to make sense of and apply or translate disciplinary knowledge (Barrie, 2006: 227). Thus, the relationship between the generic attributes and the discipline is no longer one where the attributes are isolated add-ons but are instead seen as connected to disciplinary learning.

The fourth level Barrie describes is one where generic graduate attributes are seen as enabling (Barrie, 2006: 229). It is tempting to see similarities between the translation concept and the enabling concept in terms of there merely being a difference in the degree of integration between the two. However, Barrie is explicit in his emphasis that with the enabling concept of attributes, they are at the core of university learning:

> In this conception, generic attributes are seen as transcending disciplinary boundaries even though they are initially developed within disciplinary contexts. The foregrounded abilities in this fourth structure of awareness are not atomistic (level 2) or clustered (level 3) skills and abilities. Rather what is

present is an interwoven and holistic world-view and aptitude for learning. (Barrie, 2006: 230)

When the attributes are seen from a holistic perspective, they become transformative in ways that exceed isolated application or translation to a specific discipline and its problem solving challenges. Instead, these attributes are understood to help students reshape knowledge or construct new knowledge in areas removed from their original field of study. So, with this conception attributes "are understood as abilities that are the keys to inquiry and learning in many aspects of life, not just formal study" (Barrie, 2006: 230). It is in this articulation that it is possible to see considerable concept overlap between Barrie's "enabling", Ivanic's "sociopolitical", and to some extent also Lea and Street's "academic literacies".

Some overlap can be expected in our respective ways of understanding generic skills or attributes, but it is probably more rewarding to look at how we address these attributes in teaching and learning activities. Here, Ivanic (2004) offers the more explicit framework as she correlates each level with predominant teaching approaches. Similarly, Barrie (2007) offers an overview of the teaching and learning approaches his colleagues articulated in his data. Barrie's overview is interesting as it overlaps in indirect ways with assumptions in the Lea and Street model and Ivanic's teaching approaches.

For instance, all three sets appear to share an understanding that the skills model often connects the teaching of explicit isolated skills in atomistic fashion relying on the specific instruction and templates provided by teachers or instructors. There is also inclusive overlap between Ivanic's mapping of pedagogical approaches to the process, the genre, and the social practices discourses with the teaching and learning approaches Barrie articulated for the translation conception of generic attributes. Barrie's overview makes explicit what remains implicit in Lea and Street as well as in Ivanic: the translation concept of graduate attributes requires "teaching content" (Barrie, 2007: 451).

The overlap between Ivanic's and Barrie's mappings is representative, I believe, of how the more inclusive understanding of generic attributes requires sustained and informed engagement of colleagues from the disciplines in order to facilitate the generic learning outcomes at the more ambitious levels of understanding. This involvement of content lecturers in facilitating "literacies" is present in all three "frameworks" but is most explicit in Barrie's mapping

Another dimension in which all three attempts at describing and categorizing generic attributes converge is the relative paucity of detail for the most demanding concept or level – "academic literacies", "sociopolitical", and "enabling", respectively. There are, at least, three challenges here. First to actually observe, or generate, learning environments that can be said to represent this level of understanding. The second challenge lies in moving beyond the discipline or the university environment to verify the assumptions informing this more far-reaching conception of students successfully pursuing generic graduate attributes in their practice. The third and most demanding challenge lies in refining and sharing the methodologies that best involve and motivate students in the learning of generic attributes in the more inclusive ways they can be articulated. So, the paucity of detail and example of the demanding "enabling" level is partly explained by the fact that it is rarely reached. Many institutions and educational programmes settle for an academic or professional identity. Such academic and professional identities often stay at the socialization level.

These challenges aside, it seems that from the limited perspective of communication for specific purposes, we need to look into what it takes to move beyond the initial and remedial skills level toward the socialization (Lea & Street) and translation level (Barrie) and then beyond that to "enabling sociopolitical literacy". We also have to acknowledge that we are not always in learning environments where this move is prioritised. There may even be a disciplinary preference in educational institutions if professional education might "settle for" socialization and translation, which would not be an option for a liberal arts educational institution.

Regardless of our institutional environment, additional components seem useful to facilitate the generic attributes learning we pursue. The first addition is to introduce the context specific mechanisms, theories, or concepts that best help students toward a reflective meta-perspective on the given set of attributes in a programme or institution. This involves different designs across institutions but in our experience introducing the notion of mediated action as used in activity systems analysis theory (Engeström, 1987 & 2001; Russell, 1997; Russell & Yañes, 2003) is indeed helpful for students. Without working activity theory at an advanced level, we strive to maintain the essential Vygotskian emphasis on mediation and find that the intuitive appeal of the "activity system" helps facilitate an understanding of some of the mechanisms involved as students move between systems and potentially beyond university. It is possible, too, that activity systems thinking helps

students negotiate some of the restrictions of being learners in an academic university setting rather than in a genuinely professional setting even if it is the academic setting that generates the immediate external motivation (Petraglia, 1998).

Similarly, we find that some summative assessment strategies are counter-productive to the learning outcomes we wish to promote for graduate attributes and that, therefore, we need to find assessment and assignment designs that rely on formative peer learning and assessment (Boud, Cohen & Sampson, 1999 & 2001; Falchikov, 2005; Gillespie & Lerner, 2008). Many assumptions inform peer assessment strategies but the more critical ones for our activities include actually getting an "audience" reaction either in terms of a reader or listener or for issues of teaming and knowledge building (see Young, Reiss & Gustafsson, 2006). In successful circumstances, we also see this peer assessment design staged in multi-cultural or interdisciplinary student groups, which further enhances learning and meta-perspective(s) on graduate attributes.

Examples of translating the theoretical framework into our activities

Chalmers University of Technology is a research university with a long history of engineering education. Situated on the west coast of Sweden in Gothenburg, the university staffs approximately 1,500 teachers and researchers, as well as approximately 12,000 individual students (Chalmers, 2010). So, it is not a large institution. Across all the programmes and educations at the university (BSc Eng, BSc, MSc Eng, MSc, MSArch), there are almost 1,000 international students, most of whom are enrolled in one of the 40 international master's programmes. Despite the recent increase in international student numbers and the increased use of English, there is currently no parallel language policy enforced at the university. Rather, many students find themselves in a language environment that shares more characteristics with English as a lingua franca (ELF) – see, for instance, Björkman in this issue.

The organisational structure of the university comprises disciplinary research departments and an educational organisation independent and separate from the departments. In this educational structure, programme managers place orders for courses with the relevant research departments

against conditions set up by the programme and specified in a contract with each department; the typical student is a student on a programme; and there is a clear professional and end-user orientation to the programme design. Our work focuses almost exclusively on the programme level but we have also developed elective courses open to all students across the university. Working in programmes, we deliver tailor-made and integrated courses and modules and try to ensure that the interventions provide progression in the communication outcomes we facilitate. Effectively, we design a "writing in the disciplines programme" for each engineering programme we work with.

Our interventions in different educational programmes vary in character. Sometimes they are little more than a sequence of two or three courses in a three-year programme employing a rather superficial approach to communication that focuses on technical reporting and written or oral proficiency in Swedish and/or English. So, we sometimes work in contexts characterized by a skills model or at best a process discourse about generic graduate attributes (Lea & Street 1998; Ivanic, 2004). However, we also work with programmes where there are opportunities and conditions to more closely integrate language and content progressively. In such conditions, communication outcomes are never isolated from the disciplines and communication becomes a dimension of disciplinary knowledge and belonging. Consequently, it is easier to promote a view of generic graduate attributes informing the engagement with knowledge formation and disciplinary learning. Such a view coincides in many ways with "academic socialisation" and with a "genre discourse" as well as with the concept of "translation" (Lea & Street, 1998; Ivanic, 2004; Barrie, 2006).

However, even such ambitious engineering programme contexts can, paradoxically, present restrictions to our work. The learning paradigm many students find themselves in is such that the individual student needs to be able to access and contribute to a specific engineering discipline only. Thus there is a risk that progamme designers focus exclusively on the specific discipline or profession, which means that the programme's discourse about generic graduate attributes stops at the level of socialization, social practice, or translation (Lea & Street, 1998; Ivanic, 2004; Barrie, 2006).

Given this background of our programme environments, it is possible to look at three examples from our activities. The objective with the descriptions is to enable a tentative correlation with the frameworks of generic attributes rather than providing fully data-driven profiles of the

respective activities. One example comes from a highly integrated intervention; the second example is potentially surprising as it may appear to be too heavily product-oriented; the third example is paradoxical in that it is strictly speaking not integrated and technically an isolated course so progression is problematic, yet it appears to be very effective for student learning. One important quality in all three examples is the fact that they all require very different solutions to the challenge of designing interventions that are constructively aligned (Biggs, 1999; Biggs & Tang, 2007). They have different learning outcomes and ways of reaching them but the communication outcomes are all informed by the type of conceptualisation for generic communication outcomes that is offered in Lea and Street, Ivanic, and Barrie.

Technical communication in a three-year chemical engineering programme

The chemical engineering programme is a fair example of our work in highly integrated course environments. Our activities in the programme have been described elsewhere at some length focusing on integration, peer work, and writing to learn (Ericsson & Gustafsson, 2008). Here, my aim is to relate our design and activities for the programme to the suggested framework components for generic graduate attributes.

Referring to the three articulations of levels in generic attributes, it is possible to talk of progression not only in terms of the types of communication activities students engage in but also what type of understanding of generic skills that informs the design or activity. Similarly, it is necessary to look also at the variation in communicative situations that students are exposed to as a critical component to move beyond a skills level approach. Combining "progression" and "variety", our courses in this programme span at least two of the Lea and Street levels and the corresponding levels for Ivanic and Barrie.

Our work with this programme starts in the first year with learning activities geared towards acquiring disciplinary and academic discourse in Swedish. We meet the students in the spring term and collaborate with a course in "industrial chemistry". In this course, and in our components in it, most of the students consequently work in their first language and our focus is their translation (Barrie) of the communication strategies they acquired in upper

secondary school into a discipline-specific university context. This approach involves process writing for genres like the technical report, the oral presentation and the critical reading of a literature review but very little effort is spent on remedial work in the sense of assuming a specific set of pre-requisite attributes. Similarly, working together with the content lecturer ensures that the communication dimension is discipline-informed and involves content as well as process.

For the purposes of testing the framework on our own activities, however, I want to focus on the interventions for communication in English. Our activities facilitated in English involve a larger span of the framework and as such might serve to indicate the impact of the L1 and L2 environments, respectively. For technical communication in English, we first meet students during the fall of their second year. This intervention is not integrated and is very much a skills-informed proficiency course where, for instance they practice grammar in an online environment and take a final exam for grammar proficiency. Here we see that although the programme perspective is a precursor (Barrie) one, we need to compensate that by sequencing our series of activities such that the progression suggests the subsequent levels in the framework. Therefore, the students embark on a more writing-oriented course in their spring term and they write a commentary about a vaguely chemistry-related article or topic. The scaffolding is largely process-oriented and while the product has no content-oriented audience beyond the student group, the writing assignments constitute a series of steps towards exploring what academic written discourse for chemical engineering is like.

Their next step is to instruct each other about critical components for separation technology, which is one of the integrated disciplinary courses. In that regard, this seminar activity, the disciplinary course, and the communication course are fully integrated creating a meaningful learning environment informed by actual communication with a real audience and high stakes chemistry content. The specific genre is less obvious in this seminar as the students write a technical explanation to a group of peers, but in terms of Ivanic's discourses the scaffolding of technical communication is aligned with the "social practices" discourse (Ivanic, 2004) and helps promote a sense of disciplinary action. The students also conduct a second seminar where they argue for and explain a design decision for a specific industrial separation process. Like the first seminar, the process involved in this seminar promotes peer review and multiple versions of texts. A third step for the students' disciplinary progression involves their field-specific

reading. Some of the course literature in the separation technology course is quite demanding and we therefore assist the content lecturer by scaffolding that reading with a disciplinary (critical) reading seminar to help isolate the disciplinary specificity of the text and involve the students in answering each other's questions on the textbook reading. In all, although the set of activities used and the communication outcomes that are articulated are relevant also to other disciplines, they are employed here in very discipline-specific content.

In this programme, initial activities in English are essentially skills-informed language proficiency activities for the EFL-context which the students are exposed to later. These give way to more genre-informed activities to promote socialisation, social practice, and translation levels (Lea & Street, 1998; Ivanic, 2004; Barrie, 2006). The emphasis on different communication forms, on gradually more demanding situations, and recurring peer assessment activities are all components that enhance the students' notion of technical communication in their discipline while also offering higher-order learning activities. However, even if the multi-step intervention helps promote a sense of identity as a chemical engineer, the type of setup available in this programme currently does not necessarily generate designs and activities that are characterized by the sociopolitical discourse and enabling conceptions of generic attributes.

A writing intervention for the university-wide Bachelor thesis projects

With the Bologna agreement, all students at the bachelor level are required to conduct a 15-credit study and document it as a bachelor thesis in their third year. At Chalmers, these projects are run as group projects during the third year spring term. Supervisors at each department post projects available to students across many engineering programmes and our Division is involved by scaffolding the communication dimensions of the projects. This results in a university-wide concern with the bachelor project interventions and a number of multidisciplinary projects that include students from more than one engineering programme.[2] A Dean's decision requires the bachelor thesis be written in Swedish but there are many supervisors who can only work in English and some projects really make little sense in Swedish so there are many theses in English as well.

At a superficial glance, our involvement in the bachelor projects will look like a skills-oriented one. For some students, it might be. These are students for whom the writing of a technical report is "still" a template exercise and who have supervisors supporting that approach. However, for the majority of students this learning experience holds greater potential given that we face a long writing process often comprising multiple kinds of documents in addition to multiple versions; that the teams are often multidisciplinary with a real distribution of project-related expertise; and that the setup involves project teams in peer response work as well as a critique by a different project team for the final presentation. In many cases, there is also a valid sense of working on a real project with a real audience. Most of the projects, irrespective of supervisor profile, seem to attract highly motivated student groups who gradually develop a sense of authority in their projects.

The Division provides a series of lectures on technical communication in Swedish. In addition to the lectures, we also provide a series of three compulsory tutorials. The first tutorial focuses on facilitating the peer response between two groups. The two groups have exchanged early versions of their reports and the session focuses on discussing the two reports in terms of understanding and negotiating the comments generated. The second and third tutorials are designed for one group per session only and tend to focus on strategically using the expected genre, the technical report and the oral presentation, to do justice to the project and its main strengths. The distribution of the three tutorials emphasizes how the project develops over the spring term and how their initial articulation of various concepts or theories in it was suboptimal given their end-of-term level of understanding and degree of (multi-) disciplinarity. The genre focus of the tutorials is therefore coupled also with a focus on the group's learning progression and how that is reflected in language and communication.

We invite the content supervisors to the tutorials but only very few supervisors choose to accompany their groups. The tutorial discussion is more interesting with the supervisors contributing and there is some degree of increased disciplinary credibility when they are present. While this credibility promotes the project disciplinary depth and exemplifies the integration of content and language, it need not necessarily generate the type of meta-disciplinary insights required to take this intervention from the level of socialization, social practice, and translation levels to the levels of the enabling or sociopolitical. To be sure, it does in some cases and with some student categories – notably the "Academic Susans" in Biggs' old

categorisation (Biggs, 1999; Biggs & Tang, 2007). It might also lead to this level of understanding in specific cases and with particularly active supervisors who approach generic graduate attributes with this type of understanding. In most cases, though, it is an intervention design that helps engineering students in the sometimes awkward task of moving between multiple disciplines as well as between engineers and end-users, which in itself is no small task and an important learning outcome.

Enabling sociopolitical discourse in an elective course?

The two first examples have been courses or interventions that are compulsory to the students involved. They also exemplify interventions that are highly integrated in the curriculum of the respective student groups. At first glance, it would seem that compulsory integrated activities are required for literacy-oriented work with graduate attributes but at times we also face situations where we can only offer students elective courses that are not strictly speaking integrated into the curriculum. Predictably, it is a challenge to promote an enabling sociopolitical discourse in learning environments where the institutional conditions are really indicative of a complement concept of generic attributes (Barrie, 2006).

The third example, therefore, is an elective course in technical communication offered over 14 weeks for 7.5 credits alongside one or two programme-specific courses at each student's master programme. The isolated nature of electives means that the only integration taking place is that generated by the students themselves. They do this by using assignments from other courses, by relying on their disciplinary expertise for the technical communication content development in the course, and by applying their new perspectives on technical communication in their parallel courses. They also integrate generic attributes by negotiating their conceptions of genre in the multi-disciplinary learning environment with other course participants, who tend to come from other disciplines.

The design of the course prioritises technical communication theory and tutoring theory over proficiency as such. So, like many of our courses, it is informed by genre theory. However, unlike most of our courses, it involves problematising genre by reading and discussing genre theory and testing it on students' technical communication experience. While most of our courses are based on genre theory, they tend not to involve actually reading

about the development of, and possible positions and interpretations of genre.

An additional way in which students gain a meta-perspective on communication is through the tutoring component of the course; it is our peer tutor course for working in the writing centre as a peer tutor. Peer tutoring philosophies are decisive in enhancing student perception of graduate attributes as far as communication goes. To have the responsibility of having to begin to understand the communicative constraints of another student and the disciplinary conditions that student faces is one that does indeed have the potential to provide enabling sociopolitical discourse insights for many students. Again, like for genre theory, the difference here seems to be the deliberate discussion of theory or philosophy. Almost all our courses and interventions have peer learning components but only rarely is there an explicit discussion of the philosophy of peer learning.

The third apparent difference with the elective in technical communication compared to the other two examples and the rest of our courses and interventions is the inclusion and explicit discussion of activity theory. While I do not claim that the course seminar and the discussion in it generates a very sophisticated level of activity systems awareness and application, we do see how the perspective enabled by activity theory is an effective component towards an enabling sociopolitical discourse. Relatively speaking, a larger proportion of the students in the technical communication course appear to reach this level than do students in the BSc thesis intervention or in the three-year chemical engineering course.

There are confounding parameters though. It is an elective course and as such might attract a larger proportion of high achiever students and students for whom the communication attributes and learning outcomes have rarely been extremely demanding to reach. It is also an intensive seminar with a limited number of students involved in multiple discussions about disciplinary technical communication involving several disciplines. Given such settings it is conceivably more probable that the learning environment supports students in enabling sociopolitical discourse.

Concluding remarks – language for specific purposes and enabling sociopolitical literacies

Lea and Street (1998: 158) are careful to emphasise that the three levels in their model are in no way linear or replace each other since "each model

encapsulates the other". The same overlap in discourses and conceptions seems valid also for Ivanic and Barrie. The three examples from our activities also show this encapsulation of the approaches. However, it is more difficult to establish exactly what is required for an intervention approach to fall under the socialisation, social practices, and translation categories. Genre can obviously be taught at the skills level and process orientation need not by definition help a student with the challenge of translation in a discipline or between disciplines. Furthermore, it is also hard to verify that facilitating an intervention with a certain approach or conceptualisation actually means that students achieve the corresponding learning outcomes.

In Table 1, I attempt to visualise the overlap between the three frameworks for "generic graduate attributes" and offer a suggestion for where priorities might lie for many LSP interventions. It may need pointing out, though, that already in the three examples from our activities, the Chemical Engineering students, at least in terms of their technical communication in English, are offered a more linear journey from skills to social practices as it were.

Lea & Street Model (Approach)	Ivanic		Barrie		LSP Priorities
	Discourse	Approach	Concept	Approach	
Skills	Skills	Explicit skills	Precursor	Remedial	3
	Creative	Self-expression	Complement	Associated	
Socialisation	Process	Focus on process	Translation	Teaching content	1
	Genre	Genre informed		Teaching process	
	Social practices	Functional and purposeful communication		Engagement	2
Literacy	Sociopolitical	Critical literacy	Enabling	Participatory	4

Table 1. Generic attributes and approaches and their possible relation to LSP practice.[3]

So, Table 1 and the LSP priorities suggested in it reflect the fact that, given the professional education context we face, many of our courses and interventions are informed by basic writing process pedagogy and genre applications (Swales, 1990; Swales & Feak 2004). With that "level" as our starting point, we include peer learning (Boud, Cohen & Sampson, 2001; Falchikov, 2005) and closer discipline integration in order to facilitate engagement (Barrie), social practices (Ivanic), and academic socialisation (Lea & Street). However, we also find ourselves in situations where we need to design interventions that would strictly speaking qualify as oriented towards remedial skills. This sequence in many ways does justice to our

agenda and the immediate professional context of engineering provides the incentive for students to add the skills level to their LSP-development.[4]

To what extent our interventions are indicative of, or facilitate enabling sociopolitical literacy and an empowered identity beyond that of their discipline is more difficult to assess. To be confident about that would require closer and deeper integration with disciplinary colleagues across the various departments involved in a specific learning environment. It would also require examples of students moving both between disciplinary environments and multiple-communities on the one hand and beyond the university on the other hand.

For enabling sociopolitical literacy including its more far-reaching sense of empowerment and identity to even begin to develop in LSP-informed contexts (priority 4 in Table 1), deep disciplinary collaboration is necessary in one way or another. There are at least three ways of realising such collaboration as it can take place between facilitators, between students, or within student projects. Students need to negotiate multiple disciplines or cultures to further pursue the more demanding level.

In short, discipline specificity is not enough in isolation to negotiate between cultures. A vision for this might be called "institutional LSP" which would promote "multi-disciplinary language and communication throughout the curriculums". Here, "curriculums" is crucial in the sense of the many specific curricula across an institution and "multi-disciplinary" is used not primarily in terms of multi-disciplinary fields but more in terms of education that promotes the negotiation between potentially disparate disciplines and cultures.[5] I believe it is precisely this negotiation that is important for reaching enabling sociopolitical literacy by moving beyond the isolated disciplinary focus, which risks promoting simplistic monologism (Lillis, 2003), and instead helping students towards a position of greater "negative capability".[6]

Needless to say, this kind of educational environment of high quality integrated LSP interventions requires considerable institutional commitment and collaboration among colleagues. It also implies that the institution's commitment must mean, at a very basic organisational level, that language and communication faculty are not demoted to peripheral positions in educational systems forcing us to settle for skills and translation approaches. However, avoiding such peripheral positions also challenges us since we will have to expand our professional horizons and be more involved in the teaching of

discipline-specific content in order to spot the crucial learning activities that 1) require communication support to enhance learning; 2) lend themselves to effective or critical communication interventions; 3) are critical to professional identities in terms of communication literacy beyond the isolated discipline, the university, and a specific profession (see a similar argument by Jacobs, 2005). So, we face a definitional issue as "communication-related learning outcomes" in this vision move beyond mere (discipline-specific) report or article writing or various types of business communication components. Instead, "communication outcomes" crystallize as we analyze the courses we collaborate with from the perspective of constructive alignment (Biggs, 1999; Biggs & Tang, 2007) and decide how we can best or most efficiently meet the learning outcomes of the course and its various constituent assignments in terms of a sociopolitically enabling literacy discourse.

Acknowledgements

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NOTES

[1] Please note that for this article I make no distinction between CLIL and Integrated Language and Content (ICL).

[2] The total number of projects over the spring is approximately 220 and some 40% of them are multidisciplinary.

[3] The table layout and content are based on and adapted from Lea and Street (1998: 158-160), Ivanic (2004: 225) and Barrie (2007: 452). The models do not correspond perfectly but the partial overlap is rewarding for intervention design. LSP = Language for specific purposes.

[4] Obviously, some students experience this as a backward process and would have us start at a template-informed skills level that we want to avoid.

[5] My use here of the term "curriculums" is informed by conversations with David Russell and his use of the word in a joint project in progress.

[6] Please allow for a generous use of Keats' term from his December 21, 1817 letter to his brothers. In our LSP-context the term translates into an insight of each separate discipline's limitations, the ability to address that limitation as something that is not "certain" or laid down at a procedural level, and the ability to exist in that uncertainty without regressing into the relative safety of the isolated discipline.