



Vaasan yliopisto  
UNIVERSITY OF VAASA

OSUVA Open  
Science

This is a self-archived – parallel published version of this article in the publication archive of the University of Vaasa. It might differ from the original.

## Teaching LSP to technical communicators

**Authors:** Koskela, Merja; Isohella, Suvi  
**Title:** Teaching LSP to technical communicators  
**Year:** 2018  
**Version:** Publisher pdf  
**Copyright** Mouton De Gruyter

### **Please cite the original version:**

Koskela, M., & Isohella, S., (2018). Teaching LSP to technical communicators In J. Humbley, G. Budin, C. Laurén (Ed.), *Languages for Special Purposes : an International Handbook* (96–110). Boston, Berlin: Mouton De Gruyter. <https://doi.org/10.1515/9783110228014-005>

Merja Koskela and Suvi Isohella

## 5 Teaching LSP to technical communicators

**Abstract:** The purpose of this article is to provide a new perspective on how technical communication competencies can be supported by the basic ideas of LSP theories and LSP research in technical communication education. A multi-dimensional model of the linguistic variation of LSPs is developed and discussed. Based on the model, some examples for developing technical communication curricula are presented.

### 1 Introduction

The most important task for technical communicators is to “easily communicate highly technical content in an appropriate way to the intended audience” (Carliner 2012: 61). In this task, technical communication professionals need to have a thorough understanding of how specialized knowledge is typically delivered by verbal and visual language in different professional settings, of the linguistic variation that comes with different degrees of specialization as well as of the ways in which texts convey the norms, values and ideology of professional cultures (see Trosborg 2000: vii). In other words, technical communicators need to be aware of the basic theoretical ideas behind Language for Specific Purposes (LSP) and LSP research. In fact, it has been stated that the success of technical communication to a large extent depends on this kind of knowledge (Gnutzmann and Oldenburg 1991: 103).

Technical communication education strives at producing the knowledge and skills required by working life within the field, including language and communication skills. However, the task is challenging because technical communication – as a relatively young field – is and has always been rather heterogeneous. Technical communication is also in an increasing pace facing the challenges of globalized and networked economies (see, for example Coppola 2012: 4). Already in the 1990s, there was discussion of how the field of technical communication was characterized by shifting roles, evolution and change, diversity and integration (Staples and Ornatowski 1998: xii). However, these characterizations are still accurate. As Spilka (2010: 8–9) puts it, the work in technical communication “typically takes place in complex, multiple social environments” and “we now need to negotiate a complex, often global world of intersections and interrelationships, multiple goals and constraints, and new ways of creating, disseminating, storing, and retrieving information and of managing knowledge and content.”

In order to meet the challenges put by the growing diversity and the evolving nature of working life, researchers, educators and practitioners of technical

---

Merja Koskela and Suvi Isohella, Vaasa (Finland)

<https://doi.org/10.1515/9783110228014-006>

communication have been defining and redefining the competencies required by technical communicators (see, for example, Rainey, Turner, and Dayton 2005; Whiteside 2003). By **competencies** they mean skills needed by technical communicators in their variable tasks. Discussing competencies is important for defining technical communication as a field in its own right, but it is also essential for the educators who need to plan and renew study programs that meet the needs of the field as it is today. For example, there seems to be a tendency in the United States that some study programs in technical communication that were previously called *technical communication* or *technical writing*, have changed their names to, for example, *information design* (Barnum and Redish 2011: 95–96). The latest contribution to the discussion of the skills needed by future technical communicators has been made by *tekomp*, the European Association for Technical Communication which has developed a cross-industry Competence Framework for Technical Communication that “systematizes, defines and classifies qualifying competencies, knowledge and proficiencies for persons employed in technical communication through a classification schema .” The schema consists of seven areas of competence: 1) Context analysis, 2) Planning, 3) Concept development, 4) Content creation, 5) Media production, 6) Publication and distribution, and 7) Observation and information product. (tekomp 2017).

In the ongoing discussions, the competencies are listed and categorized in various ways. For example, Isohella (2011) has grouped the most important skills for technical communicators into eight groups: personal characteristics, written and oral communication, user-oriented thinking and action, reflection and evaluation of oneself and others, group working and co-operation, technical understanding and skills, information gathering and problem solving (interviewing, combining different sources), and understanding of business environments. Comparably, the Society for Technical Communication (STC) has created a Foundation-level professional certification in technical communication that lists nine areas of professional certification in technical communication: project planning, project analysis, content development, organizational design, written communication, visual communication, reviewing and editing, content management, and production and delivery (Baehr 2016: 10; see also Carliner 2012: 61).

Comparing these examples reveals that the grounds for division are different as is the level of detail. However, according to our interpretation of earlier studies, irrespective of the type of categorization, language and communication competencies form the core, and they seem to prevail in the center of technical communicators’ professional skills in spite of the growing heterogeneity of tasks. For example, Spilka (2010: 6) states that “most technical communicators work with information in an attempt to fulfill goals somehow related to writing, reading, and communication in general”. Language and communication competencies as core competencies again seem to be supplemented with other types of knowledge, for example a general knowledge of other, often technical, domains. For some researchers, it is precisely the

combination of knowledge of communication and of one or more technical domains that differentiates technical communication profession from other professions (Hayhoe 2000: 151).

In spite of the wide agreement on the importance of language and communication competencies for technical communicators, these seem to be insufficiently addressed in the current descriptions of competencies (Carliner 2012: 61). Therefore, the aim of this article is to discuss how the competencies described above, and especially the ability to communicate specialized contents to different audiences, could be supported by introducing some of the basic ideas of LSP theories and LSP research to technical communication education. In the following sections, we will first reflect on how we understand the concept of ‘teaching LSP’ and then proceed to present a multi-dimensional model of the core components of the theories of LSP and the role of these components with respect to the work and competencies of technical communicators.

## 2 A narrow and a broad interpretation of teaching LSP

The title of our article refers to the concept of ‘teaching LSP’. Before we discuss the contributions of the theories of LSP to technical communication, we need to define what we mean by teaching LSP. In line with earlier discussions (see Huckin 2003; Hyland 2002), we talk about a narrow and broad interpretation of the concept, but define them from our own perspective.

Huckin (2003: 5) uses the term *narrow angle LSP* by which he refers to the teaching of the linguistic features of one single field to a homogeneous group of students who represent the field in question. The narrow interpretation could also be called *teaching an LSP*, in which case the concept is both language-bound and limited to a specific subject field, e.g. teaching technical English for engineering students. The starting point is a natural language (often English) that the students master at least to some degree. For example, teaching technical English includes teaching the students what the central concept systems of technology look like, i.e. how technology sees the world; the central genres and discourses of technology, i.e. for what purposes and how experts communicate within the field of technology, and the typical sender-receiver constellations of communication of technology, i.e. who typically communicates with whom, why and how. This is the narrow interpretation focusing on one language and one field. This kind of instruction is often offered to future field specialists, according to Huckin (2003: 5), for example, to a group of future air-traffic controllers in Brazil.

In the case of the broad interpretation, our position differs markedly from that of Huckin (2003) and Hyland (2002). By what Huckin (2003: 6) calls *the wide angle LSP*, he refers to the teaching of general linguistic skills that underlie the more specific features of LSP. Nevertheless, when discussing the role of LSP research for the teaching

of LSP, Huckin (2003: 13) points out that LSP research benefits teaching most by providing general strategies to guide the teacher's and the student's work. In our broad interpretation of teaching LSP, we focus precisely on such general strategies produced by research. In our view, the broad interpretation of teaching LSP is not limited to any language or a specific subject field. According to this interpretation, the purpose of teaching LSP is to add to the understanding of the basic mechanisms functioning behind the differences between subject fields, how these come about and what they lead to with respect to language and communication. Thus, firstly, according to the broad interpretation, the students should learn what kind of variation there is in the conceptual structures of specialized fields and how these are related to thinking patterns and communication within the field in question. This understanding also requires acquiring tools for analyzing and mastering such differences (e.g. concept analysis). Secondly, the students should learn that there are conventions for communicating specific types of contents in field-specific ways, what kind of variation of language use this leads to, what guides it and how it is reflected in communication. Even this type of understanding needs its supporting tools (e.g. genre analysis). Third and finally, the students should learn that different types of audiences require different types of messages. The tools for this type of analysis include the very basic understanding of the communication situation: who is communicating to whom with what purpose, and what this leads to in professional contexts (e.g. rhetorical analysis). By choosing this approach we are not taking out the specific purposes of LSP and ending up with language only (cf. Kastberg 2010: 61). Rather, we are offering the students analytical tools to better cope with the specific purposes in different contexts. Additionally, as Huckin (2003: 17) points out, it often is the students who bring in the specificity by applying the analytical ideas to their own particular contexts and specialized fields.

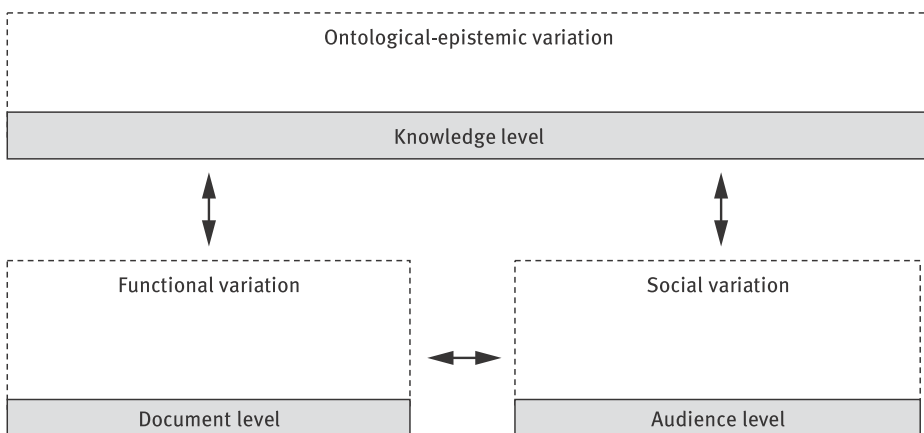
In this article we will focus on the broad interpretation of teaching LSP because it is not language bound, and it can therefore be applied to education offered on any language or to multilingual education. In addition, the broad interpretation contributes best to the requirements of future technical communicators working in highly diverse and changing environments. Working in such environments requires a firm theoretical ground that assists technical communicators in mastering constant change. According to previous research, the work of technical communicators requires co-operating and communicating with experts from many different fields (Spilka 2010: 4–5). In other words, technical communicators can seldom concentrate on one subject field only. In addition, students of technical communication can end up in various types of work (Isohella 2011; Zimmerman and Long 1993). Irrespective of their future career and the languages they have studied, the students benefit from the type of general theoretical knowledge offered by theories of LSP. In the following section we will address the topic of teaching LSP to technical communicators by describing more closely the contributions of the theories of LSP to technical communication from a competence point of view.

### 3 Contributions of the theories of LSP to technical communication

Teaching LSP to technical communicators differs from teaching LSP to future experts of certain restricted fields, e.g. electrical engineers or accountants. The future technical communication professionals need to master the special features of more than one subject field: in their future work they may well be working with texts of health care or texts of mining or any other specialty that might not even exist today but be important in the society tomorrow.

Laurén (1991: 11) describes the theoretical ideas behind LSP research by means of a three-dimensional cube that he has modified on the basis of the functional and structural linguistic theory of the Prague School as presented by Havránek. The basic idea with the cube is that LSPs represent language variation, and that variation can be caused by different factors separately and simultaneously. Of the three dimensions, one describes the differentiation into specialist areas or fields, another stands for the purpose of use or the function and the third one indicates the social aspect of language use, the intended reader/listener. Based on Laurén's discussion, we propose a multi-dimensional model of the core components of the theories of LSP and divide the factors behind linguistic variation of LSPs as follows: the ontological-epistemic variation depending on the field, the functional variation depending of the purpose of language use, and the social variation depending on who one is communicating with (Figure 1). In our opinion, the mechanisms steering all these types of variation form a core component when teaching LSP to technical communicators.

Figure 1 shows our interpretation of the variations of LSP and their manifestations in technical communication. In the present article we will approach each of



**Figure 1:** A multi-dimensional model of the variations of LSP and their manifestations in technical communication.

these variations as levels of their own from a technical communication point of view. We will refer to ontological-epistemic variation as knowledge level variation, to functional variation as a document level variation, and social variation as an audience level variation. In reality, the levels stand in complex relationships and in close interplay with each other, which is indicated by the two-way arrows in Figure 1, and they can only be separated for analytical purposes.

In the following sections we will approach ‘teaching LSP to technical communicators’ by relating chosen theoretical contributions of LSP research to relevant definitions of technical communication and to essential technical communication competencies. By doing so, we want to provide a new theoretically based framework for planning, developing and evaluating technical communication education.

### 3.1 The ontological-epistemic variation and its manifestations in technical communication at the knowledge level

The basic assumption behind the ontological-epistemic variation of LSPs is that the knowledge structures of different disciplines and areas of expertise are reflected in the language use within the field. Because technical communication typically concerns technical knowledge of different types, we have decided to refer to the ontological-epistemic variation as *knowledge level* variation.

*The ontological-epistemic variation* between fields of science has been theorized in various ways in LSP research. For example Picht (1995: 41–43) introduces a model based on Heisenberg’s thoughts of the interconnection between fields of science. The model is a continuum running from hard sciences on the left to soft sciences on the right. The hard sciences stand for exact knowledge which gradually becomes more inexact as the continuum reaches social sciences and humanities. Picht (1995: 43) claims that this type of differentiation between fields, as well as the ontological and epistemic conditions of each field, affects the specialized communication and language use in a systematic way. For example, exact knowledge could be reflected in well-defined concept systems and a systematically used terminology.

Technical and professional communication can be defined as “communication about complex, highly detailed problems, issues, or subjects in the professional world, which helps audiences visualize and understand information so that they can make informed and ethical decisions or take appropriate and safe actions.” (Dobrin, Keller, and Weisser 2010: 4.) *Complex and highly detailed* is in technical communication literature often referred as *technical* (see, for example Carliner 2010: 61), and therefore, the knowledge that needs to be communicated mostly concerns issues or subjects belonging to the hard sciences in Picht’s model. As illustrated by the model, this type of knowledge tends to be exact, and it is expected that the knowledge should also be represented accordingly so that the audiences based on it will be able to make their decisions and take action. However, the audiences of technical documents tend

to encompass every part of the continuum from hard sciences to soft sciences, which is why technical communicators need to understand what kind of knowledge it is they are communicating to which type of audience.

The importance of understanding the mechanisms behind the ontological-epistemic variation is highlighted by the symbolic-analytic character of the work of technical communicators. By symbolic-analytic work Dicks (2010: 54) means analyzing, synthesizing, combining, rearranging, developing, designing, and delivering information to specific audiences for specific purposes. Instead of providing support for physical, industrial products (Johnson-Eilola 1996: 246), technical communicators as symbolic-analytic workers often “deliver the same information that they or others will then modify for multiple audiences and for presentation in multiple media and formats” (about symbolic-analytic workers, see Dicks 2010: 54). In order to efficiently deliver and modify information – or to *create* and *manipulate* it, as Dicks (2010: 55) puts it –, technical communicators need knowledge based on which they can apply the technologies and methodologies required.

For a technical communicator, the understanding of the knowledge level variation is actualized in several competencies. Especially when it comes to collaboration skills, i.e. the ability to collaborate with subject-matter experts and with co-workers (Rainey, Turner, and Dayton 2005), this kind of understanding plays a central role for professional success. Technical communicators often work collaboratively in teams “with widely diverse knowledge and skill sets” (Dicks 2010: 55). They “often must work with scientists, doctors, product developers, graphic artists, human factors specialists, customer support personnel, subject-matter experts, information architects, product and system testers, editors, and those in many other disciplines. (Dicks 2010: 55.)” In these situations a technical communicator is required to use different language with different people and have different goals in communicating adequately with each party. Understanding the mechanisms behind perceived differences makes it easier for the technical communicators to develop their collaboration skills and adapt their knowledge to new environments. In other words, a thorough understanding of knowledge level variation can be an asset in multidisciplinary communication; especially when specialized knowledge from one subject field needs to be communicated to an audience representing another field or to an audience of non-experts or novices. (See also Koskela and Pilke 2016: 252.)

To sum up, understanding the ontological-epistemic variation of LSP helps technical communicators in recognizing the types of language variation caused by different specializations. Technical communicators need to be aware of different ways of thinking and they need to be able to cope with situations when different (world) views meet. Therefore, it would be useful to include the theoretical idea of the ontological-epistemic variation as knowledge level variation in technical communication curriculum. Many technical communication curriculums already do this by having practicing professionals as teachers, each teaching a course in his or her area of professional expertise. In this case, however, the students should not be left alone coping



with the perceived differences, but they should be offered opportunities for analyzing them and understanding them more deeply. Another way of introducing experiences of knowledge level variation to students is implementing practical training periods in different fields in the curriculum, which also requires analysis afterwards. The perhaps most comprehensive way of including the idea of knowledge level variation to the curriculum is by cross-disciplinary curriculum design. For example, the Technical Communication Master's programme at the University of Vaasa, Finland, has since the year 1996 combined communication studies (i.e. applied linguistics and digital communication) with computer science. The benefit of such design is that it offers the students ongoing possibilities of reflecting on the similarities and differences of the fields that they come across during their studies.

### 3.2 The functional variation and its manifestations in technical communication at the document level

The functional variation of LSP emphasizes the purpose of language use: what is being communicated and how. From the technical communication perspective, functional variation is strongly reflected in technical communication products, for example in technical documents such as user instructions. Therefore, we refer to the functional variation as *document level* variation, although functional variation naturally has other dimensions as well. Restricting functional variation for analytical reasons to document level can be motivated by the fact that technical communicators' work is often defined from the product perspective (Isohella 2011: 30). For example, it is stated that technical communication takes place when technical communicators produce *documentation*, write *documents etc.* (see, for example Albers 2005). In this context, a document can be understood as any form of meaning-making, as a text, a picture, a video etc.

The functional variation of LSP is closely related to the social variation of LSP, which concentrates on why and with whom one is communicating (see 3.3). In technical communication it is also evident that the functional (what) and the social (who) are intertwined. As Markel (2012: 4) puts it, technical communication can be viewed in two ways: "as the process of making and sharing information and ideas – and as a set of applications – the documents" technical communicators create. In a similar vein, the functional variation and the social variation of language have often been combined in theories of LSP. For example, in his seminal model of cumulative text analysis, Hoffmann (1985) distinguishes between *a horizontal stratification* (=the ontological-epistemic variation) and *vertical stratification of special language* (=functional and social variation). The vertical stratification is mainly based on the degree of abstraction, the theoretical level required, but also on setting, linguistic form and participants of communication (Hoffmann 1985: 84). Hoffmann (1985) distinguishes five degrees of abstraction from the highest to a very low level, each

assigned to an ideal setting, e.g. theoretical, experimental or material. (Hoffmann 1985). Fundamentally, Hoffmann's model is text-based, which was typical of text-linguistics in the 1980's, and the model is designed to capture all properties of LSP texts on all levels. That is why it encompasses both form and function.

Basically, the same is true for the most influential models of LSP genre analysis that have been presented by Swales (1990) and Bhatia (e.g. 2004). Even in these models the functional and social levels are intertwined. What is new in these models, however, is that they are less text-based than Hoffmann's model and strive to integrate both text-internal and text-external aspects of language use. Bhatia (2004) proposes a multidimensional framework that can be used in different contexts to analyze genres. Bhatia's framework encompasses four perspectives: a textual perspective, an ethnographic perspective, a socio-cognitive perspective and a socio-critical perspective (Bhatia 2004: 163). Of the four perspectives, the textual perspective is oriented to linguistic analysis. This perspective includes the analysis of the statistical significance of lexico-grammar, textual corpora, textualization of lexico-grammatical resources, discourse/rhetorical or cognitive structures, intertextuality and interdiscursivity, and generic conventions and practices (Bhatia 2004: 163–165).

There is no doubt that being able to carry out linguistic analysis of this kind benefits technical communicators, because their work to a high degree still consists of writing and editing (see, for example Meloncon 2009: 143). As the discussions of core competencies of technical communication have shown, written and oral communication are among the most important competencies required of technical communicators, and at the document level these culminate in the ability to produce high quality documents (Rainey, Turner, and Dayton 2005). The textual perspective proposed by Bhatia could benefit the document level because it focuses on existing documents: on what kinds of conventions exist for field-specific contents and what kind of variation of language use it leads to. A thorough analysis of documents helps technical communicators to edit, improve and modify them for specific purposes. In technical communication curriculum this could be done, for example, by exercises where students analyze various types of documents or it could be included in language courses on different languages.

Even though it is essential that technical communicators master the linguistic and textual features of selected types of texts, at the same time they must be able to do more than just that (Luzón 2005: 292). The work of technical communicators has more and more shifted from writing an original text or document from the beginning to the end to editing, improving, modifying and managing knowledge. As Burnett (2005: 9) states, genres are used and reproduced as part of technical professionals' regular work. Consequently, analyzing genres is – or should be – one of the main competencies of technical communicators. The ability to analyze lexico-grammatical features helps the technical communicators meet the demands of their work at document level, and help them meet the variable discursive realities of their work environment. Therefore, the basic skills of linguistic analysis in different languages

should not be forgotten in technical communication curricula, even though the tendency in LSP genre analysis has for some time now been towards larger and more complex objects of study, represented by the three other perspectives than the textual in Bhatia's model. The role of genre analysis in technical communication has been discussed earlier in some detail in an article by Luzón (2005), which is recommended reading for those designing curricula for future technical communicators. We will return to Luzón's article in the next section that concerns the social variation and the audience level.

### 3.3 The social variation and its manifestations in technical communication at the audience level

The social variation of LSP concentrates on who is communicating to whom with what purpose. It provides a framework for understanding the situation and context where language is used and especially highlights the role of the audience. In LSP research there are many models that strive to account for the social variation of language. For example, in connection with translation, Göpferich (1995: 124) suggests a pragmatic text typology for science and technology based on parameters of the interactional setting. In addition, focusing on the relation between senders and receivers and their levels of expertise, Engberg (2006) differentiates between scientific discourse as expert-to-expert-communication, practically oriented discourse as expert-to-expert-communication and finally discourse of popular science and teaching as expert-novice-communication. As illustrated by the models mentioned above, the variant communicative needs of different situations have for a long time been a central concern of the theory of LSP.

Bhatia's multidimensional framework continues this work by refining the situational/contextual analysis. At audience level, Bhatia's framework includes defining the speaker or writer of the text, the audience, their relationship and their goals (Bhatia 2004: 164). This kind of analysis is important for technical communicators because they must be aware of their audiences and of the needs of the audiences (see, for example Dobrin, Keller, and Weisser 2010: 9). The audiences "determine many factors in the document, including the genre, style, level of formality, level of detail, format, design, and length" (Dobrin, Keller, and Weisser 2010: 10) and therefore, from the social variation point of view, in technical communication the audience level is essential. According to Markel (2012: 85), "audience and purpose determine everything" about how one communicates on the job.

At audience level, the most central competencies required of technical communicators consist of user-oriented thinking and action. These include the ability to analyze user's needs and the ability to write clearly for specific audiences by clearly defined purposes (Rainey, Turner, and Dayton 2005). Audience analysis has a long tradition in technical communication and a lot of research has been conducted on

it. For example Blakeslee (2010: 200) studied how technical communicators research and think about audiences while working on digital projects. She found out that in digital environments, “writers are continuing to view audiences in very particular ways” and to “rely on a framework of problem solving and contextualization to analyze and address their digital audiences”.

Understanding the social variation of LSP could help technical communicators in becoming more aware of “the historical, socio-cultural, philosophic and/or occupational placement of the community in which the discourse takes place” (Bhatia 2004: 164). This kind of analysis could, for example, supplement the audience analysis in the technical communication curriculum.

Beside audience analysis, rhetorical analysis is another tool often referred to in technical communication curricula (Bekins and Williams 2006). In his article on genre analysis in technical communication, Luzón (2005: 292) combines rhetorical analysis closely with genre theory when he states that technical communication students should practice using language in real rhetorical situations in order to learn rhetorical skills and genres of a chosen discipline. There is no doubt that such practice would be very useful for future technical communication professionals. However, rhetorical analysis is not only about practice, but also about theory (see Miller [1989] 2003). Therefore, the same applies for students practicing in real rhetorical situations as for expert teachers and work-practice mentioned above: in order for them to be effective tools in education, the students’ experiences need to be analyzed carefully afterwards on a theoretical basis together with technical communication teachers. For such an analysis, the theories of LSP offer a firm ground.

## 4 Discussion and conclusions

In this article, we have proposed a new theoretically based framework for planning, developing and evaluating technical communication education by combining it with some of the basic aspects of the theories of LSP. In doing so, we have illustrated the value of theories of LSP for the education of future technical communication professionals. We have provided examples for the curriculum and related our ideas to definitions of technical communication and to discussions of competencies that working life requires of technical communicators. Our claim that the theoretical aspects of LSP would benefit technical communication education is based on a broad view of ‘teaching LSP’. This interpretation calls for a more theory-based approach to curriculum design, an approach that is ready to cross the borders of one language, one genre and one field thus encompassing different fields in a multilingual environment.

In our discussion we have highlighted some of the essential competencies required of technical communicators and examined how they could be supported by

some of the basic ideas of LSP theories and research. By doing so, we have expanded the view of technical communication competencies and have moved further beyond narrowly defined skills. The framework proposed could serve as an extension of technical communication curriculum design because the basic mechanisms behind language variation tend to remain consistent in spite of changes in working life. This framework could also be applied to a context in which competencies required of graduates from higher education in general are considered.

So far, we have only highlighted the role of a few chosen aspects of the theory of LSP for technical communication. However, we are aware of that the theory of LSP and LSP research do not form a unified body of knowledge. There is a lot of research carried out concerning various fields and disciplines and different linguistic and communicative aspects of professional communication. Much of this research can be very useful from a technical communication point of view, but it can be difficult to follow up such a varied field of study. From a technical communication point of view, approaches integrating technical communication research with LSP research are called for (see Luzón 2005). From a curriculum design point of view, we hope that the ideas we have presented in this article could also be considered in other, related fields. For example, in the field of translation studies some interesting articles on curriculum design have been published (cf. Korkas and Pavlides 2004).

In this article we have given our contribution to “putting the S back” to LSP, as Hyland (2002: 391–395) suggests concerning ESP. By doing so we have paid somewhat less attention to the L, but we finally want to stress the importance of language skills for future technical communicators. The basis of all writing, designing and editing texts is formed by good language skills. In technical communication environments English is important, but a good command of other languages can also be an asset in today’s global multilingual working environments.

## References

- Albers, Michael J. 2005. The Future of Technical Communication: Introduction to This Special Issue. *Technical Communication* 52. 267–272.
- Baehr, Craig 2016. Certified Professional Technical Communicator: The Foundation Exam and Its Nine Areas of Competency. *Intercom* 63(1). 10–11.
- Barnum, Carol and Janice Redish. 2011. Overlap, Influence, Intertwining: The Interplay of UX and Technical Communication. *Journal of Usability Studies* 6. 90–101.
- Bekins, Linn K. and Sean D. Williams. 2006. Positioning Technical Communication for the Creative Economy. *Technical Communication* 53. 287–295.
- Bhatia, Vijay K. 2004. *Worlds of Written Discourse*. London and New York: Continuum.
- Blakeslee, Ann M. 2010. Addressing Audiences in a Digital Age. In Rachel Spilka (ed.), *Digital literacy for technical communication. 21st century theory and practice*, 199–229. New York and London: Routledge.
- Burnett, Rebecca. 2005. *Technical Communication*. Australia, Canada and Mexico: Thomson Wadsworth.

- Carliner, Saul. 2012. The Three Approaches to Professionalization in Technical Communication. *Technical Communication* 59. 49–65.
- Coppola, Nancy. 2012. Professionalization of Technical Communication: Zeitgeist for Our Age. *Technical Communication* 59. 1–7.
- Dicks, Stanley R. 2010. The Effects of Digital Literacy on the Nature of Technical Communication Work. In Rachel Spilka (ed.), *Digital literacy for technical communication. 21st century theory and practice*, 51–81. New York and London: Routledge.
- Dobrin, Sidney I., Christopher J. Keller, and Christian R. Weisser. 2010. *Technical Communication in the Twenty-First Century*. Upper Saddle River: Prentice Hall.
- Engberg, Jan. 2006. Languages for Specific Purposes. In Keith Brown (ed.), *Encyclopedia of Language and Linguistics*, 679–683. Oxford: Pergamon Press.
- Gnutzmann, Claus and Hermann Oldenburg. 1991. Contrastive Text Linguistics in LSP-Research: Theoretical Considerations and some Preliminary Findings. In Hartmut Schröder (ed.), *Subject-oriented Texts. Languages for Special Purposes and Text Theory*, 103–136 (RTT 16). Berlin and New York: de Gruyter.
- Göpferich, Susanne. 1995. *Textsorten in Naturwissenschaften und Technik. Pragmatische Typologie – Kontrastierung – Translation*. Tübingen: Gunter Narr Verlag.
- Hayhoe, George F. 2000. What do Technical Communicators Need to Know? *Technical Communication* 47. 151–153.
- Hoffmann, Lothar. 1985. *Kommunikationsmittel Fachsprache. Eine Einführung*. Tübingen: Gunter Narr Verlag.
- Huckin, Thomas N. 2003. Specificity in LSP. *Ibérica* 5. 3–17.
- Hyland, Ken. 2002. Specificity Revisited: How Far Should We Go Now? *English for Specific Purposes* 21 (4).
- Isohella, Suvi. 2011. Työelämän asettamat vaatimukset teknisen viestinnän koulutuksesta valmistuneille. [What Working Life Requires of Technical Communication Graduates]. Vaasa: Department of Communication Studies, University of Vaasa Licentiate Thesis.
- Johnson-Eilola, Johndan . 1996. Relocating the Value of Work: Technical Communication in a Post-Industrial Age. *Technical Communication Quarterly* 5. 245–270.
- Kastberg, Peter. 2010. Knowledge Communication. Formative Ideas and Research Impetus. *Programmatic Perspectives* 2. 59–71.
- Korkas, Vassilis and Pantelis Pavlides. 2004. Teaching aspects of LSP (Language for Special Purposes) to non-specialists: A case for background courses in translation studies programmes. *The Journal of Specialised Translation* 2. 21–33.
- Koskela, Merja and Nina Pilke. 2016. From Slow Repetition to Awkward Omission: Economic, Efficient, and Precise Language Use in Bilingual Formal Meetings. *Multilingua* 35(3). 251–275.
- Laurén, Christer. 1991. *Svenskt fackspråk*. Lund: Studentlitteratur.
- Luzón, María José. 2005. Genre Analysis in Technical Communication. *IEEE Transactions on Professional Communication* 48. 285–295.
- Markel, Mike. 2012. *Technical Communication*. Boston and New York: Bedford and St. Martins.
- Meloncon, Lisa. 2009. Master’s Programs in Technical Communication: A Current Overview. *Technical Communication* 56. 137–148.
- Miller, Carolyn R. [1989] 2003. What’s Practical about Technical Writing? In Bertie E. Fearing and W. Keats Sparrow (eds.), *Technical Writing: Theory and Practice*, 14–24. New York: Modern Language Association. Reprinted in Tim Peebles (ed.), *Professional Writing and Rhetoric: Readings from the Field*, 61–70. Addison Wesley: Longman.
- Picht, Heribert. 1995. Fachkommunikation – Fachsprache. In Gerhard Budin (ed.), *Multilingualism in specialist communication*, 27–45. *Proceedings of the 10th European LSP Symposium*. University of Vienna: International Institute for Terminology Research, 29 August–1 September 1995.

- Rainey, Kenneth T., Roy K. Turner and David Dayton. 2005. Do Curricula Correspond to Managerial Expectations? Core Competencies for Technical Communicators. *Technical Communication* 52(3). 323–352.
- Spilka, Rachel. 2010. Introduction. In Rachel Spilka (ed.), *Digital literacy for technical communication. 21st century theory and practice*, 1–17. New York and London: Routledge.
- Staples, Katherine and Cezar M. Ornatowski. 1998. *Foundations for teaching technical communication: theory, practice, and program design*. Greenwich: Ablex Publishing Corporation.
- Swales, John. 1990. *Genre analysis: English in academic and research settings*. Cambridge: Cambridge University Press.
- Tekom. 2017. Competence Framework for Technical Communication. <http://competencies.technical-communication.org/home.html> (accessed 2 July 2017).
- Trosborg, Anna. 2000. Introduction. In Anna Trosborg (ed.), *Analysing Professional Discourse*, vii–xvi. Amsterdam and Philadelphia: John Benjamins.
- Whiteside, Aimee L. 2003. The Skills that Technical Communicators Need: An Investigation of Technical Communications Graduates, Managers and Curricula. *Journal of Technical Writing and Communication* 33. 303–318.
- Zimmerman, Donald E. and Marilee Long. 1993. Exploring the Technical Communicator's Roles: Implications for Program Design. *Technical Communication Quarterly* 2. 301–317.

