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SITUATED TRANSLATION IN THE TRANSLATION CLASSROOM

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Abstract

This paper sets out to illustrate the design of an *in vivo* translation course that attempts to project, as closely as possible, into the translation classroom the professional environment that students will encounter in their later careers as translators. The course forms part of the MA in specialised translation programme offered by the Institute of Translation and Multilingual Communication at Cologne University of Applied Sciences. It is based on the theoretical framework of *situated translation* (Risku, 1998, 2004), which stresses the situation-dependence of the intelligent human action of translation. Based on this framework, we review Göpferich's (2008) model of translation competence and illustrate how specific subcompetencies of this model can be linked to and are reflected in the design of our translation course. To conclude the article, we present several components of the translation course which are intended to develop the various subcompetencies of Göpferich's translation competence model.

Key words: situated translation, translation didactics, in vivo translation course, translation competence model, psycho-motor competence, tools and research competence

1. INTRODUCTION

In the last 20–30 years, a growing number of studies have raised awareness of the fact that – besides the various linguistic aspects of source and target texts – *real-world translation* includes other important factors that form necessary requisites of the overall professional translation competence (see, for example, Jääskeläinen, 1999; Torres-Hostench et al., 2010). The competent use of the internet and different kinds of software tools (both translation and non-translation specific), the communi-cative and social competencies required to negotiate with clients, proofreaders, other translators, and other actors and agents as well as the ability to cope with the demanding working environment of a fast changing translation industry have become standard requirements for any student aspiring to become a professional translator.

However, the "translation classroom" is still somewhat slow to incorporate the changes that have affected real world translation – or *in vivo* translation – in the last decades. Although universities increasingly include dedicated courses on specialised translation software as a part of their curricula and often allow the use of computers in their specialised translation classes and exams, there is still a pressing need for translation courses which adopt a holistic view of the translation situation and which aim to incorporate and to bring together the various aspects of overall translation competence as illustrated above.
In this article, we therefore set out to sketch – backed by a sound theoretical framework – the design of a trans-lation course which attempts to reduce the gap between *in vitro* translation as still often taught in university programmes

and *in vivo* translation as experienced by graduate students when they enter into translation practice. This translation course forms part of the curriculum of the MA programme in specialised translation offered by the Institute of Translation and Multilingual Communication at Cologne University of Applied Sciences (see MA programme at http://www.fh-koeln.de/en/academics/specialized-translation-masters-program_7498.php). The course was designed by the two authors of the present article, who both hold University degrees in specialised translation and who have extensive experience in both translation teaching and practical translation.

The theoretical framework which contributed to the design and the structure of this translation course is the translation-process oriented framework of *situated translation* (Risku, 1998, 2004), which is derived from the wider framework of *situated cognition* and which stands in the German functionalist tradition of translation studies (see Risku, 2004, p. 38). In our view, this framework represents the best way to study and to model translation activity in the context of real-world situations. The superordinate framework of *situated cognition* has developed an information processing model which explains human action and human problem-solving processes (for example, translation) not in terms of some encapsulated or idealized general competence but which rather links these processes to the wider situation in which such human action or problem-solving processes take place. By claiming that human competencies can only be exhaustively understood and described by taking such situational factors into consideration, the paradigm of situated cognition goes beyond the models proposed by

the preceding paradigms of *computationalism* and *connectionism* (Göpferich, 2008, p. 13–14). From a translational perspective, this paradigm allows us to understand how, for example, the use of software tools or various factors of the working environment affect the way translators process linguistic and extra-linguistic information. One of the main achievements of scholars working within the framework of situated cognition, situated translation and translation process research is arguably the development of various fine-grained models of translation competence (see, for example, PACTE, 2003, p. 60; Göpferich, 2008, p. 155). These models attempt to answer the question: Which set of skills and knowledge do professional translators need in order to successfully perform a translation task? Most of the models developed so far share the assumption that translation competence is not a monolithic knowledge structure but rather a set of subcompetencies (for example, linguistic competence, domain knowledge or research skills) which interact with each other. It is these subcompetencies that informed the structure and the development of different modules for our *in vivo* translation course.

In the next sections, we will elaborate in some detail on the theoretical framework of situated translation as the theoretical foundation of our translation course, before presenting Göpferich's (2008, p. 155) model of trans-lation competence. We will then show how the various subcompetencies of this model are reflected in the didactic approach followed in our translation course.

2. SITUATED TRANSLATION

As mentioned in the previous section, the framework of situated translation stands in the German functionalist tradition of translation studies, which took centre stage with the groundbreaking work of Reiss and Vermeer in 1984 and which eventually contributed to the decline of the normative, restrictive and overly linguistically-focused equivalence paradigm which had dominated translation studies till the mid-1980s. Functionalist approaches, and here especially Reiss/Vermeer's (1984) *skopos theory*, go beyond narrow linguistic concerns and fully recognize the wider professional reality of translation (Byrne, 2012, p. 11). By conceptualizing translation as a specific form of human action, these approaches allow for the incorporation of a wealth of extratextual or situational factors in the description and investigation of translation, factors that could not be properly captured by the preceding equivalence paradigm. Eventually, the functionalist paradigm branched out into a cognitive and a culturally-oriented strand (see Siever, 2010, p. 171, 203), with the framework of situated translation emerging in the cognitive strand. Building on the tenets of the superordinate paradigm of situated cognition, situated translation subscribes to the view that translation competence is based on the situated development of intelligent solutions for particular problems arising in specific situations (Risku, 2004, p. 75). It is obvious from this description that situated translation adopts a very macroscopic view on the complex phenomenon of translation, for if we want to study translation-in-situation we have to incorporate a host of such situational variables

that would remain hidden in more microscopic, text-focused approaches to translation. Important aspects of such situations in which humans perform an action are the so-called *artefacts*, which Norman (1993, p. 17) defines as "artificial device[s] designed to maintain, display, or operate upon information in order to serve a representational function". According to Risku (2004, p. 91), we cannot exhaustively capture intelligent actions such as translation by merely focusing on isolated cognitive processes in the brain. Instead, the investigation of "what happens in the minds of translators" (Krings, 1986) has to be complemented by an investigation of what happens, for example, in the hands, in the computer or on the desk of the translator (Risku, 2004, p. 91). It is such situational artefacts as computers or the various software tools installed on them which, in the account of situated translation, form an integral part of situated human cognition and which have to be factored in when describing intelligent human actions (such as translation) or the competencies enabling such actions. Naturally, translation competence models subscribing to the tenets of situated translation have to match the macroscopic perspective adopted by this paradigm and have to incorporate as many relevant situational factors as possible without becoming overly complex and thus losing their explanatory power. A translation competence model which masters this balancing act in a convincing way is the model developed by Göpferich (2008, p. 13–14), which is illustrated below.

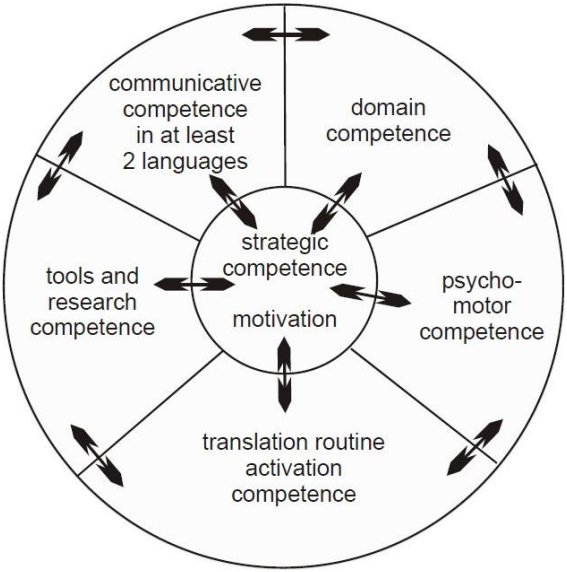

Figure 1: Göpferich's translation competence model (adopted from Göpferich/Jääskeläinen, 2009, p. 16)

Göpferich's translation process model contains five subcompetencies (in the outer circle) which, in actional contexts, are coordinated by a strategic subcompetence (which is subject to motivational factors). In this model, the *communicative competence in at least two languages* (1) covers the receptive competence required to understand the source text and the productive competence required to write the target text (Göpferich, 2008, p. 156). The *domain competence* (2) basically covers the subject-matter knowledge required to under-stand a particular source text or to create a particular target text and also includes the ability to recognize the need to close such knowledge gaps in order to produce a high-quality translation (Göpferich, 2008, p. 149). The *psycho-motor*

competence (3) covers psycho-motor skills required for (computer-assisted) reading and writing tasks (ibid.) and includes, for example, the competent use of computer keyboards or other peripherals. The *trans-lation routine activation compe-tence* (4) includes the knowledge and skills required to employ certain translation techniques (for example, various types of translation shifts) which yield acceptable translation solutions (ibid.). Finally, the *tools and research competence* (5) covers the knowledge and skills related to translation-specific conventional and electronic tools, such as (electronic or paper-based) dictionaries, ency-clopaedias, text-processing programmes, translation me-mory systems, terminology management systems, in-ternet search engines or corpora (Göpferich, p. 149). In our view, Göpferich's model covers all relevant subcompetencies of the overall translational competence required to perform successfully in the world of professional translation. Therefore, we used this model to structure our *in vivo* translation course, which brings several of these subcompetencies together in a translation environment reflecting as closely as possible the translation environment that students will encounter in their work as professional translators.

3. THE *IN VIVO* TRANSLATION COURSE

The translation course which attempts to bring together and to implement the theoretical considerations and the translational subcompetencies identified above is called "Translation Project Using Translation Tools". The course forms part of the "Tools" module of the MA programme in specialised translation offered by the Institute of Translation and Multilingual Communication at Cologne

University of Applied Sciences. The course runs for two hours a week over the whole semester and is taught in a classroom featuring state-of-the-art computers and software (translation-specific and other). The course is intended to enable students to independently complete complex translation projects using translation software and related tools such as terminology management software, translation memory systems or the internet (for a translation project-based approach to translator training, see also Garant, 2006). At the beginning of the course, students are introduced to various general aspects of a translation project. This introduction is based on the German version of international quality standard EN ISO 17100:2013 "Translation Services – Requirements for translation services", which contains detailed guidelines for the completion of translation projects. Then, students are tasked with their first translation project, which they have to complete using the various resources provided. For example, they will establish transparent folder structures for the various project files provided by the client, create translation memories and terminology databases, review the client's translation instructions, style guide, and other documents and prepare the files for translation. Several of the competencies that students have to use in this context are developed in other courses of the MA curriculum (for example, in dedicated specialised translation, translation technology or subject-matter classes, see subcompetencies 1, 2, 4 and 5 in the translation competence model above). In the course to be presented here, these competencies are then brought together in a realistic translation environment. In the following sections, we will revisit the psycho-motor competence and the tools and research competence of Göpferich's translation competence model

presented above and illustrate how these subcompetencies are linked to various components of our translation course.

3.1. Psycho-motor competence

As mentioned above, the psycho-motor competence refers to the set of skills needed to read and write texts. Göpferich (2008, p. 149) argues that the more one is able to automate these skills, the more cognitive capacity is freed for more important tasks (like problem solving or formulating sentences). When students work on a translation project, there are, in addition to the actual translation process, a variety of additional tasks that rely on the psycho-motor competence, for the most part administrative and project management-related tasks. An example would be the storing and organizing of the various files provided by the client for the translation project. Translation projects usually include a wide variety of files: the source text, a translation memory, a terminology database, various reference files, specific translation instructions, a style guide, a query sheet, the purchase order, and other documentation. All these files have to be organised in a systematic way so they can be accessed quickly when needed. Depending on the psycho-motor competence of the translator, the process of storing and organising these files (and other similar tasks) can be managed very efficiently or it can become a rather time-consuming issue. Most translation students will intuitively use a standard file manager and navigation tool like Windows Explorer for this process and would probably make an extensive use of the computer mouse to accomplish the task.

In our course, we ask the students to critically review the performance of the tools they normally use and to compare it to other tools available to them so they can decide which tools are more ergonomic or generally better-suited for their needs. Additionally, students are made aware of the importance of using keyboard shortcuts to avoid overly use of the computer mouse when storing and organising files – which can be both time-consuming and distracting. For this purpose, we devised the following task: The students are provided a typical set of customer files, usually in the form of a ZIP archive. The task consists in storing, as quickly as possible, the files in a previously defined folder structure (conforming to the requirements laid out in standard EN ISO 17100:2013, see above) comprising folders for the different file categories (for example, source text, translation memoryand terminology database). Usually, an experienced course instructor finishes this task in a matter of seconds, while some students need several minutes to store all files in the right folders. The unexpected speed of the instructor in storing and organising the files usually leads the students to question their own working methods and to explore the potential for optimizing the psycho-motor routines involved in storing and organising files.

3.2. Tools and research competence

By developing their tools and research competence, students are enabled to confidently handle the different tools required for the completion of complex translation projects and to procure, in a systematic way, the information required for their actual translation task. We will first consider the *tools* component of this subcompetence.

The tools covered in the course "Translation Project Using Translation Tools" include not only the obvious translation memory and terminology tools (which are already part of the curricula of numerous MA programmes) but also other tools like email applications, navigation tools, FTP clients, or desktop search applications. Our CAT Tools training courses are probably not radically different from the courses offered by other universities (a difference could be that we strongly emphasise the need to automate the use of such tools by using, for example, keyboard shortcuts, see the psycho-motor competence discussed above). However, in our *in vivo* translation course, we also focus on other tools and applications such as the ones illustrated above. Such tools and applications are usually not specifically addressed in translator training, although they arguably play an important role in the day-to-day routine of professional translators.

For instance, email applications provide a variety of configuration options (such as filters, autotext or memos) which can help speed up and enhance communication with clients, project managers or other translators. Tools for hard-drive navigation are also particularly important since translators spend a great amount of time searching, copying, moving and deleting files. In this context, students are introduced to split-screen file managers such as the open-source programme Double Commander (doublecmd.sourceforge.net), which allow performing such processes in a much quicker way than standard file managers such as Windows Explorer. The competent use of FTP clients has also become an essential part of

professional translation management tasks since a growing number of clients provide their (often very large) files via an FTP server and no longer by email. In this context, students are introduced to the freeware FTP client FileZilla (filezilla-project.org), and part of the file exchange in our translation course is performed not by email but by using this FTP client. To raise students' awareness of the advantages of using appropriate software for certain tasks, we devised a series of exercises destined to reveal the difference between using adequate software and using any given application that "happens to be installed in the computer". For example, the task of quickly storing a set of files as described in the context of the psycho-motor competence in the previous section can usually be accelerated not only by using keyboard shortcuts but also by using a split-screen file manager such as Double Commander. Once students have gained an awareness of the advantages that various non-standard software tools can offer for certain tasks, they develop a more critical stance towards pre-installed standard software and are more willing to explore the potential of alternative software tools.

We will now turn to the *research* component of the tools and research subcompetence. In order to develop this component, our course contains, for example, a specific module called "Online Research Strategies for Translators". This is intended to do justice to the fact that, as *digital natives*, students make extensive use of the internet when gathering information for a translation task. Since the internet is a very rich but at the same time an inherently unstructured and heterogeneous source of information, it is important that students follow a structu-

red approach when querying the internet for information. In the Online Research Strategies module, students are first introduced to the general functioning principle and the "epistemic capacity" of internet search engines such as Google, Yahoo, or Bing. In this context, students are, for example, made aware of the difference between the *surface Web* (being that part of the internet accessible by conventional search engines) and the considerably more extensive *deep Web*, which cannot be accessed by such conventional search engines (for example, password-protected websites or sites that are dynamically generated using content from local databases; see Griesbaum et al., 2009). It is therefore important to highlight that, by using conventional search engines, students can only access a small subset of relevant information, with more differentiated and more complex searches in the deep Web being potentially necessary.

Also, students are made aware of the difference between *universal search engines* (for example Google or Yahoo) and *vertical search engines* that focus on a specific field or discipline (Sánchez-Gijón, 2009, p. 117) and thus allow for more targeted searches. Further relevant characteristics of search engines that are made transparent to students as part of the Online Research Strategies module are the ranking criteria which determine the sorting order of specific search results (for example, Google's PageRank algorithm, see also Krüger, 2012, p. 516) or the distinction between natural listings (results listed according to objective ranking algorithms) and paid listings (results that the search engine provider is paid for to present at the top of the page) (see Lewandowski/Höchstötter, 2009). If students gain an awareness of these hidden principles of

result presen-tation, they may take a more critical stance towards the search results presented to them and may be prompted to look harder for the required information instead of merely relying on the results that are presented at the top of the page.

A further point that is discussed as part of the Online Research Strategies module is the functioning principle and the reliability of online dictionaries (such as leo.org, dict.cc, or linguee.com) and online encyclopaedias (particularly Wikipedia), which students use increasingly to obtain linguistic or conceptual information for specific translation tasks. These dictionaries and encyclopaedias are typical instances of the Web 2.0, where online content is no longer provided by a central authority which is responsible for the completeness or correctness of this content (for example, publishing houses). Instead, in the Web 2.0, such content is often created collaboratively by a large number of volunteers, regardless of their educational or personal background. In this context, students are briefly introduced to Surowiecki's (2004) theory of the "Wisdom of Crowds", which can be seen as one of the basic principles underlying the Web 2.0. According to this theory, the collective intelligence of the many is superior to the intelligence of isolated experts. With particular emphasis on Wikipedia as a prime example of the Wisdom of Crowds approach, the specific merits of this encyclopaedia along with its shortcomings are discussed, so that students can engage with such online offerings in a critical and informed way. Specific merits are certainly the high availability of information on an enormous range of topics, which can hardly be matched by any centrally edited encyclopaedias. Also, the authors of

Wikipedia articles (the so-called *Wikipedians*) usually take joint responsibility for the quality assurance of such articles, and articles on canonised knowledge often contain extensive references to further sources (such as published books), which usually exhibit a higher authority than the actual Wikipedia articles. A major shortcoming would be the fact that, due to the open editorial process, anyone can edit and therefore also manipulate articles, and although such manipulations are usually quickly detected and corrected, it is always possible that an article is in a defective or manipulated state when it is accessed for research purposes. Raising students' awareness of the potential unreliability of such online information may prompt them to cross-check this information, thus reducing the risk of introducing factual errors into their translations.

Another course module that is intended to develop the research competence of the students is called "Corpus Use in Translation Practice". This module shows some parallels to the Online Research Strategies module illustrated previously and is intended to enable students to use corpora as a "performance-enhancing tool" (Varantola, 2003, p. 59), which they can query in order to solve a specific translation problem. The general merits of corpus use in the translation classroom and in translation practice has been discussed in detail in various publications (for an overview see, for example, Krüger, 2012) and will not be revisited here. Instead, we will briefly illustrate how corpus use can be reconciled with the restrictions arising out of the *in vivo* approach adopted in our translation course and how it can be linked to the tools and research subcompetence of Göpferich's translation

competence model. Firstly, our *in vivo* approach entails that the various tools and techniques we introduce to our students will have to be assessed with regard to their applicability in professional translation contexts, which are often characterised by time and financial constraints. In this regard, Aston (2009, p. IX–X) stresses that there is a discrepancy between the increasing use of corpora in translation teaching and the rather low acceptance of these resources among professional translators. According to Aston, the reason for this discrepancy could be that designing and consulting corpora is a very time-consuming task, ma-king their use "anti-economic in the short term" (p. IX–X). In order to bridge this gap between corpus use in translation teaching and in translation practice, we restrict our corpus approach to so-called do-it-yourself (DIY) corpora, which are compiled "for the sole purpose of providing information – either factual, linguistic or field-specific – for the purposes of completing a translation task" (Sánchez-Gijón, 2009, p. 115). According to Zanettin (2012, p. 64), one of the main advantages of such DIY corpora is precisely that they can be compiled *ad hoc* in response to specific translation problems or information needs. Therefore, the design and use of such corpora can generally be reconciled with the constraints encountered in real-life translation practice.

In translation didactics, it has now been generally recognised that the use of corpora should not be regarded merely as an additional qualification that should be acquired independently of "pure" translation competence, but that it rather forms part of the wider translation competence itself (see Rodríguez Inés 2009). This high relevance of corpus use as a proper translational

subcompetence is reflected, for example, in PACTE's (2003, p. 60) translation competence model. For the instrumental subcompetence of this model (which shows parallels to Göpferich's tools and research competence), Rodríguez Inés (2009, p. 136) proposes a further subcompetence which covers "the ability to use electronic corpora adequately to solve translation problems in an adequate manner." For the purpose of this article, we will briefly illustrate how students can use the internet as a source of corpus texts or how they can use the internet itself as a macro-corpus.

The internet is generally acknowledged as the most viable source for compiling do-it-yourself corpora (see Sánchez-Gijón, 2009, p. 116). However, there are several drawbacks involved, the most prominent being the lack of structure of the content provided and the varying quality of this content. Therefore, if students want to compile a targeted and high-quality DIY corpus from the internet, they have to compensate this lack of structure as well as potential quality concerns by adopting a structured corpus compilation approach. In this context, we introduce students to specific search strategies which can be used to narrow down a web search to yield only results with direct relevance to the DIY corpus that students want to compile (see also Sánchez-Gijón, 2009, p. 117). For example, conventional search engines like Google or Yahoo offer the search operator *site:*, which can be used to restrict the web search to a specific website or domain. For example, the search string *site:www.siemens-home.de* would only yield results from the website of the company Siemens, whereas the search string *site:.edu* would restrict the search to websites with the top-level domain *.edu*, i.e., to

sites of educational institutions. Such search strategies may prove useful if students are looking for terminology or the style emplo-yed by a specific client (for example, the corporate language or terminology of Siemens) or if they are searching for high-quality explanatory texts on a specific subject matter. Another helpful search operator is *filetype:*, which restricts the search to documents of a specific file format. The search string *filetype:pdf*, for example, would only yield results for PDF files, which are usually claimed to have a more stable (and hence probably more authoritative) content than files in other text formats (see Zanettin, 2012, p. 58). Employing these search strategies, students can quickly compile targeted DIY corpora and can query them for linguistic or conceptual information required for their specific translation tasks (for a more detailed discussion of corpus compilation using the internet, see Krüger 2012, p. 515 ff.).

The internet cannot only be used as a source for corpus compilation but it can itself be used as a macro-corpus (Zanettin, 2012, p. 56) which students can query directly for linguistic or conceptual information. The internet as a macro-corpus can either be accessed via conventional search engines or via specific Web concordancers. Conventional search engines offer, for example, the search operator *define:*, which yields a list of definitions of the search term along with hyperlinks to the corresponding Web pages. For example, the search string *define:piston ring* would yield explanatory contexts for the technical term *piston ring*. Using a more sophisticated strategy, students could formulate a search string in the form of the classical Aristotelian definition, leaving the *definiens* of the search string unspecified (see Bowker/Pearson, 2002,

p. 206 ff.). If students require a definition of the term *piston ring*, they could query the internet using the search string *A piston ring is*. The linking element of this string can also be varied to yield hypernymic information (for example, *A piston ring is a kind of*), meronymic/holonymic information (*A piston ring consists of/contains/is a part of*) or functional information (*A piston ring is used to*). Once students have been made aware of these possibilities of targeted internet searches, they are usually capable of devising creative search strategies of their own.

While accessing the internet as a macro-corpus via conventional search engines is a viable approach, these conventional search engines generally do not present the results in a format that is suitable for straightforward linguistic analysis. For example, the selection and ordering of results does not follow any linguistic criteria and these results are usually static and do not allow for any manipulation (such as sorting the concordance lines or generating collocations, see Zanettin, 2012, p. 58 ff.). If students require such corpus analysis functions when querying the internet as a macro-corpus, they can resort to specific web concordancers such WebCorp Live (www.webcorp.org.uk/live). With this web concordancer, students can, in a first step, define the search engine to use (for example, Google or Bing), the language of the Web pages to search, or the number of concordance lines per Web page. Several options provided by conventional search engines (for example, the specification of a certain site or domain to search) are also available in WebCorp Live. After the search process is completed, there is a post-processing phase in which students can specify, for

example, the number of words or characters to display to the left and right of the search term. Also, they can choose to sort the concordances by date or alphabetically (for example, sort by the words to the left or right of the search term). Students can also generate a table with the most frequent collocates and they can specify stopwords to exclude from the list (for example, high-frequency words like *a* and *the*). WebCorp Live also caches the search results for seven days. Students can save the results on a local computer (Zanettin, 2012, p. 60) and they can share the hyperlink to the cached results with the course instructor or with other students. WebCorp Live offers some powerful functions to conduct a linguistically-oriented analysis using the internet as a macro-corpus. If students combine these functions with the various research strategies described previously, they can obtain high-quality search results having direct relevance to their specific translation tasks at hand.

4. CONCLUDING REMARKS

This article has attempted to show how the framework of situated translation, together with theoretical reflections on the different aspects of translation competence, can be practically applied in translation teaching. In line with the tenets of situated translation, the translation course presented in this article attempts to project, as closely as possible, into the translation classroom the professional environment that students will encounter in their later careers as translators. This *in vivo* approach is intended to reduce the gap between theory and practice that is still often felt by students when they enter into real translation practice. We based the design of the course on Göpferich's translation competence model and illustrated how various subcompetencies of this model (in particular, the psycho-motor subcompetence and the tools and research subcompetence) are reflected and developed in our *in vivo* translation course. Although the rapidly changing face of the translation profession is increasingly reflected in the curricula of translation studies programmes (for example in the form of translation technology courses), there still seems to be a lack of courses that bring together the various competencies that are taught individually in isolated courses. This article can therefore be seen as a call for a holistic approach to translation teaching, which combines the various subcompetencies discussed previously and develops these subcompetencies to the benefit of the overall translation competence of our students.

REFERENCES

Aston, G. (2009). Foreword. In A. Beeby, P. Rodríguez Inés, & P. Sánchez-Gijón (Eds.), *Corpus use and translating. Corpus use for learning to translate and learning corpus use to translate* (pp. IX–X). Amsterdam: John Benjamins.

Bowker, L., & Pearson, J. (2002). *Working with specialised language. A practical guide to using corpora*. London: Routledge.

Byrne, J. (2012). *Scientific and technical translation explained. A nuts and bolts guide for beginners*. Manchester: St. Jerome.

Jääskeläinen, R. (1999). *Tapping the process: An explorative study of the cognitive and affective factors involved in translation*. Joensuu: Joensuun Yliopisto.

Garant, M. (2006). Effective translation projects: translating web pages for the Finnish business community. *Current Trends in Translation Teaching and Learning 1*, 77–84.

Göpferich, S. (2008). *Translationsprozessforschung. Stand, Methoden, Perspektiven*. Tübingen: Narr.

Göpferich, S. & Jääskeläinen, R. (2009). Process research into the development of translation competence: where are we, and where do we need to go? *Across Languages and Cultures 10 (2),* 169–191.

Griesbaum, J., Bekavac, B., & Rittberger, M. (2009). Typologie der Suchdienste im Internet. In D. Lewandowski (Ed.), *Handbuch Internet-Suchmaschinen* (pp. 18–52). Heidelberg: AKA.

Krings, H. P. (1986). *Was in den Köpfen von Übersetzern vorgeht. Eine empirische Untersuchung zur Struktur des Übersetzungsprozesses an fortgeschrittenen Französischlernern*. Tübingen: Narr.

Krüger, R. (2012). Working with corpora in the translation classroom. *Languages in the globalised world: Interpreting multilingual literacy and cross-cultural encounters. Special issue of Studies in Second Language Learning and Teaching 2 (4)*, 505–525.

Lewandowski, D., & Höchstötter, N. (2009). Standards der Ergebnispräsentation. In D. Lewandowski (Ed.), *Handbuch Internet-Suchmaschinen* (pp. 204–219). Heidelberg: AKA.

Norman, D. A. (1993). Cognitive artifacts. In J. M. Carroll (Ed.), *Designing interaction. Psychology at the human-computer interface* (pp. 17–38). Cambridge: Cambridge Univ. Press.

PACTE Group (2003). Building a translation competence model. In F. Alves (Ed.), *Triangulating translation: Perspectives in process oriented research* (pp. 43–66). Amsterdam: John Benjamins.

Reiss, K. & Vermeer, H. J. (1984). *Grundlegung einer allgemeinen Translationstheorie*. Tübingen: Niemeyer.

Risku, H. (1998). *Translatorische Kompetenz. Kognitive Grundlagen des Übersetzens als Expertentätigkeit*. Tübingen: Stauffenburg.

Risku, H. (2004): *Translationsmanagement. Interkulturelle Fachkommunikation im Kommunikationszeitalter*. Tübingen: Narr.

Rodríguez Inés, P. (2009). Evaluating the process and not just the product when using corpora in translator education. In A. Beeby, P. Rodríguez Inés, & P. Sánchez-Gijón (Eds.), *Corpus use and translating. Corpus use for learning to translate and learning corpus use to translate* (pp. 129–149). Amsterdam: John Benjamins.

Sánchez-Gijón, P. (2009). Developing documentation skills to build do-it-yourself corpora in the specialised translation course. In A. Beeby, P. Rodríguez Inés, & P. Sánchez-Gijón (Eds.), *Corpus use and translating. Corpus use for learning to translate and learning corpus use to translate* (pp. 109–127). Amsterdam: John Benjamins.

Siever, H. (2010). *Übersetzen und Interpretation. Die Herausbildung der Übersetzungswissenschaft als eigenständige wissenschaftliche Disziplin im deutschen Sprachraum von 1960 bis 2000*. Frankfurt/M.: Lang.

Surowiecki, J. (2004): *The Wisdom of Crowds*. New York: Anchor.

Torres-Hostench, O.; Biau, J. R.; Cid, P.; Martín, A.; Mesa-Lao, B.; Orozco, M. & Sánchez-Gijón, P. (2010). TRACE: Measuring the impact of CAT tools on translated Texts. In M.-L. Gea-Valor; I. García Izquierdo & M. J. Esteve (Eds.), *Linguistic and translation studies in scientific communication* (pp. 255–276). Bern: Lang.

Varantola, K. (2003). Translators and disposable corpora. In S. Bernardini, D. Stewart, & F. Zanettin (Eds.), *Corpora in translator education* (pp. 55–70). Manchester: St. Jerome.

Zanettin, F. (2012). *Translation-driven corpora: Corpus resources for descriptive and applied translation studies*. Manchester: St. Jerome.