Susanne Göpferich / Imke Neumann (eds.)

Developing and Assessing Academic and Professional Writing Skills

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Academic literacy used to be considered a complex set of skills that develop automatically as a by-product of academic socialization. Since the Bologna Reform with its shorter degree programmes, however, it has been realized that these skills need to be fostered actively. Simultaneously, writing skills development at all levels of education has been faced with the challenge of increasingly multilingual and multicultural groups of pupils and students. This book addresses the questions of how both academic and professional writing skills can be fostered under these conditions and how the development of writing skills can be measured.

The Editors
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Contents

Developing and assessing academic and professional writing skills – An introduction

Writing skills constitute one of the qualifications that are central both for academic and professional success. In an increasing number of occupational fields, degree programmes and disciplines, writing skills are not only required in one's mother tongue but also in English as the *lingua franca* of international communication. The observation that writing skills often do not develop to a sufficient extent if they are not fostered actively but rather considered a by-product of vocational or academic training has led to a number of initiatives such as, for example, the introduction of more process-oriented writing curricula, the establishment of writing centres as central support services at universities and the introduction of writing-intensive seminars in the disciplines. In higher education in Germany, a large number of writing centres and similar initiatives have been set up since 2011, when funding could be obtained for such measures from the German Federal Ministry of Education and Research (BMBF) in its "Quality Pact for Teaching" programme. This programme addresses the needs of increasingly higher proportions of age cohorts that enrol in university degree programmes (in the German state of Hesse more than 50% in 2012) and that, due to diverse educational backgrounds, come with rather heterogeneous entrance qualifications including writing skills.

Writing curricula which are tailored to students' specific needs cannot be developed without insight into the specific writing skills, for example, in terms of genre knowledge and languages, that these students will need in their education and training as well as their later professional lives. Furthermore, reliable assessment procedures are required which can be applied to determine what competencies students bring with them and can be considered the foundation for further skills development, as well as to evaluate whether writing curricula yield the expected results. Given the importance of writing skills both for learning and knowledge construction as well as for academic and professional success, applied linguistics is faced with the challenge of informing the development of writing courses and writing-

intensive seminars in the disciplines and contributing to the establishment of best practises of literacy development and assessment.

The present volume addresses the questions of how both academic and professional writing skills can be fostered under the conditions specified above and how writing skills development can be measured. These two central questions will be answered from three different perspectives reflected in the three parts of this volume: Part I "Vocabulary and terminology in academic writing", which focuses on the lexical level; Part II "Complex writing competence constructs", where a holistic perspective is taken trying to capture writing competence in all its complexity; and Part III "Subjective conceptions of writing and how to foster it", which considers students' subjective attitudes and beliefs on writing, which, as will be shown, have an impact on the acceptance of writing support. The methods employed in the studies reported on range from corpus-linguistic approaches via analytical and holistic assessment procedures to ethnographic studies. The writing assignments subjected to analysis range from seminar papers via personal portraits, letters of complaint and application to portfolios and statements on learning platforms. In the following, an overview of the structure of this volume and short summaries of each of the six contributions from four European countries, Austria, Germany, Sweden and Switzerland, will be provided.

Part I: Vocabulary and terminology in academic writing

The two contributions of Part I address corpus-based studies that focus on lexical and terminological aspects of L2 academic writing in the fields of a) business administration and b) the natural sciences and engineering.

In her article "Writing for specific purposes: Developing business students' ability to 'technicalize'", **Christine S. Sing** (Vienna/Austria) investigates how advanced students of business administration elaborate on technical terms in their L2 English writing by means of defining, exemplifying and explaining, i.e., how they 'technicalize'. For this purpose, she draws on a self-compiled specialized corpus, the corpus of Academic Business English (ABE), which comprises approximately one million tokens and was compiled from assessed university student writing on a broad thematic range of business topics. Christine Sing's analyses focus on the challenge frequently encountered by ESP students that they may be familiar

with domain-specific concepts but lack the language resources necessary to appropriately embed them in their writing. Against this background, Sing pleads for a more effective orchestration of the teaching of subject-domain knowledge and the domain-specific language needed for communicating about it. This includes the necessity to firmly anchor professional genres in the relevant curricula, which should replace writing assignments, such as seminar papers, as they are often used as training texts. As she points out, the latter types of assignments "alienate students from the professional target genres" they are expected to be able to write in their later professional lives. Furthermore, she pleads for foregrounding the processual character of writing instead of misconstruing writing as a product.

Hans Malmström, Diane Pecorari & Magnus Gustafsson (Gothenburg & Växjö/Sweden) contribute to our understanding of what we may reasonably expect of English Medium Instruction (EMI) for the development of students' English language proficiency. More specifically, their article "Coverage and development of academic vocabulary in assessment texts in English Medium Instruction" focuses on advanced students' productive knowledge of English academic vocabulary at a technical university in Sweden where all degree programmes at graduate level use English as the medium of instruction. Drawing on a corpus comprising 80 texts (approximately 720,000 words) produced by Swedish and international Master of Science students in their first and second years of study, they set out to answer the following three research questions: 1. What is the lexical coverage of the students' writing, i.e., what proportion of words in their texts is academic? 2. Are home students and international students comparable in terms of their productive academic vocabulary knowledge? And 3. Does students' productive knowledge of academic words appear to develop during their studies? Their findings call the effectiveness of EMI for academic vocabulary development into question.

Part II: Complex writing competence constructs

Whereas the articles of Part I focus on one specific aspect of academic writing skills, lexical competence, Part II comprises two articles which address the assessment of professional and academic writing skills in a more encompassing manner.

In their article "Assessing writing in vocational education and training schools: Results from an intervention study", **Liana Konstantinidou, Joachim Hoefele & Otto Kruse** (Winterthur/Switzerland) describe an assessment procedure they used to evaluate a process-oriented approach to writing instruction in vocational education and training (VET) schools introduced in the German-speaking part of Switzerland. This new approach to writing instruction includes both German as L1 and German as L2 approaches and was designed to more adequately cater to the diverse language needs in the multilingual, multi-ethnic vocational classroom than traditional product-oriented approaches. The article outlines the nature of the new approach to writing instruction and introduces the instruments used for the assessment of the students' writing competence in a pre-test/post-test/control group design with follow-up measurement including the writing tests and scoring procedures. Their main results show a significant increase in writing competence in the experimental group as compared to the control group. The article concludes with a discussion of the value of their assessment procedure.

The construct of writing competence assessed in the pre-test/post-test study conducted by **Susanne Göpferich & Imke Neumann** (Giessen/Germany) and presented in their article "Writing competence profiles as an assessment grid? – Students' L1 and L2 writing competences upon entering university and after one semester of instruction" is university students' ability to express themselves in a formally and linguistically correct, cohesive, coherent and well-reasoned manner in a genre they are familiar with from their secondary education. The empirical basis of their analyses is formed by the argumentative essays that 61 students (26 in their L1 German and 35 in their L2 English) composed at the beginning and at the end of one-semester study skills academic writing courses in either their L1 German or their L2 English. These essays were subjected to both a (text-)linguistic error analysis and a holistic evaluation of their argumentative rigour yielding assessments in five areas: formal correctness, lexical correctness, syntactical correctness, text-linguistic correctness and argumentative rigour. The findings from both the beginning of the semester and the end of the semester are visualized in area charts, so-called writing competence profiles (WCP), which, against the background of dynamic systems theory, set individual writing sub-competencies in relation to each other. These WCPs

show characteristic patterns, which are assumed to provide insight into how the individual sub-competencies and their developments may be related to one another. The characteristic patterns suggest that WCPs, when available for a larger range of writing competence levels, may be usable as grids for the assessment of writing competence.

Part III: Subjective conceptions of writing and how to foster it

The two articles combined in Part III address the subjective conceptions that university students have of 'ideal' professional and academic writing processes and their beliefs of how their writing skills can be fostered.

In her contribution "Portfolios as a means of developing and assessing writing skills", **Sandra Ballweg** (Bielefeld/Germany) explores a teacher's and her engineering students' actual use of a portfolio in the context of an academic writing course in German as a Foreign Language as well as their perception of this portfolio work. The empirical basis of the study is formed by 25 hours of audiotaped and transcribed lessons and portfolio conferences as well as interviews, four conducted with the teacher and three with each of seven participating students. Her objective is to reveal patterns of portfolio use and to generate hypotheses on the usefulness of portfolio work. The major hypothesis generated in this study through qualitative research methods relates to a gain-loss effect of portfolio use. The findings suggest that the introduction of portfolios in the writing classroom cannot just be viewed as an additional offer to the students and their learning but also necessitates abandoning established elements and procedures. Therefore, teachers have to make informed decisions as to both the focus of their teaching and the purpose of portfolio work. To enable them to do so, Ballweg pleads for preparing teachers for portfolio work and to support them in the process of employing it.

Acknowledging that students' beliefs about writing and writing strategies may interfere with their acceptance of writing support and that it is therefore helpful for writing instructors to be aware of these beliefs, **Sabine Dengscherz & Melanie Steindl** (Vienna/Austria) explore these beliefs using statements posted by students on a learning platform. In their article "'Prepare an outline first and then just write spontaneously' – An analysis of students' writing strategies and their attitudes towards professional writ-

ing", they provide insights into students' attitudes towards planning and spontaneous writing, both for short assignments in non-academic genres and longer texts in academic writing. For this purpose, statements from 163 students were analysed, which were posted on the learning platform *Moodle* during four courses of the BA programme "Transcultural Communication" at the Centre for Translation Studies of the University of Vienna. The courses were designed around writing in German as an L1 or L2. The results reveal numerous individual writing strategies and beliefs about writing between a 'conscious craft' and a 'kiss-of-the-muse' position. Students who take the 'conscious craft' position are keen to learn more about writing strategies, whereas students with the 'kiss of the muse' position doubt whether writing support might be helpful for them at all. The article discusses the didactical potential of online forum discussions about writing and how they can be integrated into writing classrooms.

We would like to thank all contributors for their excellent cooperation and hope that the present volume will give further impetus to the development of more student-centred approaches to professional and academic writing instruction and improved literacy assessment procedures.

Giessen, January 2016   Susanne Göpferich & Imke Neumann

Part I
Vocabulary and terminology
in academic writing

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Writing for specific purposes: Developing business students' ability to 'technicalize'

Abstract

English: This article examines business students' ability to technicalize in an L2 English writing task. Building up technicality in discourse is a key component of writing competence. Despite the importance of technicality for discipline-specific writing, so far little attention has been paid to identifying the usage patterns characteristic of this type of writing. The aim of this study is to investigate how undergraduate writers technicalize in elaborating on technical terms by means of defining, exemplifying and explaining. Drawing on a self-compiled specialized corpus, the study adopts a mixed-methods approach of computation and interpretation. It was found that technicalizing is a two-stage process, which consists of naming a term and subsequently embedding it in taxonomic relationships. The resulting chains of reference are taken to be indicative of field-specific uses in writing. The findings have important implications for developing business students' writing skills in view of the conceptual challenges they meet in current specific-purpose instruction.

German: Gegenstand des vorliegenden Beitrags ist die Art und Weise, wie Studierende beim fachspezifischen Schreiben in ihrer L2 Englisch Technizität *(technicality)* herstellen. Hierzu werden diejenigen sprachlichen Verfahren ermittelt, die sie nutzen, um Fachtermini durch Definitionen, Beispiele und Erklärungen in den Text einzubetten. Die Fähigkeit, Technizität herzustellen, wird dabei als wesentliche Komponente der Kompetenz zum fachsprachlichen bzw. disziplinspezifischen Schreiben verstanden. Als Datengrundlage dient ein spezialisiertes Korpus von studentischen Texten aus vier Bereichen der internationalen Betriebswirtschaftslehre, die auf Englisch als L2 verfasst wurden. In einem *Mixed-Methods*-Ansatz werden korpuslinguistische mit interpretatorischen Verfahren kombiniert. Es zeigt sich, dass das Herstellen von Technizität als zweistufiger Prozess beschrieben werden kann, in dem ein Fachausdruck zunächst benannt und dann in eine taxonomische Beziehung eingebettet wird, wodurch Referenzketten entstehen, die für die untersuchten Texte charakteristisch sind. Aus den gewonnenen Erkenntnissen werden Schlussfolgerungen für die Didaktik der Schreibkompetenzförderung in wirtschaftswissenschaftlichen Lehr-/Lernkontexten gezogen.

1 Writing for specific purposes

English for Specific Purposes (ESP) is traditionally conceived of as a "mate-rials- and teaching-led movement" (Dudley-Evans/St John 1998: 19), cater-ing to specific student needs in specific contexts. ESP is thus "an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning" (Hutchinson/Waters 1987: 19). Recent developments in the field, however, have heightened the need for a fresh perspective on ESP: "What once looked to many like a straightforwardly needs-oriented, a- or pan-theoretical […] approach, now, like the constantly changing learning targets it addresses, is itself becoming harder and harder to capture in anything like a single stop-action frame" (Belcher 2006: 134).

The internationalization of higher education (HE) marks a sea change in the role of English in scholarship and instruction. English-medium instruc-tion has become the rule rather than the exception in tertiary education across Europe. Given the centrality of writing in HE institutions (Hyland 2013), there is an increasing concern for students' needs, lacks and wants in writing instruction. Indeed, it appears to be the case that students are lacking essential competencies when it comes to university writing and thus need to be acquainted with its primary purposes. This raises the question what differentiates university writing in English for General Academic Pur-poses (EGAP) from that in English for Specific Academic Purposes (ESAP) settings.

Arguably, the transition from secondary to tertiary education represents a "cultural shift" (Gee 1996: 155) for most students as they meet with dif-ferent literacy expectations in their new environment. What is more, the novice writers face linguistic challenges in that they use English as an L2 in their writing, which means that they are struggling with both general and academic English at the tertiary level. Particularly, students are lacking in knowledge of the relevant target genres and are grappling with the highly formalized and conventionalized written academic style.

In ESP settings, the writing task has regularly been of central impor-tance, most notably in business, academic and professional domains (Tardy 2012: 6266). And yet, in specific-purpose writing instruction, these two challenges – cultural and linguistic – are compounded by what Peters et al. (2014: 744 ff.) refer to as "conceptual challenges". The authors report

several pedagogical issues in ESP contexts, arising from the fact that learning disciplinary knowledge and learning the specialist language are not carefully orchestrated. As a result, ESP students are not only linguistically challenged by having to overcome difficulties in both general academic English and the specialist language of their discipline; they also face conceptual challenges in that ESP programmes "require students to develop a more abstract understanding of concepts within the discipline, in order to be able to apply their knowledge effectively" (Peters et al. 2014: 755). This implies that ESP students may be familiar with field-specific concepts while lacking the language resources necessary to construe disciplinary knowledge in their writing.

It is this conceptual challenge that will be addressed in the present analysis. It will be argued that the students in the ESP setting of a business school fail to be empowered by the potentially effective cross-fertilization of subject knowledge and disciplinary language. Building on Tribble's (2002) contextual-analysis framework and Flowerdew's (2004) parameters for specialized corpora, it will be shown that, in order to be able to engage in disciplinary discourse, student writers need to develop the ability to "technicalize" (Ravelli 2004: 104), i.e., to grow aware of the linguistic resources highlighting that a given word or concept is embedded in a body of knowledge.

Drawing on a self-compiled specialized corpus, the corpus of Academic Business English (ABE), this account sets out to examine three major modes of constructing technicality in business student writing, namely defining, explaining and exemplifying. Prior to presenting the main findings, I will first outline the theoretical framework of Systemic Functional Linguistics (SFL), in which the notions 'technicality' and 'technicalize' originated. The in-depth contextual analysis will conclude with a discussion of how specific-purpose writing instruction could address these conceptual challenges.

2 Theoretical background

The notions 'technicality' and 'technicalizing' are deeply embedded in the SFL framework, which contends that language users represent experience through language by means of various genres and resources. Martin (1991: 308 f.) proposes a cross-classification of genres (report, explanation, exposition) and discourse functions (describing, explaining). In this

approach, the complexity of written texts can be described on the basis of two functional dimensions, technicality and abstraction. The rationale behind this classification is that, while both sciences and humanities rely on these genres and functions, there are clear discipline-specific preferences as to which features predominate. A case in point is the genre of report which, in science discourses, fulfils a taxonomizing function, while reports in the humanities tend to generalize. Not only does this highlight the instrumental character of discourses, it also illustrates the process of knowledge construction in different disciplines. Different fields name, order and classify similar phenomena differently.

This begs the question as to the linguistic resources that are instrumental in construing disciplinary knowledge in writing. In order to achieve representation, language typically fulfils three functions: 1. creating technical vocabulary, 2. classifying the experiential world, and 3. explaining the experiential world. Ravelli (2004: 104) argues that, in order to perform these functions, "writers must be able to give names to things, and to connect these names to each other, in order to theorize about the world around them". She refers to these functional modes as technicalizing and rationalizing, respectively. Here the emphasis will be placed on technicalizing or theorizing, as it may also be referred to. It will be argued that, once capable of technicalizing, student writers demonstrate a deeper understanding of taxonomies, i.e., of how terms or concepts are to be placed in an ordered system.

Technicalizing, i.e., the process of building up technicality in writing, involves two stages: 1. naming the phenomenon and 2. making the name technical. The latter is aided by 'discourse cues' such as textual signals or macrostructures. Woodward-Kron (2008: 238 f.) identified several linguistic devices that may be used to flag technicality in discourse, examples being definitions and taxonomic relationships. The reliance on discourse cues, however, presupposes the existence of an engaging writer-reader relationship. Since the English language represents a "writer-responsible culture" (Dahl 2004), strategies such as "lexical familiarization" are particularly rewarding. The latter can be defined as "a contextual aid, intentionally and explicitly provided by the author when writing for a specific readership. The writer's intention is to help his reader by providing him with sufficient

familiarity with the new word, as employed in its context, so that the reader can continue reading with understanding" (Bramki/Williams 1984: 170).

Taking the writer and reader community as a point of departure, Hyland (2010) conceives of academic writing as an interactive communicative practice. Of particularly strong appeal is Hyland's (2005: 37) interpersonal model of metadiscourse, i.e., "the cover term for the self-reflective expressions used to negotiate interactional meanings in a text, assisting the writer (or speaker) to express a viewpoint and engage with readers as members of a particular community". More specifically, he distinguishes between two dimensions of interaction, namely interactional and interactive metadiscourse. While the former is primarily concerned with reader engagement, it is the category of interactive metadiscourse that includes the linguistic resources instrumental in technicalizing. According to Hyland (2005: 37), interactive metadiscourse is grounded in the writer's awareness of an audience. For this reason, writers rely on resources such as transitions, frame markers and code glosses. The latter, which "supply additional information, by rephrasing, explaining or elaborating what has been said, to ensure the reader is able to recover the writer's intended meaning" (Hyland 2005: 52), are vital for building up technicality in discourse. Table 1 presents the code glosses that may be used to signal technicality in discourse.

Table 1: Technicalizing functions of code glosses

Discourse function	Linguistic resources	Metadiscourse category
Defining *Exemplifying* *Explaining*	*called*, *defined as*, *known as such as*, *for example*, *e.g.* *that is*, *which means*	Code glosses

In what follows, each of these functions will be subject to an in-depth analysis, involving both a quantitative analysis of their frequencies of occurrence and a more qualitative study of their discourse patterning. As will be shown, the student writers technicalize in that they establish so-called "chains of reference", "i.e. sequences of noun phrases all referring to the same thing. This constitutes an important aspect of textual cohesion, which makes a text more than just a series of sentences" (Biber et al. 1999: 234 f.). The following corpus example showcases how such textual macrostructures are established:

[1]   I will **name** three of these companies, **explain** what kind of products they sell
       and the materials used. [ABE_Business]

The student clearly feels the need to first refer to the phenomenon, followed by embedding it in a given technical framework. Before this will be discussed, the data and context of analysis will be described.

3 Data and method

3.1 Corpus and context description

Recent developments in the field of corpus-based analyses of student writing have seen the compilation of several corpora of (under-)graduate writing in English, for example, the Michigan Corpus of Upper-level Student Papers (MICUSP) and the corpus of British Academic Written English (BAWE). While both provide a rich source of data, comprising several genres and disciplines, they need to be carefully differentiated from learner corpora on the one hand and Language for Specific Purposes (LSP) corpora such as the ABE corpus on the other. The former are clearly indebted to Second Language Acquisition (SLA) research, where the emphasis is placed on interlanguage features such as a limited lexical repertoire, semantic misuse or overuse of connective devices (Paquot 2010). The latter, by contrast, are referred to as specialized corpora, which "are corpora designed for the purpose of creating a sample of specialized language either by collecting texts of similar content [...] or of similar text-type or genre" (Gavioli 2005: 7). These tend to be small and localized collections of data, which means that scholars, like the author of this present study, are frequently forced to assemble their own corpora (Tognini-Bonelli 2008: 35). The ABE corpus, which makes up the database of the present study, is such a self-compiled, specialized corpus. As shown in Table 2, with a size of approximately one million tokens, the ABE corpus greatly exceeds the usual 250,000 word mark of specialized corpora. In actual practice, specialized corpora typically range between around 60,000 words and 250,000 words. Handford (2010: 258) thus concludes that "[i]n terms of actual size, a specialized corpus can be defined as large [...] if it contains a million words".

Table 2: ABE corpus data

Subcorpora	Number of papers	Type/token ratio (STTR)	Number of running words (tokens)
Business	103	41.22	236,917
Economics	104	40.76	273,455
Finance	104	39.60	253,203
Marketing	102	40.64	251,156
ABE Total	**413**	**40.55**	**1,014,731**

Given that a corpus is "not simply a collection of texts" (Biber/Conrad/
Reppen 1998: 246), there should be a principled stand on corpus compila-
tion. The compilation of the ABE corpus was guided by a clear set of design
criteria. These are summarized in Table 3 below, drawing on Flowerdew's
(2004: 21) set of parameters for defining specialized corpora on the one
hand and Tribble's (2002: 133) contextual-analysis framework on the other.

Table 3: Description of data and context

DATA DESCRIPTION	
Specific purpose for compilation	To investigate business student writing in a localized setting
Size	Large specialized corpus (ABE) of approx. 1 million running words
Language used	Written academic English, used as L2
CONTEXTUAL DESCRIPTION	
Genre family	Assessed university student writing
Communicative purpose	To demonstrate / be accredited for proficiency in academic English and knowledge of business concepts
Text type	413 simple assignments, seminar papers
Subject matter	Broad thematic range of business topics
Setting	ESP setting of a business school; committed to a wide-angled approach to the teaching of business English
Participants	Advanced undergraduate students of international business administration

In what follows, each of these features will be described, detailing the specifics of the ABE corpus and the institutional context in which it originated. First and foremost, "[h]aving a clearly articulated question is an essential step in corpus construction since it will guide the design of the corpus" (Reppen 2010: 31). And yet, the compilation of specialized corpora tends to be prompted by more specific purposes. The most obvious reason for building "DIY corpora" (McEnery/Xiao/Tono 2006: 21) lies in the fact that none of the existing corpora include a sample of the genre investigated. Another main driving force behind self-compiled corpora are methodological considerations. Even if corpora are available, not all data lend themselves to conducting contextualized analyses. Studying business student writing with a view to enhancing these students' development of writing skills necessitates the retrievability of contextual information, ranging from details about the institutional setting and the curriculum in operation to localized academic practices. Thus, methodologically, small self-compiled corpora have the edge over larger corpora whenever detailed, fully contextualized analyses are intended (Nelson 2010: 55). Yet another reason for compiling the ABE consisted in creating a specialized corpus that would contain the type of language characteristic of this particular ESP setting.

As mentioned earlier, the ABE corpus can be considered a large specialized corpus. The question of corpus size is closely intertwined with the issue of representativeness. Unlike general corpora, for which representativeness may be achieved through size, this "aim [...] is rendered impossible through the need to target a disciplinary or thematic specialty" (Williams 2002: 45). Instead, "the representativeness of specialized corpora is usually measured by reference to external selection criteria (i.e. *by/for whom* the text is produced, what is its subject matter), which are regarded as somewhat subjective" (Flowerdew 2004: 18; highlighting in the original). In order to mitigate the effects of subjectivity, the collection of data needs to meet clear sampling criteria. Accordingly, texts had to meet the following external criteria for inclusion in the ABE: All texts had to be complete rather than samples. They had to be single-authored and of equal length (i.e., not exceeding the word limit of 2,400 words). They had to be organized in terms of the macrostructure laid down in the institute's style sheet. Their thematic focus was required to be on either business, economics, finance or marketing, which corresponded to the subject matter dealt with in the

seminars. These external criteria clearly limit the range of texts eligible for inclusion, meaning that "[b]y restricting the scope of the corpus, energy can be directed towards assembling a detailed collection of texts that fully represent the kind of academic language one is likely to encounter" (Meyer 2002: 36).

However, the conditions of data collection are highly unpredictable, particularly when student work is involved. Alsop & Nesi (2009: 73) report similar sampling problems when compiling the BAWE corpus. As they did not quite know what to expect from the assignments – neither in terms of volume nor nature – they used a matrix of disciplinary groupings on four different levels of study. Following Alsop & Nesi, the ABE corpus texts were sampled on the basis of a matrix of four disciplinary groupings in order to plan the structure of the corpus, i.e., the sub-fields of business, economics, finance and marketing served to organize corpus holdings. Accordingly, texts were cross-classified making up matrix cells, which were based on these sub-fields on the one hand and on the external criteria mentioned above on the other. In order to achieve balance, texts were then added to the corpus until all cells were filled in equal numbers.

Prior to moving on to the description of context, a passing reference to the language used in the corpus texts is in order. The specialized language represented in the ABE corpus is "[t]he academic business English required by students on courses in disciplines such as business, finance, accounting and banking [which] has more in common with the study of other EAP [English for Academic Purposes] disciplines" (Dudley-Evans/St John 1998: 53). The student writing included in the ABE is therefore strongly informed by the institutional context. The close interweaving of texts and the institutional setting in which they originated warrants the distinction between text type, genre and communicative purpose, all of which relate to the categorization of written texts. The distinction between genre and text type, in particular, is a moot point. Broadly, the distinction is grounded in whether external or internal criteria are used for grouping texts together. As originally laid down by Biber (1988), genre "is defined as a category assigned on the basis of external criteria such as intended audience, purpose, and activity type, that is, it refers to a conventional, culturally recognized grouping of texts based on properties other than lexical or grammatical (co-)occurrence features" (Lee 2001: 38). The category text type, by con-

trast, characterizes texts in terms of their textual properties and linguistic patterning. However, as pointed out by Paltridge (1996), the distinction is anything but watertight and is best seen as complementary. More precisely, genres can be realized by different text types, that is, "more than one genre may share the same type. […] Equally, a single genre […] may be associated with more than one text type" (Paltridge 1996: 239).

In modelling the 'seminar paper' (SP) as a specific type of written text, the present account subscribes to Biber's (1988) corpus-linguistic classification. Accordingly, the SP is viewed as a specific, institutionalized form of assignment writing, which a) has a particular organization, b) deals with a specialized topic and c) realizes an identifiable set of social and communicative functions. The SP is deeply rooted in German-speaking HE (Kruse 2006). It is an argued text similar to an exposition, frequently taking on the form of research articles (RA) in miniature (Ehlich 2003). In many disciplines, particularly in the social sciences and humanities, it continues to be the standard type of assessed writing. In the context of Austrian HE, the seminar paper has been studied extensively (Gruber 2006). A case in point is Gruber's (2004: 50) identification of the SP's prototypical structure: introduction, problem definition, descriptive and argumentative discussion of the problem(s), case description and conclusion.

Its generic properties are further determined by a detailed set of instructions, according to which the paper is to present an 'academic argument' rather than make recommendations for (case-)specific situations. The strict formal criteria laid down for the SP typically relate to principles of layout and text organization, citation practices and bibliographical conventions. The SP is typically a simple assignment, i.e., the number of texts equals the number of writing tasks; conversely, the number of texts equals the number of authors. Thematically, SPs are subject to sub-field specific variation. The internal criteria used to determine the SP as an abstract text type were topic-based. In order to ensure that the teaching and learning context is adequately reflected in the corpus data, the corpus was subdivided into four thematic subcorpora, each relating to the topical focus of seminar teaching: business studies, economics, finance and marketing. Regarding the social and communicative functions of SPs, they can be argued to realize a particular genre, namely assessed student writing. In fact, university student writing has been shown to constitute a genre family consisting of various

subgenres (Nesi/Gardner 2012). In combining several of these subgenres, the SP fulfils what is perhaps the primary function of assessed university writing: accreditation (Nesi/Gardner 2012: 23).

The setting in which the texts were collected and the participants can be specified as follows: The institutional context at hand is a fully-fledged academic unit, which, despite its full-departmental status, does not offer bona fide degree programmes. It instead caters to business programmes, such as the four-year diploma programme of International Business Administration (IBA). Owing to the content-based curriculum, the focus clearly is on specialist language (Business English – BE), leaving little scope for developing general English language skills. Similarly, there are few opportunities of familiarizing students with academic English, which means that the students will not have received any formal writing instruction prior to producing the assignment. In the light of this curricular framework, it is perhaps not surprising that a wide-angled approach (Basturkmen 2010: 143) to the teaching of BE is adopted, implying that English is taught through a variety of topics in several business fields. The integration of subject-specific knowledge with language learning is thus hinged on a terminology-driven approach to BE. The participants are usually in their third or fourth year of the diploma programme when producing the SP. They are referred to as advanced students in the sense that they will have spent at least three years in HE, in other words, 'advanced' does not describe their proficiency in English. As there are no initial placement tests nor any official language testing throughout the programme, no assessed information as to their actual level of English can be provided. Neither are there any detailed metadata available on individual student authors. The vast majority are however L1 users of (Austrian) German. At the same time, there is a large intake of international students, accounting for approximately 10% of the entire student population.

3.2 Method

Discipline-specific writing has mainly been studied from either a corpus-linguistic, variationist perspective or using ethnographic research methods. Corpus-based approaches aim to retrieve lexico-grammatical patterns in order to identify field-specific uses of language. These variationist accounts

tend to focus on variables such as novice vs. expert practices or English L1 vs. English L2 uses in discipline-specific writing. There is a substantial body of research which has examined disciplinary variation in academic discourse, including citation practices (Samraj 2013; Charles 2006), stance (Chang/Schleppegrell 2011; Biber 2006) and shell noun uses (Flowerdew 2006; Aktas/Cortes 2008). However, approaches of this kind carry with them various well-known limitations. First, it seems to be the case that, due to the contrastive approach taken, variationist studies conceive of disciplinary forms of writing as uniform practices. The inherent normativity then leads to an analytical focus "on identifying academic conventions […] and on (or with a view to) exploring how students might be taught to become proficient or 'expert'" (Lillis/Scott 2007: 13). Second, expert writing is frequently conceived of as constant and stable, ignoring the fact that lexical complexity in the writing of experts is itself subject to considerable variation over time (Trinh 2011). Thus, once both a timescale and a time window are taken into account, expert practices no longer serve as the reliable yardstick they are made out to be. Yet another shortcoming of this approach consists in the decontextualized lexico-grammatical patterns identified; more often than not, the analysis does not include the level of discourse, i.e., language beyond the sentence level.

Ethnographically-oriented studies seek to address the social conditions of the production and interpretation of academic texts. Accordingly, Gnutzmann & Rabe (2014: 33) observe "a certain neglect of the wider context of academic writing and publishing, since many conventions of disciplinary cultures are unwritten and have to be reconstructed through other methods". Using interpretative methods, the authors propose an interview-based study of the language demands and attitudes of German researchers using English as an L2. The ultimate aim of such an account consists in homing in on precisely those contextual factors amiss in much corpus-based research.

The present account proposes a 'third way' of analysing ESP writing, intending to reconcile these two approaches. It combines the empirical rigour of corpus-based studies with the interpretative methods of ethnographical research. The study at hand thus provides a fully contextualized analysis in drawing on the ABE as a localized collection of data. Specialized corpora permit the analyst to study patterns of language use in the contexts in which they originated (Handford 2010: 258 f.). More precisely, with

specialized corpora, "the analyst is probably also the compiler and does have familiarity with the wider socio-cultural context in which the text was created […]. The compiler-cum-analyst can therefore act as […] specialist informant to shed light on the corpus data" (Flowerdew 2005: 329). Not least the growing complexity of ESP settings has highlighted that corpus data are invariably situated. The importance of studying corpus texts in their contextual environment results from the tight interweaving of text and context: "To make sense of the way particular texts and particular grammatical patterns occur, and why they occur in a particular order, it is essential to consider what is distinctive about texts within their particular institutional context" (Veel 1997: 162). The author of the present study is such an insider. This field knowledge will be used when discussing the findings of the corpus study below.

In what essentially constitutes a mixed-methods approach involving computation and interpretation, the corpus data were subject to a bottom-up, inductive analysis, followed by the study of discourse patterns, which was more qualitative in nature. Using *Wordsmith Tools 6* (Scott 2012), a wordlist analysis was first conducted for all four subcorpora. This served to retrieve the most frequently used code glosses across the ABE, as exemplified in Table 1 above. These instances were then concordanced to identify their most frequent collocates. In a second stage, the discourse patterns in which these code glosses are embedded were examined using *MAXQDA*. For this purpose, the chains of reference were coded as definitions, exemplifications and explanations respectively. It should be noted that the classification of metadiscourse devices is problematic in itself, since these describe a continuum of functional resources rather than mutually exclusive categories. Therefore, metadiscourse is notoriously difficult to quantify, which is why the emphasis was placed on exploring the usage patterns of these discourse phenomena in the data at hand, paying particular attention to intra-disciplinary variation.

4 Results and discussion

The analysis set out to examine the linguistic resources used by business students to build up technicality in their writing. Technicalizing was introduced as a two-stage process: 1. referring to/naming the phenomenon concerned

and 2. making it technical by means of elaboration. Due to the interactive nature of academic writing, the first step of the analysis involved retrieving all relevant code glosses, assuming that they highlight instances of technical language use. The emphasis was placed on glosses that mark defining, exemplifying and explaining. As can be seen in Fig. 1, which shows the main findings for this first set of analyses, the three metadiscoursal devices are used fairly differently across the subcorpora.
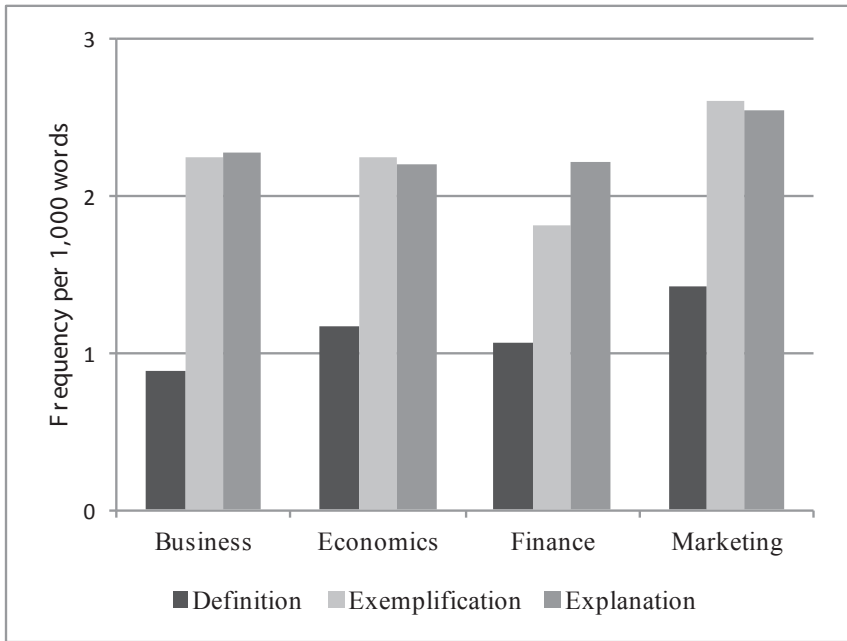
Fig. 1: Distribution of code glosses across the ABE subcorpora

Generally, it is evident that the construction of technicality chiefly occurs by means of exemplification and explanation. Explicit glosses used to signal acts of defining are clearly less frequent than those relating to exemplification and explanation. Referring more specifically to individual subcorpora and zooming in on the more subtle differences between them, several interesting findings were produced. First and foremost, the in-corpus variation is remarkable, given that all four ABE subcorpora are made up of the same

text type. While definitions clearly play a subordinate role in building up technicality in these corpus texts, the distribution of exemplifications and explanations in the corpus data varies greatly. Focusing on frequency of occurrence alone, it could be argued that the results for the business and economics subcorpora are fairly similar. However, when taking into account the relations between the most pervasive code glosses exemplification and explanation, the distribution for business and finance on the one hand, and economics and marketing on the other is fairly similar. In the latter, the student writers use slightly more exemplifications than explanations while the situation is reversed for the business and finance subcorpora. This can be accounted for by the differences in composition structure: While both business and finance papers tend to be organized as case studies and thus follow the problem-solution pattern, papers in economics and marketing tend to be argued essays, both descriptive and argumentative in nature, implying that the student writers rely on exemplifications to illustrate the points they make rather than explaining case specifics in detail. Even though these facts and figures of corpus analysis highlight important differences between the ABE subcorpora, they represent only a small part of a much bigger picture. Therefore, the second part of the analysis involved identifying the usage patterns and textual macrostructures in which these code glosses are embedded.

4.1 Technicalizing by means of defining

Due to their knowledge-telling function, definitions expand on a given term that has been 'named' in the preceding context. When labelling such a discourse act, the student authors whose writing is documented in the ABE tend to resort to the following linguistic resources: *called*, *the term* X, *defined as*, *define* and *known as*, which makes them the top five most frequently used glosses of this category across the ABE subcorpora. The analysis revealed several usage patterns which will now be discussed (the subcorpora from which the examples are taken are indicated in square brackets):

[2]   AUTHOR and AUTHOR (1995: 17) **define** <u>CC</u> [= Corporate Citizenship] as the engagement of companies, using corporate resources in order to solve [ABE_Business]

[3]   type of tourism called <u>events tourism</u>. AUTHOR **defines** <u>events tourism</u> as "the planning, development [ABE_Marketing]

As shown, the most obvious way of introducing a new term is by what Ädel & Garretson (2006: 273) refer to as "attribution", the procedures by which "writers […] frequently attribute statements and acts to other researchers". The student writers, too, make use of this standard procedure by means of paraphrasing or quoting verbatim from a source, which means that the verb *to define* is used as a reporting verb. In both instances, however, the term is not defined on first mention; instead it has already been used in the preceding context, which testifies to the existence of "chains of reference". Accordingly, the term *Corporate Citizenship* has already been introduced as it is defined in abbreviated form. Example [3] provides an introductory sentence in which reference is made to the term *event tourism*, which is subsequently defined in a more technical way.

Chains of reference are also operative in yet another pervasive pattern identified in business student writing. As exemplified below, the reference to a given term is established by the section heading that serves as the antecedent and immediately precedes the defining act:

[4] Joint Ventures [= section heading] A joint venture **can be defined as** a company which is owned corporately by two or more parties [ABE_Business]

[5] Definitions [= section heading] The Role of Information [= section heading] Information **can be defined as** "data with attributes of relevance and purpose [ABE_Economics]

Technicality is thus gradually built up in first naming the phenomenon in question, followed by according it a technical status. As indeed highlighted by the corpus examples above, technicalizing clearly has a taxonomizing function in that the term is positioned in an ordered system. The students' taxonomic organization of their writing topic creates such a system, whose structure becomes manifest in the tables of contents of their papers. The fact that the student writers seem to be preoccupied with taxonomies rather than developing ideas is further supported by the relatively low lexical density (see STTR scores in Table 2 above), suggesting that their writing has a low informational value and that topic development occurs on the basis of few new language items. In their study of technicality in geography textbooks, Wignell, Martin & Eggins (1993: 157 ff.) found that chapter or (sub-)section headings and the emboldening of terms correspond to "superordination taxonomy" in contrast to "composition taxonomy". The former is

primarily concerned with classifying a given term while the latter provides a list of its elements. For example, the superordination taxonomy of the technical term *climate* would include different types of climate, e.g., tropical, moderate and dry, while the composition taxonomy would include a list of descriptive elements such as temperature, pressure systems or atmospheric moisture (Wignell/Martin/Eggins 1993: 159).

It can be argued that the above examples are indicative of a strong concern for superordination rather than composition taxonomy. The findings also suggest that students are concerned with composition taxonomy as illustrated by the following examples:

[6] cross-cultural cooperation in a positive manner. The first dimension is **called** "universalism versus particularism [ABE_Economics]

[7] change process is **called** "managing the transition". The third phase is **called** "sustaining momentum". [ABE_Finance]

Taxonomizing presupposes that students are capable of identifying technical vocabulary in the sources used. In so doing, they make use of the composite nature of technical language and seek to decompose it by foregrounding component parts such as *step*, *dimension*, *phase*, *stage* or *mode*. This has the effect of an unfolding discourse, which can be achieved in two directions: from naming to signalling or from signalling to naming.

The following examples show a reversal of the process of technicality construction:

[8] long a put option. This strategy is **called** protective put and limits the maximum loss to the premium [ABE_Finance]

[9] expatriates normally return back home, this process is **called** repatriation. Cost of foreign assignments [ABE_Business]

Here the description of the phenomenon in question occurs first, followed by the introduction of the terms, namely *protective put* and *repatriation*. In this pattern, the chains of references are established by means of so-called 'signalling nouns' or 'shell nouns' (Sing 2013). "A signalling noun is potentially any abstract noun which is unspecific out of context, but specific in context" (Flowerdew 2006: 348). Nouns such as *attitude*, *difficulty* and *process* are pervasive in academic discourse, performing important cohesive functions within or between sentences.

The preceding discussion has clearly shown that these student writers, despite imperfections of language and style, demonstrate the ability to technicalize. However, they do not seem to conceive of themselves as 'knowledge-makers'.

[10] <u>In the third part of my paper</u> **I will try to define** the term hooliganism and give some basic explanations for the phenomenon hooliganism. <u>Finally, in the last part</u> [ABE_Business]

[11] <u>This section</u> will **define** the term new media and <u>then</u> shortly discuss the change in language culture. [ABE_Marketing]

[12] <u>The first part</u> basically outlines the aim of the agreement and **defines** the term 'trade in services'. <u>The second part</u> gives an overview [ABE_Economics]

In contrast to the uses of *to define* as a reporting verb above, these uses highlight that defining proper is restricted to attribution. Although the student writers use the first person pronoun *I*, they do not perform the act of defining. Instead the main emphasis is placed on the paper's organization, as evidenced by the co-occurrence with so-called frame markers such as *first*, *then*, *finally* and *in the last part*, which "can be used to sequence parts of the text or to internally order an argument" (Hyland 2005: 51). This means that, in this particular pattern, the verb serves as a genuine metatextual gloss. Alternatively, the students make use of non-human agents (*section*, *part*), which also frame, rather than perform, the defining act.

One possible explanation for this pattern is students' awareness of the genre, i.e., assessed university writing, and its main social purpose, accreditation. The student writers thus show compliance and do what is expected of them. Given that the business students will not have received any writing instruction prior to producing the assignment, they come equipped with lay beliefs about what constitutes good academic writing. The fact that they are still in the process of internalizing their knowledge is shown in the following set of examples:

[13] <u>Before examining the topic in detail</u>, **it is necessary to define** the reoccurring terms 'endorsement marketing' and 'celebrity endorser'. AUTHOR (2009: 126) states that endorsement [ABE_Marketing]

[14] First <u>it is important</u> **to define** <u>the term that is probably the most important in the whole paper</u>, ethnic minority. Since there is no general [ABE_Marketing]

These examples highlight that the patterning is clearly learning-related. It is evident that these business students are anxious to define key terminology in their writing. At the same time, they are overwhelmed by the task, given the abundance of definitions for relevant concepts. They find it difficult to tolerate this ambiguity, seeking to reduce the complexity to the one-and-only correct definition of a given phenomenon.

[15] confused and are used in a much diversified sense (AUTHOR 2004: 3). For this reason, it is important **to define** e-commerce in comparison to e-business and illustrate the differences. [ABE_Marketing]

[16] paper is dealing with cultural aspects of the COUNTRY capital, it seems to be a good approach **to define** more narrowly the use of the word culture. Culture is certainly one of the two or three most complicated words [ABE_Business]

All in all, the business students at hand tend to be familiar with different modes of elaborating on technical terms, thereby establishing chains of reference to build up technicality. The students are also clearly alert to expectations in terms of genre conventions. With a view to complying with the requirements of the writing task, the student writers have internalized that, in academic writing, they are to define key words prior to discussing them in more detail. In the sections that follow, the findings for the modes of technicalizing by means of exemplification and explanation will be presented.

4.2 Technicalizing by means of exemplifying

Technicality may also be constructed when writers elaborate on a term by means of exemplification. The most pervasive metadiscoursal devices across the ABE subcorpora are: *such as*, *for example*, *include*, *e.g.* and *for instance*. Crucially, there is considerable variation with regard to the concepts that are exemplified in discourse. As shown in Table 4, the above-mentioned metadiscoursal resources co-occur with both field-specific (e.g., *companies*, *products*, *investors*) and 'signalling noun' (e.g., *factors*, *issues*, *problem*) L1 collocates (listed in terms of their frequency, with a minimum occurrence of 4):

Table 4: L1 collocates across subcorpora (minimum frequency of 4 occurrences)

Corpora	L1 collocates
ABE Business	issues, values, activities, factors, problem, countries
ABE Economics	countries, factors, companies, issues, problems, products, services
ABE Finance	instruments, investors, areas, failures, products, sectors, banks, countries, factors, institutions, events
ABE Marketing	events, attributes, countries, technologies, activities, areas, communication, industries, media, problems, services

As shown below, exemplifying proper serves to elaborate field-specific or procedural vocabulary. The following examples illustrate this point:

[17] Patents require <u>inventions</u>. In general, the main characteristics of <u>inventions</u> **such as** novelty, inventiveness, [ABE_Economics]

[18] Equity capital markets deal with stocks and <u>derivative instruments</u>, **such as** forward contracts, futures, and options (AUTHOR 2011: 14). [ABE_Finance]

If field-specific vocabulary is exemplified, the term will most likely have been introduced in the preceding context, which may also involve attribution. What is more, exemplification may also be used to instantiate taxonomies. Following on from the discussion in Section 4.1, the effect of superordination taxonomy on subsection headings is also noticeable here.

[19] Recruitment [= section heading] <u>Recruitment</u> and selection is more than just hiring people. Pre-recruitment activities **include** writing a job description as well as developing [ABE_Business]

[20] Introduction [= section heading] There are many forms of business communication, **such as** marketing or image communication, crisis communication [ABE_Marketing]

Interestingly, the effect of composition taxonomy on how students elaborate a given term by means of exemplification seems to be weaker than when they technicalize by means of defining resources. More importantly still, exemplification appears to encourage students to opt for chains of references in which ideas are loosely strung together, enforcing a linear, associative structuring rather than building taxonomies.

[21] There exist different types of <u>tour operators</u>- **such as** 'niche tour operators', who
      specialize in certain destinations as **for example** a region [ABE_Marketing]

[22] (compound options) and options on swaps (swaptions). <u>Compound options</u>,
      for instance, appear in <u>four basic forms</u>: call on a call, call on a put, put on
      a call and put on a put. [ABE_Finance]

The virtual absence of hierarchical structures in exemplifying chains of
reference may also point to another task-related requirement. The SP is to
show students' ability to reason. Witness the following corpus examples:

[23] sponsors, suppliers and employees. <u>Secondary stakeholders</u> are, **for exam-
      ple**, the host community and media. <u>In addition</u>, the external environment
      [ABE_Marketing]

[24] <u>The terms</u> have also been used to invoke a variety of associated concepts. **For
      instance**, <u>exploration</u> has been linked to radical innovation, market expan-
      sion [ABE_Finance]

Of course, the student writers cannot be assumed to construct a discursive
argument in the examples above. Contrasting different types of stakehold-
ers on the basis of exemplification is conceptually not very challenging.
And yet, while still remaining descriptive on the surface, the students show
initial signs of truly elaborating rather than simply naming a given term.

4.3 Technicalizing by means of explaining

The corpus analysis revealed that the top five most frequently used code
glosses in this category are *means that*, *i.e.*, *explain*, *namely* and *refers to*.
By and large, the usage patterns retrieved are fairly consistent with those
previously identified. In general, it seems that students perceive of the reper-
toire of discourse cues available to them as alternative modes of construing
technicality, while being largely unaware of the more subtle differences be-
tween them. In what follows, I will first briefly comment on the established
patterns and subsequently pinpoint the causes for variation between them.

In explaining a given term, students also establish chains of reference in
which the phenomenon in question is first named and only subsequently
explained more accurately, frequently involving attribution (see examples
[25] and [26]).

[25] reduce their <u>carbon footprint</u>, **i.e.**, "the total greenhouse gas emissions caused
      directly and indirectly [ABE_Business]

> [26]   The term <u>mass tourism</u> was born. <u>Mass tourism</u> **is characterized by** "short-
> term travel of non-residents [ABE_Economics]

On the level of taxonomies, the effects of both superordination ([27] and
[28]) and composition taxonomy ([29] and [30]) are comparable to those
identified for elaboration.

> [27]   Methods and techniques of traffickers [= section heading] Ways of recruit-
> ment [= subsection heading] <u>Trafficking</u> **is characterized by** different recruit-
> ment methods which [ABE_Business]

> [28]   Marketing ethics and consumer behavior [= section heading] <u>Marketing eth-
> ics</u> **refers to** the moral principles behind the operation [ABE_Marketing]

> [29]   possible <u>identity shifts</u>. <u>One group</u> of the returned expatriates is **classified as**
> "<u>identity shifters</u>" which can be explained through their exposure [ABE_Eco-
> nomics]

> [30]   consumer manipulation <u>in at least four domains</u>. <u>The first field</u> **refers to** food
> products, where, for instance, manufacturers [ABE_Business]

The two modes of expressing technicality are also consistent with regard
to the following usage pattern:

> [31]   I shall briefly describe the idea of fair trade. <u>Then</u> I shall **explain** and discuss
> the impact of the social, economic [ABE_Business]

> [32]   CSR measures at COMPANY. <u>In a first step</u>, I shall **explain** what drives
> companies to engage in CSR [ABE_Business]

Just like the verb *to define*, *to explain* is not used as a reporting verb either.
Instead, it tends to function as a gloss in the strict sense of a metatextual
comment (witness the co-occurrence with frame markers). Once more, the
business students are certainly aware of genre conventions and assessment
criteria, which, as mentioned in Section 3.1, include presenting an academic
argument on the basis of reasoning.

> [33]   characteristic is the <u>oligopoly market situation</u> which **means that** the market
> is dominated by a few companies that fight over market [ABE_Economics]

> [34]   <u>developing countries</u> and has not changed after independence. Furthermore,
> <u>these countries</u> are **characterized** by top-down management with "authoritar-
> ian and paternalistic [ABE_Business]

As these examples indicate, students have their ways of responding to the
requirements laid down for SP writing. They demonstrate their understand-

ing of the concept 'oligopoly market situation' by providing an explanation using their own words rather than relying on attribution. It remains to be seen, however, whether or not they do so as a result of the nature of the SP "in which writers want to show their instructor what they have read (and hence what they know), but what they think is of minor importance for their paper" (Gruber 2004: 54). While this compliance may well be linked to the SP's main purpose of accreditation, it may also point to the absence of more assertive writer identities (Sing 2015). Alternatively, both factors could be related to the institutional setting and viewed as the outcome of localized forms of learning. Prior to addressing this important point, I will briefly wrap up the discussion of the results.

Centring on the notion of technicality and relating it to Hyland's (2005) interpersonal model of academic writing, the present study conceived of technicalizing as a two-stage process, involving the naming of the phenomenon concerned as well as integrating it into a field of knowledge. The corpus analysis revealed that student writers use a number of metadiscoursal devices, so-called code glosses, in order to flag the technical nature of their writing. While it is understood that writers technicalize in a variety of ways and using a range of linguistic resources other than the ones examined here, the corpus analysis succeeded in retrieving highly relevant usage patterns that may be fed back into teaching. Cases in point are the different uses and functions of the chains of reference established by the student writers when elaborating, or trying to elaborate, on new terminology. The addition *trying to* is especially noteworthy as the preceding discussion may have suggested that the usage patterns identified are taken at face value. Whether or not the student writers intend to define, explain or exemplify when using the respective metadiscoursal devices is a moot point. Owing to the explorative character of the present study, the issue of congruence is an important corollary of the analysis. Further empirical work, possibly involving focus group interviews with the students concerned, is required to establish if the discourse action and the discourse label used to denote the action can, with some justification, be argued to converge.

5 Conclusions: Meeting conceptual challenges

At the outset, the article invoked the challenges of contemporary ESP settings in view of the major changes in HE across Europe. Many of the challenges – linguistic, cultural and conceptual – have regularly dominated specific-purpose instruction. This ongoing process can be accounted for by a widening of the gap between ESP research and practice. To date, teaching and materials development are surprisingly little informed by state-of-the-art research, even in those cases which would lend themselves to direct teaching applications.

What is more, needs analysis retains a strong foothold in more traditionally inclined ESP settings, assuming that once the area and nature of students' difficulties are identified, they can be more easily assisted in mastering the language-based skills or tasks required. In view of the growing complexity of HE, ESP programmes are, however, frequently forced to cater to vastly different literacy demands, spanning the workplace, academia and the corporate world. What is needed is a stronger commitment to the relevance of context in ESP, including an acknowledgement of the situatedness of learning.

Using the field knowledge of an ethnographic researcher, I will now turn to discussing several pedagogical implications for ESP writing instruction. The inconsistency between language and content typical of ESP settings becomes manifest in the writing task as the distinction between 'carrier content' and 'real content', which is central to ESP. In specific-purpose instruction, teaching activities are essentially context-based, implying that content knowledge is used to teach and practise specific language. In the ESP setting at hand, the business topics of the SP are not the aim of the task; rather, these topics constitute the carrier content for which written academic English is the real content, i.e., the explicit teaching target. This is, however, not the only reason why the SP is a genuine showcase for addressing conceptual challenges in ESP writing instruction.

What is more, students seem to struggle with the writing task itself. Given the absence of any formal writing instruction prior to producing the assignment, students come equipped with rather common (mis-)conceptions about academic writing, regarding it as a monolithic entity. Setting the SP as a simple assignment further misconstrues writing as a product. Instead,

it would be useful to foreground the processual character of writing, for example, in setting up a compound assignment, in which individual subgenres are trained separately. In this manner, the different resources that can be used to technicalize in writing could be singled out, paying particular attention to structural issues such as composition taxonomy.

It is on the level of categorization rather than language that students are in need of assistance. Despite imperfections in grammar and style, students' actual conceptual problem lies in taxomizing. As the findings suggest, students rely heavily on the structure already provided to them in the sources they use. Only few student writers have managed to reorganize the material covered in an original way. In view of the patterns identified, the large majority of students seem to address this requirement through retaining the superordination taxonomy. Bold as it may seem, such an assertion is fully supported by the contextual information available to the compiler-cum-analyst of the ABE corpus. On the basis of this inside knowledge, such a student response is hardly surprising. On the contrary, it is a conditioned reflex acquired in a learning environment that rewards learning strategies such as rote learning, which is then simply transferred to writing. The business students at hand emulate what they consider expert models and seek to apply these to their own writing.

This begs the question as to what type of expertise these students are aspiring to. Being susceptible to a technocratic view of the experiential world, it seems likely that these expert genres are realized by text types that are dramatically different from the SP. Thus the discrepancy between the educational genre, the training text used for writing practice and the professional genres used in the workplace could not be more apparent. If assignment writing requires students to "fictionalize" (Pohl 2009), this is particularly valid for this ESP setting. Using the SP with its cultural baggage as a training text only serves to alienate students from the professional target genres. With a view to developing their writing skills as business students, these professional genres need to be firmly anchored in the relevant curricula. Although policy makers pay lip service to the importance of language learning, formal writing instruction in particular has been increasingly marginalized in curricular development. It seems to be the case that specific-purpose instruction is clearly seen as training rather than an integral part of language education.

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Coverage and development of academic vocabulary in assessment texts in English Medium Instruction[1]

Abstract

English: This paper is centred in the context of English Medium Instruction (EMI) and is primarily concerned with advanced students' productive knowledge of English academic vocabulary, widely regarded as a crucial dimension of successful academic communication. The study problematizes the claim that EMI is beneficial for students' development of academic vocabulary knowledge. The investigative context is a technical university in Sweden where all degree programmes at graduate level use English as the medium of instruction. The corpus data include texts (n=80, approx. 720,000 words) produced by Master of Science students in their first and second year of study, written by home and international students. The study, using the Academic Vocabulary List (Gardner/Davis 2014), sets out to answer three research questions relating to knowledge and development of academic vocabulary in EMI: 1. What is the lexical coverage of advanced (master's) level student writing, i.e., what proportion of words in students' texts is academic? 2. Are home students and international students (all of whom have English as a foreign language) comparable in terms of their productive academic vocabulary knowledge? 3. Does students' productive knowledge of academic words appear to develop during their studies? The results of the investigation can be summarized as follows: In the corpus as a whole, academic vocabulary items account for approximately 20% of all tokens. This figure is considerably higher than that found in many earlier studies. There are no significant differences between home and international students in any of the measures of vocabulary used (pertaining to lexical sophistication and diversity). Finally, the findings regarding lexical development across years of study are somewhat mixed; however, the overall picture presented by the various measures is one of significant but very modest gains in some areas and none in others. These

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findings call into question the actual effectiveness of EMI for academic vocabulary development. The overall contribution of the paper is an important step towards a more comprehensive understanding of what expectations we may reasonably have of the development of English language competency in EMI.

German: Die Fähigkeit, wissenschaftlichen Wortschatz aktiv zu gebrauchen, gilt als eine entscheidende Komponente erfolgreicher Wissenschaftskommunikation. Dabei herrscht die Annahme vor, dass English Medium Instruction (EMI) einen positiven Einfluss auf die Entwicklung des wissenschaftlichen Wortschatzes Studierender habe. Im vorliegenden Beitrag werden die Ergebnisse einer Studie vorgestellt, die diese Annahme kritisch beleuchtet. Die Studie wurde an einer Technischen Universität in Schweden durchgeführt, an der alle Masterstudiengänge auf Englisch unterrichtet werden. Das Korpus umfasst Texte (n=80, ca. 720.000 Wörter), die von schwedischen und internationalen Master-of-Science-Studierenden in ihrem ersten und zweiten Studienjahr verfasst wurden. Die Studie, für die die Academic Vocabulary List (Gardner/Davis 2014) genutzt wurde, geht drei Forschungsfragen nach, in deren Mittelpunkt der Umfang und die Entwicklung wissenschaftlichen Wortschatzes in EMI-Kontexten stehen: 1. In welchem Umfang beherrschen fortgeschrittene Masterstudierende den wissenschaftlichen Wortschatz, d. h., welcher Anteil der Wörter in den studentischen Texten ist wissenschaftlich? 2. Sind schwedische und internationale Studierende mit Englisch als L2 vergleichbar in ihrer Kompetenz, wissenschaftlichen Wortschatz aktiv zu gebrauchen? 3. Entwickelt sich dieser Wortschatz während des Studiums erkennbar weiter? Die Ergebnisse der Untersuchung lassen sich wie folgt zusammenfassen: Im Korpus hat wissenschaftliches Vokabular einen Anteil von ungefähr 20 % aller Tokens und damit einen deutlich höheren Anteil, als in vielen früheren Studien nachgewiesen werden konnte. Im Gebrauch wissenschaftlichen Wortschatzes (sowohl hinsichtlich dessen lexikalischen Anspruchs als auch dessen Differenziertheit) lassen sich zwischen schwedischen und internationalen Studierenden keine signifikanten Unterschiede feststellen. Die Befunde zur Entwicklung des Wortschatzes während des Untersuchungszeitraums sind ambivalent; insgesamt lässt sich jedoch ein moderater Zugewinn in einigen Bereichen feststellen, wohingegen in anderen Bereichen kein Fortschritt zu verzeichnen ist. Diese Ergebnisse geben Anlass zu berechtigten Zweifeln an der Annahme, dass sich mit EMI Wortschatz effizient erweitern lasse. Die Studie leistet somit einen wichtigen Beitrag zur realistischeren Einschätzung der Möglichkeiten, die EMI für die Förderung der englischen Sprachkompetenz bietet.

1 Introduction

The broader context of this study of academic vocabulary knowledge is English Medium Instruction (EMI). For the purposes of this paper, this may be defined as the deliberate use of English (typically as a result of an official educational policy) to engage students communicatively in academic study, i.e., by asking students whose first language is not English to read, write, speak and listen in English rather than using their first language (cf. Coleman 2006; Dearden 2014). While in some contexts a distinction between EMI and Content and Language Integrated Learning (CLIL) is becoming increasingly difficult to maintain, EMI and CLIL should not be considered the same thing. The difference might be one of degree but the defining factor distinguishing the two is the extent to which students receive deliberate language education (CLIL) as opposed to mere immersion (EMI) (Marsh 2005; Lasagabaster 2008; Gustafsson et al. 2011; Gustafsson/Jacobs 2013).

EMI is a "rapidly growing global phenomenon" (Dearden 2014: 2) and a number of different "drivers of the Englishization" (Coleman 2006: 4) of higher education exist. In this respect, there is a widespread assumption articulated to differing extents by the various stakeholders that students enhance their academic as well as general English competency as a result of studying in EMI contexts. However, this is only an assumption (like many other assumptions about EMI reviewed by Dearden), and it has yet to be confirmed by empirical research. Dearden (2014: 2) highlights the fact that "we are quite some way from a 'global' understanding" of EMI and notes that there is an "urgent need for a research-driven approach […] which measures the complex processes involved in EMI", for example, the conditions for "the acquisition of English proficiency". In other words, research that confirms, refutes, or at least problematizes the claim that EMI is beneficial for students' development of English language skills is called for.

In this paper, we are concerned with a single but crucial dimension of English proficiency development in EMI contexts, namely academic vocabulary knowledge, and, more specifically, students' productive knowledge of academic words as reflected in their writing. Our starting point is the widely held claim (see, e.g., Stæhr 2008) that there is a correlation between knowing many words, i.e., having good vocabulary knowledge, and overall communicative competence. Milton (2010: 212) notes that "vocabulary

knowledge is key to both comprehension and communicative ability", and Laufer & Nation (1999: 34) talk of the "enabling" function of vocabulary vis-à-vis other dimensions of communication. In academic discourse, the same kind of correlation obtains between academic words and general academic literacy (see, e.g., Corson 1997; Coxhead 2000; Milton 2010). These correlations are supported by research indicating that understanding virtually all the input words is fundamental to comprehension in any kind of communicative situation (Coady/Huckin 1997; Schmitt 2000; Nation 2001; Bogaards/Laufer 2004). It has been suggested that in excess of 95% of the running words must be understood for "adequate comprehension" to be possible in connection with reading and listening, and for optimal comprehension as much as 98% of the words should be known (Nation 2001; 2006). It seems evident that, if a large vocabulary is needed for reading comprehension, it must be of at least equal importance for the productive assessment tasks in an EMI environment.

In this respect, it is reasonable to ask what might actually be expected of students in EMI in terms of academic vocabulary knowledge. Numerous methods of measuring vocabulary knowledge exist, including self-assessment scales and definition tasks among other measures of receptive knowledge. However, in most EMI settings, students need not only to *understand* English in lectures, textbooks, etc., but also to *produce* it in assessment tasks, so their productive vocabulary knowledge is of interest. Our first research question is therefore:

1. What is the lexical coverage of academic vocabulary in student writing, i.e., what proportion of words in students' texts is academic?

A second perspective we want to explore concerning students' productive knowledge of academic words relates to the Englishization of higher education as a result of globalization/student mobility. One effect of globalization and the concomitant proliferation of EMI has been a rise in EMI outside of the traditionally English-speaking world, in the "Expanding Circle" (Kachru 1992).[2] In Sweden, where this study is set, as in many other

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2 Kachru (1992) identifies three English "Circles". The Inner Circle is represented by countries like the United Kingdom, USA, Canada, Australia, and New Zeeland, i.e., countries where English is the primary language and the native language of most people. In Outer Circle countries (such as Singapore, India,

Expanding Circle countries, a result has been that significant numbers of 'international' students (students domiciled outside Sweden) are now studying alongside 'home' students (domiciled in Sweden with an almost 100% Swedish language background and English as their first foreign language at school), creating an international mix and a multilingual learning environment in what used to be a linguistically relatively homogenous teaching/learning environment. The (English) language demands placed on international students and home students in the EMI classroom are naturally the same, but our overall knowledge of how this more diverse group of students actually performs linguistically vis-à-vis home students is very limited.

It is easy to problematize international students and find isolated and categorical statements that speak in general negative terms about international students' shortcomings with regard to English proficiency. For example, in response to a survey about attitudes towards English in higher education administered to university teachers in Sweden (reported in Pecorari et al. 2011), one teacher offered the following comment:

> "English texts, especially academic English texts that we use, are demanding for students. The same is true for writing in English. The problem is especially pronounced for our foreign students who are particularly challenged to write acceptable English."

However, with very few exceptions (see, e.g., Jochems et al. 1996), the research available concerning the overall academic performance and linguistic ability of international students in relation to home students is restricted to Inner Circle countries (see, e.g., Warwick 2006; Carroll/Ryan 2005; Morrison et al. 2005), meaning that our knowledge of how international students compare to home students in Expanding- and Outer Circle countries is almost non-existent.

A first step towards a more comprehensive understanding of the relationship between home students and international students as regards their

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Pakistan, Bangladesh, Nigeria, and Kenya) English is not the native language but firmly established as the *lingua franca* in most areas of society and typically has the status of "official language". Finally, in countries in the Expanding Circle (the Nordic countries are a case in point), although often widely used for the purpose of international communication (e.g., in much business communication), English is not an official language or the language used in government.

English proficiency is to establish whether home students and international students in EMI environments have equally sized academic English vocabularies, clearly a pertinent investigation given the centrality of academic words to comprehension. This leads us to pose the second of our three research questions:

2. Are home students and international students (all L2 users of English) comparable in terms of their productive vocabulary knowledge?

Finally, this paper directly addresses the supposition that EMI is conducive to developing students' English language skills, focusing on vocabulary gains. There is support in the literature that incidental exposure to English vocabulary in study contexts does lead to positive lexical gains over time (Huckin/Coady 1997; Laufer/Hulstijn 2001); however, the vast majority of this research has focused on learners' receptive knowledge of vocabulary and there is a dearth of research concerned with students' productive lexical knowledge (cf. Durrant 2014). In addition, the bulk of the literature on vocabulary acquisition, and indeed second-language acquisition generally, has focused on learners who are much less advanced than those who are in a position to undertake study at university through the medium of their L2.

Laufer (1994), the most widely cited study on productive vocabulary development available, looked at "changes in the productive lexicon of advanced second language learners' writing over a period of one academic year" (1994: 21) using a construct she calls "lexical quality". Focusing on writing compositions produced in a controlled environment, and by drawing on two basic types of analytical measures, a frequency profile and a Type-Token Ratio, Laufer found no significant lexical gains with regard to general high-frequency words, but there were significant gains for words from the University Word List (Xue/Nation 1984), i.e., Laufer's measure used for academic words, and for words of lower frequency (words beyond the 2,000 most common). With respect to lexical variation, as measured by the Type-Token Ratio, no significant longitudinal gains were recorded for any type of lexis.

Additional longitudinal perspectives on the development of productive lexical knowledge have been provided by more recent research from Australia. This research comes to a different conclusion. Knoch et al. (2015) investigated to what extent the writing of English L2 students developed

positively over three years. Development was measured by looking at a set of discourse-analytic measures, among which was lexical complexity, operationalized with reference to the proportion of words from the Academic Word List (Coxhead 2000), lexical sophistication and lexical richness. For all three measures of lexical complexity, the differences between the first and the second writing collection point fell well short of statistical significance, suggesting that there is little support for the notion that studying in an EMI context has a significantly positive effect on students' productive knowledge of academic lexis.

The setting provided by Laufer's study as well as the study reported by Knoch et al. is in many ways different from EMI contexts in Europe outside Great Britain and Ireland and elsewhere today. It is noteworthy, for example, that the participants in Laufer's investigation were all language learners and therefore possibly 'primed' to attend to linguistic matters like vocabulary, unlike the vast majority of EMI students enrolled in subject courses or degree programmes where there is little or no attention devoted to language *per se*. In addition, it seems unfair to compare the EMI situation of English L2 students studying in English Inner Circle countries with the situation in Expanding- or Outer Circle countries; the complete immersion in an Inner Circle environment presumably affords many more opportunities for engagement with English vocabulary (academic or otherwise). The issue of lexical development in the EMI context facing a great number of students in Expanding- or Outer Circle countries must therefore be investigated independently of such research in Inner Circle countries. Thus, the third research question that this study asks is:

3. Does students' productive knowledge of academic words appear to develop during their studies in an EMI context?

2 Data collection and methods

This section describes the context of the investigation, the data collection and the analytic procedures adopted.

2.1 Study context

Our study is set at a prestigious technical university in Sweden where policy stipulates that all degree programmes at master's level use English as the medium of instruction. The university has approximately 11,000 students, 2,400 of whom are enrolled in one of 41 master's programmes. While we have no reliable record of the first language of the students, the majority of the home students are Swedish L1 speakers and, as far as we have been able to ascertain, none of the international students' whose data were included were domiciled in an English L1 country.

2.2 Data

The data for this study is a small student text corpus made up of 80 texts in English (totalling just over 720,000 running words) written by Master of Science (MSc) students from four different disciplines (applied physics, chemical engineering, chemistry, and mechanical engineering) and from the first and second year of study at the master's level. A total of 30 texts, comprising approximately 115,000 running words, were primarily technical- or mini-project reports written as part of students' course work at some point during the first year. The 50 second-year texts, comprising approximately 605,000 words, were full-length master's theses written during the last term of a two-year study programme. At this university, master's theses are generally reports of project work. Thus, although there is greater variation in the first-year corpus in terms of the assignment set, the two sub-corpora can be regarded as broadly similar in terms of text type.

Because virtually all written course work at this university is done in groups of two or more students, we were unable to obtain first-year and second-year texts from the same author or team of authors. Therefore, 'development' of academic vocabulary refers to change across levels of study rather than change in individual students. In all cases, all authors were either Swedish or international; texts with a mixed authorship with regard to national origin were excluded from the sample in order to enable the comparison between Swedish and international MSc students regarding their productive knowledge of English academic vocabulary.

2.3 Analytical procedure

To address the three research questions, we used several measurements, following Milton (2009) in distinguishing between two basic constructs: lexical sophistication and lexical diversity. The former refers to the extent to which more or less common words are used: in Milton's example, the difference between *the cat sat on the mat* and *the feline reposed on the antique Persian rug* (2009: 131). The latter refers to the extent to which the same or different words are used.

One measure of lexical sophistication is the presence of academic vocabulary. Over the years, several descriptions and compilations of academic vocabulary have been developed (see Gardner/Davies 2014; and Charles/Pecorari 2016: 109 ff. for a discussion). Until recently, the most widely used list, for both teaching and research, has been Coxhead's (2000) Academic Word List (AWL). As a result of this wide use, a number of limitations of the AWL have been identified,[3] and these limitations have provided the impetus for the newer Academic Vocabulary List (Gardner/Davies 2014); this list is adopted as a basis for what counts as academic vocabulary in the present study.[4]

The AVL was developed from a 120-million-word academic sub-corpus (featuring texts with a heavy emphasis on journal articles from across nine different academic disciplines) taken from the 425-million-word Corpus of Contemporary American English (COCA 2015). Rather than using an existing word list to exclude general vocabulary (the way Coxhead used the General Service List by West 1953), a criterion for relative frequencies was developed, such that words were considered to be part of an academic core if they occurred in the academic corpus with a frequency 50% greater than in the general, non-academic reference corpus (the non-academic portion of COCA). Words needed to be represented at or above a threshold

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3 It is not within the scope of this article to criticize the AWL, but Hyland & Tse (2007) and Gardner & Davies (2014) both offer a comprehensive account of the perceived problems with the AWL.

4 The pedagogic utility of lists of general academic vocabulary is widely accepted and Gardner & Davies (2014: 2) note several areas in which such lists are purposeful (see also Schmitt/Schmitt 2014). It should be stressed, however, that pedagogic utility is not a central concern in this study (though see Section 6 where various didactic implications are discussed).

frequency in seven of the nine subject areas, and both a criterion for dispersion and relative frequencies were implemented to exclude words which have a particular affinity with one or a few subject areas (thus allowing for a distinction to be made between core/general academic vocabulary and subject-specific/technical vocabulary). As a result of this process, the AVL consists of 3,015 words (lemmas) that occur across a wide range of academic disciplinary areas more frequently than they do in general discourse. Table 1 includes examples of words from the AVL.

Table 1: Most and least frequent words (lemmas) in the Academic Vocabulary List

AVL words 1–10		AVL words 3006–3015	
study n.	however adv.	unusable adj.	imprimatur n.
group n.	research n.	unpalatable. adj.	coherently adv.
system n.	level n.	causally adv.	component n.
social adj.	result n.	prioritization n.	tangential adj.
provide v.	include v.	overemphasis n.	relevancy n.

Because the AVL contains words that are more common in academic than general discourse, they are in that sense 'advanced' vocabulary. Two measures of lexical sophistication used in the present study were based on the AVL: the proportion of coverage afforded by the AVL, and the number of types from the AVL. However, AVL items vary greatly in frequency, and so not all are equally 'advanced'. For example, the most frequent word on the AVL is *study*, and it also is among the first 1,000 general words by frequency. We thus distinguish between the first 500 words on the AVL and the rest of the list.

The second construct we were interested in was lexical diversity. One of the oldest (Johnson 1939; Mann 1944) and most common measures of lexical diversity is the Type-Token Ratio (TTR). However, the TTR has limitations (Malvern/Richards 2013; Vermeer 2000), including the fact that it is sensitive to text length (Holmes 1994; Baker 2006). While there are no entirely unproblematic measures of lexical diversity, the Guiraud Index (Guiraud 1954) and the Advanced Guiraud (Daller et al. 2003) compensate for the TTR's sensitivity to length and perform more reliably, and were thus adopted here. The former is calculated by dividing the number of types in a text by the square

root of the number of tokens, and the latter uses the same calculation after very common words have been excluded (in this case, the first thousand most frequent words in the BNC and COCA corpora, as provided by Paul Nation's Range files (Range 2015)). Because the advanced measure eliminates the most frequent types, there is a basis for considering it to be an indicator of lexical sophistication as well as diversity, as Daller & Xue (2009) do. Because there is no established baseline for these measures in texts of the type analysed here, they are primarily of value in this study in the two between-group comparisons.

Once the data had been collected, the texts were cleaned[5], converted into text files and processed using AntWordProfiler (Anthony 2015) to determine the frequency of AVL words. In vocabulary profiling (see, e.g., Laufer 1994; Nation 2006) the number of words (tokens) in the texts is counted and the words' distribution relative to pre-established lists is calculated. In this case we used two lists: one list consisting of the 500 most frequent types in the AVL (called AVL 500 here), and one comprising the remaining less frequent lemmas from the AVL (AVL 501+).

Two additional procedures were needed to enable a comparison of the present findings with the Gardner & Davies (2014) study (to the best of our knowledge, the only study based on the AVL to date). Unlike the COCA academic sub-corpus used in that study, our corpus is untagged, meaning that it does not distinguish between words like *study*, n., which is on the AVL, and *study*, v., which is not. To estimate the effect of this difference, a manual search was done among the first 300 words of the AVL for candidates for overcounting (such as *study,* v.). A second procedural issue is that the profiling tools used in the study may have idiosyncrasies which cause them to perform somewhat differently. To estimate the extent of this effect, samples of each corpus text were submitted individually to the lexical profiling tool on Mark Davies' Word and Phrase website (Davies 2015) which analyses the first 1,000 words from each text.

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5   The following features were removed from the texts: extensive visual information in the form of tables and figures (table and figure captions were left in); all equations/formulae and/or parts thereof, unless some element featured as a syntactic constituent in which case it was treated as technical vocabulary; finally, all tables of contents, reference sections and acknowledgement sections were also removed.

Finally, where relevant, SPSS was used to test the significance of between-group differences. Because a random distribution could not be assumed, a non-parametric test was appropriate (Turner 2014). The independent samples Kruskal-Wallis test was used, and differences were considered significant when p < .05.

3 Results

The research questions guiding this investigation related to 1) academic vocabulary coverage; 2) comparisons between home and international students; and 3) comparisons between first-year and second-year texts.

The results of the AVL profiling (Fig. 1), relating to the lexical sophistication of the texts, showed that 19.3% of the tokens in the corpus are academic words. This is a considerably higher proportion of academic vocabulary than previous studies have shown. The most relevant earlier study is Gardner & Davies (2014), who found that the AVL gave coverage of the academic sections of the COCA and BNC in the vicinity of 14%. To estimate the extent to which procedures may have contributed to these different results, two additional analyses were conducted.
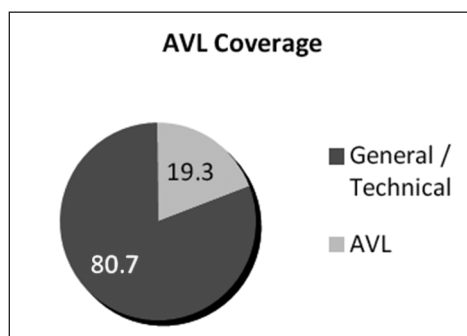
Fig. 1: Academic vocabulary coverage in the MSc writing corpus

To account for the effect of the untagged corpus, a manual search was done among the first 300 words of the AVL for candidates for overcounting (such as *study,* v.). A total of 2,028 such forms were identified, or approximately 1.4% of the total corpus size. The effect of the untagged corpus is therefore real but relatively modest. When the first 1,000 words of each text were

submitted to the Word and Phrase profiling tool (Davies 2015), an average of 23% of the tokens came from the AVL. It is therefore reasonable to conclude that academic words do in fact make up approximately 20% of our corpus and that procedural issues play a relatively small role. Other explanations for the difference between these findings and earlier studies are taken up in Section 4 below.

A further measure of lexical sophistication was the proportion of infrequent AVL words. In the COCA academic corpus, the 500 most frequent of the 3,015 AVL types (i.e., 17%) account for 74% of all of AVL tokens. The average number of tokens representing each type in the 1–500 list was 14 times greater than on the 501+ list (22,599 versus 1,480) (see Fig. 2). As Figure 2 shows, the figures for the present corpus are comparable: 70.5% of the AVL tokens come from the first 500 words of the AVL, with only 29.5% coming from the remainder of the list, and the average type on the 1–500 list had nearly 13 times as many tokens as the average type on the 501+ list.
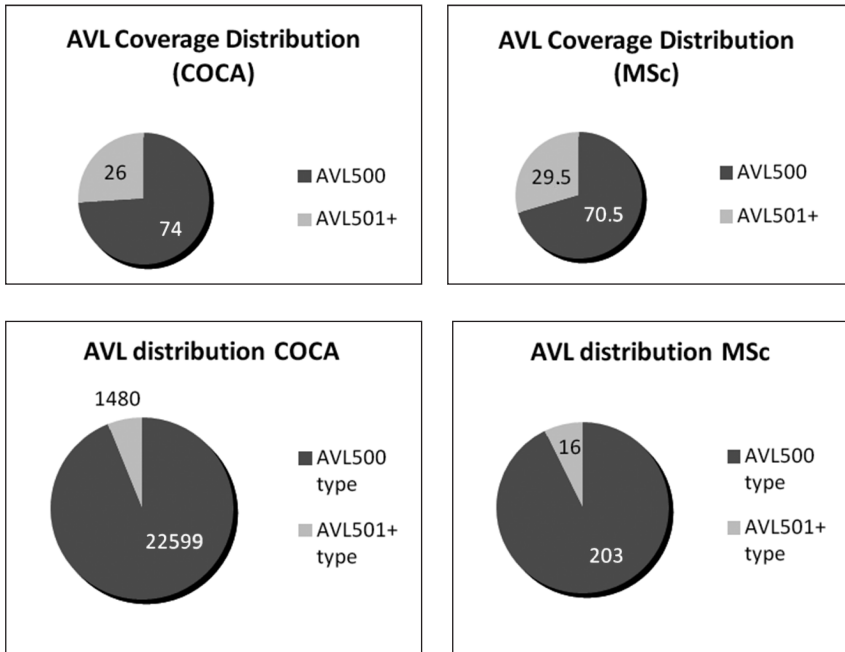
Fig. 2: Academic vocabulary diversity and sophistication in the COCA and MSc writing corpora

The second research question addressed the relative productive vocabulary of native Swedish and international students. Given that large numbers of international students are a relatively recent phenomenon in Swedish university classrooms, there is a need to understand whether the English skills of this new constituency permit them to participate in EMI on the same terms as their local counterparts. Measures for lexical sophistication and lexical diversity were therefore considered for the two groups separately.

As Table 2 shows, for all measures, the differences were small, and indeed none of them was statistically significant. This measure thus suggests, encouragingly, that this relatively new student group is able to take on EMI education on a level playing field with their Swedish peers, at least when assessed on the basis of the productive vocabulary knowledge.

Table 2: AVL distribution for home versus international students

Measure	Overall	Home	International
AVL coverage (entire list)	19.3%	18.9%	19.9%
AVL 500 coverage	13.6%	13.2%	14.1%
AVL 501+ coverage	5.74%	5.7%	5.8%
AVL Types per 100 words	5.69	5.88	5.40
AVL 500 types per 100 words	3.60	3.76	3.37
AVL 501+ types per 100 words	2.08	2.12	2.03
Guiraud Index	14.2	14.01	14.48
Advanced Guiraud	8.68	8.33	9.20

Since language development is one of the reasons offered for implementing EMI, it would be reasonable to think that students' vocabulary – particularly academic vocabulary – develops during their course of study. The third research question was therefore whether the second-year texts showed greater lexical sophistication and variation than the first-year texts.

The measures of lexical sophistication failed to reflect gains between the two groups. As Table 3 shows, a small increase was found for the overall coverage afforded by the AVL, from 19.0% to 19.5%. On closer investigation, this increase is seen to be driven by increased usage of the 500 most frequent AVL items, from 12.9% to 13.9%, which was in turn offset by a

slight decrease in coverage from the remainder of the list. However, none of these changes were significant.

The normalized frequencies of types from the entire AVL, the most frequent 500 items and the less frequent items, all showed a significant decrease in the second year (p=.000). This (in combination with the change in the Guiraud Index and Advanced Guiraud, see below) is an indication that the greater diversity of lexis came either from general (i.e., non-academic) vocabulary in the less frequent range, and/or from technical terminology, rather than increased usage of general academic vocabulary.

In terms of variation, both the Guiraud Index and the Advanced Guiraud showed a modest but significant (p=.000) trend toward greater lexical variation in the year-two texts (see Table 3). Because it excludes the first thousand most commonly used words, the Advanced Guiraud also reflects lexical sophistication.

Table 3: AVL distribution in first- versus second-year texts

Measure	Overall	Year 1	Year 2
AVL coverage (entire list)	19.3%	19.0%	19.5%
AVL 500 coverage	13.6%	12.9%	13.9%
AVL 501+ coverage	5.74%	6.0%	5.6%
AVL Types per 100 words	5.69	7.40	4.73
AVL 500 types per 100 words	3.60	4.85	2.90
AVL 501+ types per 100 words	2.08	2.55	1.82
Guiraud Index	14.2	12.96	14.90
Advanced Guiraud	8.68	7.46	9.37

4 Discussion

Section 3 presented findings that were in some ways unexpected, and thus merit further discussion.

4.1 Academic vocabulary coverage

The finding that approximately 20% of this corpus consisted of academic words contrasts strikingly with the much lower figures in previous studies. For example, Coxhead (2000) and Hyland & Tse (2007) found that

the Academic Word List afforded about 10% coverage of their respective corpora. A 20%-figure was approached only in Chung & Nation's (2003) study concerning Applied Linguistics textbooks. As noted above, methodology accounts for only a minor part of the difference, and it is interesting to speculate as to what may account for the rest.

One likely explanation is the composition of the corpus; the proportion of academic vocabulary varies according to text type (Chung/Nation 2003; Li/Qian 2010) and academic discipline (Chung/Nation 2003; Coxhead 2000; Hyland/Tse 2007). However, no other study based on a fully comparable corpus exists. Engineering was one of the fields investigated by Hyland & Tse (2007) and Mudraya (2006), but the former corpus contained a mix of text types, while the latter consisted of textbooks and provided no overall academic vocabulary coverage figure. Thus, while it is probable that academic subject area and text type explain some of the difference between the present findings and earlier ones, it is not possible to ascertain the extent of their influence.

A second explanation lies in the use here of the Gardner & Davies (2014) AVL, while previous investigations have employed Coxhead's (2000) AWL. The AVL's ability to represent core academic vocabulary better than the AWL has been demonstrated empirically. Gardner & Davies (2014) profiled the academic sections of the BNC and COCA with both the AWL and the AVL, using word families to enable a comparison with the AWL, and found that the top AVL 570 word families provided nearly twice the coverage with respect to the AWL (13.8% versus 7.2% in COCA; 13.7% versus 6.9% in the BNC). In this light, the fact that the present study found approximately twice as much academic vocabulary as earlier studies is unsurprising; indeed an investigation of the present MSc writing corpus (with some modifications) found that the AWL provided just under 10% coverage (Gustafsson/ Malmström 2013).

A further question is why AVL coverage is higher for the MSc writing corpus than the academic portions of COCA and the BNC. Here too, corpus composition undoubtedly plays a role. In addition, there is likely to be an effect due to an aspect of Gardner & Davies' (2014) methodology. While the AVL (unlike the AWL) is not based on word families, their figure of approximately 14% coverage comes from a case study which, in order to permit comparisons with the AWL, used part of the AVL grouped

into 570 word families. The findings of these studies are therefore not fully comparable, and because of the lack to date of studies using the AVL, further research is needed.

4.2 Home versus international students

There is a fairly commonplace belief on the part of many Swedish university teachers that international students have lower English proficiency than home students. This perception is frequently offered almost apologetically; there is a widespread perception that international students enrich the Swedish university classroom and that their presence is therefore desirable, but that achieving an international student presence requires the use of English as an academic *lingua franca*, and while this puts all participants at a disadvantage, those who have gone through the Swedish educational system, which emphasizes English, are better able to cope than most incoming mobile international students. It is not clear how to explain the disparity between this belief and the findings of the present study.

A possible explanation is that teacher perceptions are based less on reality and more on an awareness of differences. More specifically, the English used by Swedish university students is familiar to their teachers, and the non-standard transfer features that characterize it are unmarked, while those of students with other origins are more salient. Another possibility, which indeed is applicable to all of the findings reported here, is that students recruited to the prestigious university where this study was conducted are a relatively homogeneous, skilled group of English users. Were the study to be replicated at another institution, between-group differences might be identified. It is also possible that these groups may differ in English proficiency, but that the differences manifest themselves in other domains than productive academic vocabulary (i.e., in other domains of oral and written communication). Future research would be required to establish the extent to which any of these explanations is a factor.

4.3 Vocabulary development over time

One of the intended benefits of EMI is that it creates exposure to the language and can therefore result in incidental vocabulary acquisition. Academic vocabulary would appear to be a prime candidate for such ac-

quisition, since it is an area of language to which students can be expected to have greatest exposure in a university setting. It is therefore somewhat counterintuitive that the findings for academic vocabulary development were mixed.

One reason for this may be that even the least experienced writers in this study were highly proficient. By virtue of being deemed capable of doing postgraduate academic work through the medium of English, these students can be classed as advanced users of English, and this is additionally indicated by the fact that their texts were richly populated with academic vocabulary. As Hyltenstam & Abrahamsson (2012) note, research on very proficient L2 learners is in short supply compared with the voluminous body of second language acquisition research on learners at lower proficiency levels. However, it is reasonable to expect their learning to progress at a slower pace, simply because they have less ground to cover. In other words, there may be a phenomenon at play akin to a ceiling effect, according to which the year two texts did not show much greater lexical diversity and sophistication because the year one texts were already satisfactory in that regard.

Similarly, it may be thought that these students had relatively limited opportunities for vocabulary development. The EMI environment provides a context in which only incidental language acquisition can occur, rather than an EAP/TEFL environment where language development is the target of explicit instruction. As a result, opportunities for language learning are closely linked to *exposure* to the linguistic features that are candidates for learning. Less proficient learners have more opportunities for exposure to new forms than advanced learners, precisely because more of what they are exposed to is new. In the case of the high-register academic vocabulary that was the focus of the present investigation, the opportunities for exposure to the infrequent words decrease logarithmically, not arithmetically, once the first bands of very frequent words have been learned.

5 Conclusions

This article has reported an investigation into the academic vocabulary knowledge of students in an EMI setting. Students' knowledge of academic vocabulary is important in this context because it is essential both

for adequate comprehension of academic texts and for producing register-appropriate assessment work. As a consequence of the fact that study in the EMI environment places demands on students' receptive and productive academic vocabulary knowledge, it is an aspect of linguistic proficiency which could reasonably be expected to develop over the course of their studies. A measure of students' productive academic vocabulary is therefore a useful indicator (though by no means the only one) of two important factors: students' preparedness for academic study, and their development in English.

To the extent that the findings presented in this paper speak to preparedness, they permit an optimistic interpretation: academic vocabulary items accounted for approximately 20% of all tokens, a rather higher figure than that found in many earlier studies. Although knowledge of academic vocabulary alone cannot be interpreted as evidence that students are equal to the challenges of study through the medium of English, a more cautious claim can be made: there is no reason to believe that this cohort of students lacks an adequate knowledge of academic vocabulary.

The high level of coverage also provides support for the principles underlying the construction of the AVL. By including items which occur in academic texts more frequently than in general ones, and by excluding items which occur disproportionately frequently in some disciplines only, the AVL is designed to give a better representation of general academic vocabulary than earlier lists, and the incidence of AVL items in the present corpus provides indirect evidence that the AVL behaves the way it was intended. While this does not resolve all of the problematic aspects of the notion of an academic core vocabulary (cf. Hyland/Tse 2007), it suggests that, in circumstances where an academic vocabulary list is necessary or desirable, for pedagogical or research purposes, the AVL is the list of choice.

Perhaps more significantly, this measure of productive academic vocabulary gives no support for the idea that international students and local Swedish students differ in their abilities in English. This is reassuring given the fact that the economic and policy imperatives in Swedish higher education (and reflected elsewhere in Europe) will for the foreseeable future lead to an increase in inward student mobility.

With regard to vocabulary development between the first and the second year, evidence was limited; there were modest gains by some measures

and none by others. This is a finding of relevance given the current rapid expansion of EMI, and the twin motivations behind it. EMI is expected to be both a tool to facilitate mobility in higher education and a vehicle for improved English language skills on the part of participants but this study of academic vocabulary knowledge provides little indication that the latter ambition is realized, at least in the context under investigation.

6 Pedagogical implications

In this volume, with its focus on the pedagogical aspects of assessment, the pedagogical implications of the findings merit exploration. However, the EMI environment is complex in its pedagogical objectives. One objective of EMI is simply to enable the teaching and learning of subject matter by using English as an academic *lingua franca*. In many EMI contexts, though, an additional objective is to provide a context which facilitates students' incidental acquisition of English. The pedagogical implications of students' vocabulary knowledge and development are different for these two different objectives.

In terms of content learning, these students appear to be well equipped with a productive knowledge of academic vocabulary sufficient to complete assessment tasks (and therefore by implication with a receptive vocabulary sufficient to read academic texts). This means that teachers (provided they have similar student profiles and communication genres) can concentrate on, for instance, promoting the critical reading of the disciplinary vocabulary. From a collaborative learning perspective, peer learning can enable the further exploration of the enhanced understanding of technical vocabulary.

In the scenarios where the EMI context involves an element of collaboration or contact between language lecturers and subject lecturers, the language lecturer might help the subject lecturer highlight the way in which academic vocabulary serves to carry the disciplinary argument. Such a shared focus would help students articulate the necessary disciplinary connections between argumentative components. A subject lecturer might contribute with useful insights for prompts, exercises, and classroom assessment techniques focused on exploring technical vocabulary.

With respect to language development, teachers may conclude that basic academic vocabulary knowledge can be taken as confirmed. They can there-

fore use this apparent communicative resource of academic vocabulary as a stepping-stone to explore the remaining dimension of written disciplinary communication. For example, they might have students extract and master the technical vocabulary in the texts they encounter via basic critical reading using genre and corpus analyses.

The productive knowledge of the frequent academic vocabulary items demonstrated here could also be a potential stepping-stone toward command of the less frequent AVL items. However, the evidence of this study is that development along those lines does not happen automatically, and indeed there is no reason to suppose it should, given that opportunities for exposure to infrequent vocabulary are limited. A key pedagogical implication of these findings is therefore that *incidental* acquisition is unlikely to be *accidental*, and that teachers who hope their students' academic vocabulary will develop during an EMI course should create opportunities for exposure to and practice of a broader range of academic lexis.

This study underscores a reality of many EMI settings. EMI is intended to be a *de facto* form of Content and Language Integrated Learning (CLIL) but while CLIL settings work actively both with content knowledge and with language development, in EMI the expectation is frequently that the preconditions for incidental language acquisition are put in place simply by dint of offering instruction in English. This study has provided evidence that those expectations are not entirely justified.

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Part II
Complex writing competence constructs

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Assessing writing in vocational education and training schools:
Results from an intervention study

Abstract

English: In this paper, we describe the assessment of writing in vocational education and training (VET) schools within the scope of an intervention study carried out in the German-speaking part of Switzerland. In literacy education within VET schools, the diversity of students' linguistic backgrounds is not sufficiently taken into consideration. To address this lack, a teaching approach based on process-oriented writing instruction incorporating both German as L1 and German as L2 approaches was developed and evaluated. The paper focuses on the instruments used for the assessment of students' writing competence at three stages and describes the writing test as well as the scoring procedures applied. Reflections on the quality of the writing competence scale (Cronbach's alpha: .82–.85) and some of the main results showing a significant increase in writing competence in the experimental group compared to the control group are presented alongside a discussion of the potential value of our assessment procedures.

German: Dieser Beitrag hat die Erhebung von Schreibkompetenz im Rahmen einer Interventionsstudie an Berufsfachschulen der Deutschschweiz zum Thema. Im allgemeinbildenden Unterricht dieser Schulen findet sich ein hoher Anteil von Lernenden mit mehrsprachigem Hintergrund und unkonventionellen Sprachbiografien, was in der Förderung der Sprach- bzw. Schreibkompetenz jedoch nur wenig berücksichtigt wird. Aus diesem Grund wurde ein Konzept der prozessorientierten Schreibdidaktik entwickelt, das Mutter- und Zweitsprachenunterricht mit Schreib- und Sprachförderung zusammenbringt und evaluiert. Der Artikel konzentriert sich auf eine Darstellung der Instrumente zur Erhebung und Bewertung der Schreibkompetenz, was eine Beschreibung der Schreibtests und des Scoring-Verfahrens beinhaltet, ebenso wie auf Überlegungen zur Qualität der Schreibkompetenz-Skala (Cronbachs Alpha: .82–.85). Die Hauptergebnisse, die unmittelbar nach der Intervention einen signifikanten Zuwachs der Schreibkompetenz der Experimentalgruppe im Vergleich zur Kontrollgruppe zeigen, werden vorgestellt, bevor der Artikel mit einer Diskussion der Ergebnisse schließt.

1 Introduction

Literacy development in vocational education and training (VET) schools is a field that has only recently attracted research (Becker-Mrotzek/Kusch/ Wehnert 2006; Efing 2008) in spite of the high value that is placed on the dual education system in German-speaking countries. In Switzerland, annually more than 65% of all students pass through one of the 2- to 4-year VET programmes, in which they spend between one and two days[1] a week in school and the remainder at work (SBFI 2015: 4 ff.). In today's digital and knowledge-based society, reading and writing skills become increasingly important in VET and in professional life (Müller 2003; Jakobs 2008). In 2010, the Swiss Business Federation published the results of a survey of 771 Swiss enterprises of various sizes and representing numerous business sectors. Participating businesses highlighted that apprentices had a general lack of mathematical and especially language skills at the beginning of their training. This concerned not only apprentices with a migration background, but also native VET students (economiesuisse 2010: 3 ff.).

For the majority of VET students, reading and writing are complex cognitive and linguistic challenges that they do not always master successfully (Nodari 2002: 11). Although studies focusing on VET schools are not available, we must assume that a sizeable number of VET students, especially those in apprenticeships that are less demanding regarding school achievement, come close to what, in Shaughnessy's (1977) understanding, are "basic writers". They are little acquainted with the formal requirements and conventions of Swiss standard German and unaccustomed to expressing their ideas in written form. They are not overly motivated to cope with language-related tasks and have often been unsuccessful writers in their previous educational experience. As scholastic achievement is one of the main selection criteria for the apprenticeships that students choose, we must also assume that those students gaining access to apprenticeships that are more demanding with respect to language skills usually have a higher proficiency in German.

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1   VET can also be completed at a full-time vocational school. In the French-speaking and Italian-speaking parts of Switzerland, the proportion of full-time vocational schools is higher than in German-speaking Switzerland. For further information about VET in Switzerland, see Swisseducation (2015).

It is more than motivation and the kind of apprenticeship, however, that explains variation in language skills. Many VET students come from families with a modest level of education and/or a migration background. Adolescents with an immigrant background have usually grown up in multilingual environments using several languages simultaneously and learned German as a second or third language. Furthermore, an additional challenge is that both native and migrant-background students must cope with diglossia in Switzerland. There is a large gap between the written language and the local dialects spoken in Switzerland with their markedly different lexis, grammar and idioms as compared to Swiss standard German (Ammon/Bickel/Ebner 2004; Dürscheid/Giger 2010; Dürscheid/Elspass/Ziegler 2011). Today, local Swiss dialects are also preferred in informal written communication such as SMS and e-mail. As local Swiss dialects are not standardized with respect to grammar and spelling, young people are not accustomed to regulated language usage and are not overly motivated to comply with the norms of Swiss standard German (Sieber 2013). In spite of the linguistic diversity in VET schools in German-speaking Switzerland, the teaching of German/literacy still follows approaches designed for monolingual groups of native speakers, and teachers are trained to teach classes consisting of purely mother-tongue students (Belke 2001: 2) without accounting for their pervasive multilingualism.

At Swiss VET schools, the teaching of language and communication is integrated into a multidisciplinary subject called ABU "allgemeinbildender Unterricht", which can be translated as "general education" in contrast to vocational education subjects (BBT 2006). ABU allows teachers to focus on a wide range of subjects of general interest such as economics (e.g., dealing with money), civics (e.g., voting), or law (e.g., signing a contract). The teaching of German/literacy is integrated into these fields of content. Even though school curricula include instructions on the relationship between language/literacy teaching and the teaching of general education content, teachers are quite free to create their own teaching units into which they can integrate language instruction and the teaching of writing.

The assessment procedures reported on in this paper are part of an intervention study in which a new way of teaching writing in VET schools was introduced. The basic philosophy behind the teaching method we suggested was a process approach largely following the instructional model outlined

in American secondary and higher education (cf. Pritchard/Honeycutt 2006) in the 1970s, and which was later adopted in other countries (cf. Ruhmann/ Kruse 2014). This approach was integrated with an L2 approach to writing to cater to the lack of essential linguistic skills in Swiss standard German, which holds true for the majority of students (both native and non-native).

To describe which decisions led to the construction of our measurement techniques, we will briefly review the literacy education situation in Swiss vocational schools and describe the nature of the intervention we conducted. This is followed by a description of the writing test and the scoring procedures. We then introduce the writing competence scale and detail some of the major results of the intervention. Finally, we show that the changes in the teaching of writing resulting from our intervention are well reflected in the writing competence scale, thus demonstrating it to be a valid instrument for the assessment of writing skills.

2 Process-oriented writing between L1 and L2 in vocational schools

In our project, we were looking for ways to introduce a process approach to writing in VET schools and add approaches from the teaching of German as an L2 in order to more effectively respond to the multilingual realities of the student population.

The process approach revolutionized the teaching of writing in educational contexts in the United States after Emig's (1971) study *The Composing Process of Twelfth Graders*. It offered a new perspective on writing by drawing attention away from the idealized prescriptions on what good texts are and directing it to the thinking process of the writer instead. Writing has since been seen as a way of generating text through several interrelated activities which are not processed in a linear way, as in earlier models of the writing process, but recursively. This means that writers tend to rethink their ideas repeatedly and proceed in several loops before they decide on the final form of the text. This paradigm shift was the starting point for research looking at what really happens during writing and is still seen as one of the cornerstones of writing pedagogy (Anson 2014; Ruhmann/Kruse 2014).

From the 1980s on, the process approach was accompanied by cognitive models of writing, initiated by Hayes & Flower (1980), Flower & Hayes

(1980; 1981), Bereiter (1980), Bereiter & Scardamalia (1987), and others, that view writing as a series of cognitive activities such as idea generation, structuring ideas, planning, proposing ideas, and translating ideas into word strings. This approach placed a strong emphasis on problem-solving activities and writing strategies. Recently, several new elements have been absorbed into the process approach, the most important being peer feedback, collaborative writing and reflective techniques (Pritchard/Honeycutt 2006; Ruhmann/Kruse 2014).

Unfortunately, the shift from product to process has resulted in an increased reluctance towards the teaching of language in the writing class. In cognitive process models (in the tradition of Hayes/Flower 1980), linguistic activity is viewed as a means of translating thought into text but not as a part of thinking, idea generation and meaning making. All essential processes are thought to be cognitive or computational in nature, so that there is no particular need to pay attention to the teaching of language for writers. As a result, language support has almost disappeared from the teaching of writing. If language support is given to writers, it is likely to happen in courses offered specifically for second-language writers who are seen as needing language skills (see, for instance, the work of Swales 1990; 2004; Hyland 2000; 2011).

Recently, it has become clear that language instruction has to find its way back into the teaching of writing in L1 classes (Steinhoff 2007; Pohl 2007; Locke 2010; Myhill 2010; 2012; Feilke 2012; 2014; Anson 2014). Hyland (2011: 24) expresses this need most emphatically when he claims that

> "teachers of writing clearly need to be teachers of language, as it is an ability to exercise linguistic choices in the ways they treat and organize their topics for particular readers […]. A knowledge of grammar, focusing on how students can modify meanings in distinct and recognizable ways becomes central to learning to write."

Hyland uses the term *grammar* in a broad sense here, referring to the linguistic means necessary for text production. In the case of VET schools, his suggestion seems particularly relevant, as students with multilingual backgrounds may lack the essential linguistic means for their task of learning, for example, business communication. In our approach, we drew on teaching units from German as an L2 to support the development of students' language skills, and provided the students with a variety of focused linguistic elements that they could use when formulating or revising text. Materials

(e.g., reading assignments) to prepare writing tasks were also handed out to the students to instruct them on the writing processes/routines, which also include linguistic forms and rhetorical elements. We followed the idea of Feilke & Lehnen (2012) that learning to write means building routines when using rhetorical and structural elements for expressing ideas rather than simply 'running' cognitive functions as Hayes & Flower (1980) suggest. For this approach, it is important to focus on key linguistic elements that are needed to solve a task, and allow students to develop routines during writing and revising.

The approach we developed was based on the following guidelines:

- As a basis, we chose a procedure from the process tradition (Anson 2014; Ruhmann/Kruse 2014) and deconstructed the writing process into distinct actions that can be connected individually in the development of a unique strategy.
- We placed a strong emphasis on social activities and collaborative learning to make writing a rewarding group enterprise.
- We took care to create authentic prompts which connected writing to real-life situations of the writers.
- From second-language learning, we added the principle of preparation ("Vorentlastung") in which reading activities were presented before the actual writing task.
- We followed a scaffolding strategy (Gibbons 2002) by accompanying the writing process with support for the linguistic tasks that had to be solved.
- We connected oral and written activities to create synergies between both modes of text production and reception.

We developed this teaching strategy together with the regular teachers, thereby allowing them to integrate the new curriculum into the requirements of their existing teaching plans and their individual teaching styles. The teachers were introduced to the basic philosophy of our research approach and then co-constructed the new teaching units for all stages of the curriculum. Altogether, we developed three major teaching units which covered 16 teaching hours (the equivalent of 33% of the overall time available for ABU teaching in a semester). The teachers' experience with and knowledge of the target group were very important for the implementation of our concept into teaching practice.

The three basic units were constructed as open scenarios in which writing fulfilled a core function, but was seen as a means of reaching the goals of an overarching activity. There were three such scenarios that shared a common general structure.

In the first scenario, students were asked to produce portraits of each other – to be printed in a brochure along with pictures – that would be presented to their families and at their workplaces. In the second scenario, students were asked to write a letter of complaint responding to an excessive bill from their mobile phone provider. In the third scenario, students were requested to write a letter to a real company that they would actually visit on a class excursion. These letters were written individually and then the best from each class was selected to be sent to the company. The best letter from all the classes was awarded a prize of 500 Swiss francs, which could be spent during the excursion.

Each of these tasks required many classroom hours to prepare, carry out and evaluate. The main recurring elements were:

- presenting the task
- discussing the problems involved
- providing materials to solve the problems (techniques, preparatory texts, search operations, etc.)
- integrating 'focus on language' exercises into the writing process which raise awareness of language skills and their importance for the subsequent writing or prewriting phase
- initiating reflection on text procedures that take place in writing activities
- generating and structuring ideas, draft writing
- peer feedback with subsequent revision
- writing the final version

There was frequent alternation between individual and group work, and each paper went through several cycles of consideration before students settled on the final version. In this way, participants were led through stages of generating ideas, planning, discussing and revising several times.[2]

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2   For further information on the intervention and the teaching materials used, see Hoefele/Konstantinidou (in prep.).

3 Study design and results

The intervention study took place in 18 different classes in three VET schools in Switzerland (N = 318). Nine of these classes received regular ABU teaching (control group) while nine classes received a special treatment of process-based teaching of writing (experimental group). Teaching in the control group followed the usual principles of general education classes in VET schools connected with several writing assignments which were graded and aimed at supporting writing development. The general study design can be described as a pre-test/post-test/control group design with follow-up. Experimental and control groups were compared at the beginning of the intervention, at the end of the intervention, and after a follow-up period of 3 months. The test procedures and assessments were not part of the teaching assignments, but were carried out on separate occasions and in an identical manner for both groups. Testing took place in August 2013 (pre-test), in February 2014 (post-test), and in June 2014 (follow-up test).

Because of school circumstances (practical and administrative issues), classes (natural groups) rather than students were randomly assigned to the experimental and control group respectively (quasi-experimental study). In order to avoid selection effects or major differences between the intervention and the comparison group that might explain differences (or lack of differences) in the post-test and follow-up comparisons, the project team created a control group that matched the experimental group with respect to the apprenticeships included in the sampling. In this manner, six different apprenticeships (hairdressers, information/documentation assistants, lab assistants, logisticians, multi-skilled mechanics and painters) from one group of classes were assigned to the experimental group, and those from their parallel classes at the same school were assigned to the control group.[3] Furthermore, variables that might confound the results, such as gender, immigration and linguistic background, were taken into consideration (Bortz/Döring 2006: 524 ff.).

3　In the school year of the intervention, there was no parallel class for the information/documentation assistants. For this reason, a vocational class of lab assistants was assigned as the control group. According to school coordinators, these two vocational classes are comparable regarding school achievement and motivation.

As mentioned above, the participating teachers of the experimental group were introduced to process-oriented teaching of writing in both L1 and L2 situations and prepared to participate in the intervention study (as mediators). In cooperation with them, a new writing curriculum including three extended writing tasks based on the scenarios mentioned above was developed and tested against a traditional curriculum. The main research question concerned differences between the students in the experimental group and the control group regarding their writing competence immediately after and four months after the intervention. It was assumed that immediately following the intervention (and four months later) students in the experimental group would show better writing skills than students in the control group and that they would organize, plan and revise their writing better. Students in the experimental group were also expected to have more positive attitudes towards writing and be more self-confident, self-regulated and motivated writers.[4]

3.1 The writing test

There are several possible reference points for assessing writing skills at VET schools (Weigle 2002). A basic requirement of educational research is to arrive at methodologically sound estimations of students' abilities at all levels of educational systems. Very little, however, is known about the level of literacy skills to be expected from students in VET schools, in which students from very heterogeneous professional fields (ranging from multi-skilled mechanics and information/documentation professionals to hairdressers and logisticians) are educated and where the teaching of writing is not as clearly defined as in primary education.

A more reliable reference point for the assessment of writing is the teaching situation and the literacy curriculum running in the background, no matter how ill-defined it may be. Connecting assessment with teaching may also lead to better instruction. In turn, better instruction can provide information regarding the validity of scales with respect to their sensitivity to the kind of change our intervention leads to. In order to estimate the

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4   Results regarding attitudes and other psychological aspects are available but are not the focus of this article.

impact of the new teaching strategy, we developed assessment tools that reflect both the particular level of the vocational students and the nature of the intervention.

The writing test was developed in three stages: design, operationalization and administration (Bachmann/Palmer 1996, quoted in Weigle 2002: 77). During the design stage, the general curriculum (BBT 2006) and the curricula of the participating schools were studied in order to determine what kind of texts students are required to write in the first year of VET. Furthermore, a focus-group discussion with VET students allowed us to identify their writing needs in everyday environments outside school. We expected this procedure to lead to authentic writing prompts connected to the students' real-world concerns. We selected a persuasive writing/argumentation task (Becker-Mrotzek/Böttcher 2012: 218 ff.) which required literacy skills that came closest to the kind we intended to measure. Students were asked to compose formal letters (motivational letters) in which they had to argue for a cause and convince the intended audience to support it.

The writing test consisted of three different authentic prompts that were specified in cooperation with the teachers in the operationalization stage. The selection of authentic prompts was intended to arouse the interest of the test-takers (interactiveness). The prompts were as follows: (1) at the pre-test stage, students were to write a letter to the school management in order to win a school contest for a four-day stay for the whole class in the French-speaking part of Switzerland as a prize; (2) in the post-test, the recipient of the motivational letter was the education office, which finances vocational students' sojourns in Ticino; and (3) in the follow-up test, the letter had to be directed to the students' workplace mentor who had to be persuaded to grant a paid leave for the participation in a school sojourn in the Italian-speaking part of Switzerland. Formal letters reflect the multidimensional nature of writing and are conventionalized enough to allow for the development of clear rating criteria which contribute to the validity of the instrument (see section below).

The writing test was presented as a booklet of eight pages including prewriting pages (planning and draft pages) as well as the criteria for the text evaluation. As is common in test situations at VET schools, all assessments were written by hand directly in the booklet provided. For the integration of process-oriented writing elements into the assessment, as in the National

Assessment for Education Progress (NAEB 2007), students were given a substantial amount of time for completing the task and were invited to undertake planning and revising activities before starting to write (e.g., *On this page you can make notes and plan your writing.*). The writing time of each student was recorded.[5]

To prepare the main survey, the writing tasks were tested in a pilot study (administration stage) with 118 VET students from the same apprenticeships as those participating in the main study. The results of the pilot study (empirical item investigation, factor and reliability analysis, inter-rater reliability) led to changes and adaptations in the wording of the writing tasks and in the scoring criteria.[6] Additionally, in order to confirm the validity of the measurement instrument, we asked the VET teachers to verify whether pilot study test scores (see Section 3.2) corresponded to the students' general achievement in writing (Weigle 2002: 49). This result was very encouraging since teachers confirmed that test scores corresponded to the writing achievement for more than 80% of the students.

The writing test was administered by trained test administrators. A test administrator manual based on previous international studies (PISA, PIRLS, ICCS) described their roles and responsibilities and included instructions on the distribution of the student testing instruments according to student tracking forms, the supervision of the testing sessions and the recording of students' participation (Schulz/Ainley/Fraillon 2011: 91).

3.2 Scoring procedures

The development of scoring criteria also formed part of the operationalization stage of the writing test's development. For the scoring procedure, a code book was developed. It was based on previous German studies, including DESI (Harsch et al. 2007) and VERA (code book available online at IQB

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5 The recording of writing times, as well as the assessment of planning and revising activities, were intended as an attempt to assess some writing process elements. These elements, however, were not taken into consideration when assessing the quality of the final written products.

6 Adaptions of the scoring criteria mostly concerned the *Correctness* and *Style* subscales.

n.y.), the work of Becker-Mrotzek & Böttcher (2012) and Nussbaumer & Sieber's (1994) Zurich Analysis Grid.

As the main scoring criteria, six rating scales (or subscales) were chosen, which were assigned to three main dimensions:

- Linguistic Competence: subscales *Correctness* and *Style*
- Genre Competence: subscales *Formal Conventions* and *Structure/Coherence*
- Pragmatic Competence: subscales *Content* and *Communicative Impact*

A limited number of scoring criteria (here: six) is suggested by Becker-Mrotzek & Böttcher (2012: 128) and Baurmann (2008: 133) because they can easily be adapted to writing tasks and the objectives of evaluation, which increases the practicality of the scoring procedures (Weigle 2002: 138).

Each text was rated as a whole using each of the six subscales. For the possible scores on each subscale, a range from 0 to 4 points was chosen with 4 points indicating complete mastery and 0, no mastery. Very short texts (under 50 words) were also rated with 0 (see Tables 1, 2 and 3). Mastery levels were defined *a priori* and are described in the tables. This allowed us to make inferences about test takers' writing competence on an absolute scale level and not only in relation to other test takers (Weigle 2002: 125). The *Writing Competence* score is the sum of the six subscale scores and amounts to a maximum of 24 points. Raters used the full range of scores for all six rating scales except for the *Formal Conventions* scale, where none of the students was given zero points.

The overall scoring strategy may be called 'analytic' as we decomposed the construct of *Writing Competence* into several distinct rating scales (Weigle 2002: 109 ff.). Each of the six rating scales themselves, however, may be characterized as a combination of analytic and holistic scoring, as some of them demand a holistic judgment while others are based on distinct criteria or the number of errors. While, for example, the *Correctness* and *Formal Conventions* rating scales are quite analytic and include error counting, the *Communicative Impact* rating scale is holistic, asking the rater for a judgment on the extent to which the text would convince the recipient.

Table 1: 'Linguistic Competence' scoring criteria and descriptors (based on the DESI and VERA code books)

Linguistic Competence		
Scoring Criteria	Level	Descriptor
Correctness	4	Texts at this level contain almost no spelling, punctuation or grammatical inaccuracies (fewer than 2). Syntax is correct; sentences are complete. Declination, conjugation or tense errors do not occur.
	3	Texts at this level contain few spelling, punctuation or grammatical inaccuracies (fewer than 5) that do not disturb reading flow or comprehension. Syntax is rarely incorrect.
	2	Texts at this level contain multiple spelling, punctuation or grammatical inaccuracies (more than 5) OR: Texts at this level have few spelling, punctuation or grammatical inaccuracies (fewer than 5) but these inaccuracies disturb reading flow or comprehension. Occasionally, syntax errors occur.
	1	Texts at this level contain multiple spelling, punctuation or grammatical inaccuracies that disturb reading flow or comprehension. Syntax is often incorrect.
	0	Texts are too short (fewer than 50 words) and cannot be scored.
Style	4	Texts at this level contain a vocabulary range that is both broad and adequate for the task and genre. Word repetitions hardly ever occur. Word choice is mostly accurate, appropriate and without dialectal influences. Formulations are objective. Register is formal and polite.
	3	Texts at this level contain a relatively broad vocabulary range that is mostly adequate for the task and genre. Word repetitions rarely occur. Word choice is accurate, appropriate and without dialectal influences. However, communication patterns characteristic of spoken language occasionally occur in the text. Formulations are mostly objective. Register as a whole is formal and polite.
	2	Texts at this level contain a restricted vocabulary range. OR: Texts at this level contain vocabulary that is inadequate for the task and genre. Occasionally, word repetitions occur. Word choice is on the whole accurate. However, texts contain errors that negatively affect comprehension and/or communication patterns characteristic of spoken language often occur. The text is at times narrative, and formulations are not objective enough. Register as a whole is formal and polite.
	1	Texts at this level contain a very restricted vocabulary range. OR: Vocabulary is mainly copied from the writing task. AND/OR: Word repetitions occur frequently. AND/OR Vocabulary is inadequate for the task and genre. Word choice is clumsy and colloquial. The text is mostly narrative, and formulations are not objective. Register as a whole is inappropriate and too informal.
	0	Texts are too short (fewer than 50 words) and cannot be scored.

Table 2: 'Genre Competence' scoring criteria and descriptors (based on the DESI and VERA code books)

Genre Competence		
Scoring Criteria	**Level**	**Descriptor**
Formal Conventions	4	Texts at this level fully conform to the formal conventions of the text genre (letter). The return and recipient addresses are correct (deliverable) and in the correct place. Place and date are present and in the correct place. The form of address and salutation are appropriate and both are in the correct place. The letter is signed.
	3	Texts at this level mostly conform to the formal conventions of the text genre (letter). Only one of the above-mentioned conventional elements is missing, is incorrect/inadequate for the recipient or is not in the correct place.
	2	Texts at this level partially conform to the formal conventions of the text genre (letter). Two of the above-mentioned conventional elements are missing, are incorrect/inadequate for the recipient or are not in the correct place.
	1	Texts at this level do not conform to the formal conventions of the text genre (letter). More than two of the above-mentioned conventional elements are missing, are incorrect/inadequate for the recipient or are not in the correct place.
	0	Texts at this level do not contain any of the correct conventional elements of the text genre (letter).
Structure/Coherence	4	Texts at this level are meaningfully and logically structured and can be read fluently. Structural elements are easily identifiable and in a logical order. Sentence structure is varied and sufficiently sophisticated for the task. Texts are completely coherent with diverse and appropriate connectors.
	3	Texts at this level are meaningfully and logically structured and can mostly be read fluently. Structural elements are identifiable and in a logical order. Sentence structure is mainly simple, though there may be combinations of main and subordinate clauses. Various connectors are used appropriately.
	2	Texts at this level are mostly meaningfully and logically structured, but show a lack of rhetorical fluency at times. Structural elements are identifiable, though not in a logical order. Generally, main clauses are present but subordinate clauses occur only infrequently. OR: Subordinate clauses are overly complicated. Some connectors are incorrect.
	1	Texts at this level have little or no logical structure. Structural elements are barely identifiable and not in a logical order. The texts consist only of main clauses connected with *and* or of main and subordinate clauses that are either not connected or incorrectly connected.
	0	Texts are too short (fewer than 50 words) and cannot be scored.

Table 3: 'Pragmatic Competence' scoring criteria and descriptors (based on the DESI and VERA code books)

Pragmatic Competence		
Scoring Criteria	**Level**	**Descriptor**
Content[7]	4	Texts at this level refer to all issues in sufficient detail (e.g., reason for writing, class description, description and justification of intentions, gratitude). The purpose of writing is clear. Argumentation is strong and weighty.
	3	Texts at this level refer to all issues (e.g., reason for writing, class description, description and justification of intentions, gratitude) and deal in sufficient detail with at least three of them. The purpose of writing is clear. Argumentation is good and weighty enough.
	2	In texts at this level, only one issue is missing. However, all other issues are dealt with in sufficient detail. OR: Texts at this level refer to all issues (e.g., reason for writing, class description, description and justification of intentions, gratitude), but two of them are not dealt with in sufficient detail.
	1	In texts at this level, more than two issues are missing. However, all other issues are dealt with in sufficient detail. The purpose of writing is clear. OR: Texts at this level refer to all issues (e.g., reason for writing, class description, description and justification of intentions, gratitude) but not in sufficient detail.
	0	Texts cannot be scored.
Communicative Impact	4	Texts at this level would definitely persuade the reader. They are very convincing regarding content, form and rhetoric.
	3	Texts at this level are likely to persuade the reader. They are convincing regarding content, form and rhetoric.
	2	Texts at this level could fail to persuade the reader. They are only partly convincing regarding content, form and rhetoric.
	1	Texts at this level are likely to fail to persuade the reader. They are only slightly convincing regarding content, form and rhetoric.
	0	Texts cannot be scored.

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7   The evaluation of the content is task-dependent. The description in the table is rather general compared with the description in the project code book.

To ensure reliability, all tests were scored independently by two raters. Test scoring took place after the study was completed. The three raters participating in the scoring procedures received intensive training in which each scoring criterion was discussed in detail and more than 30 randomly selected texts were scored jointly. The aim of the training was to achieve high agreement between the raters regarding their understanding of the scoring criteria. After training, texts were assigned to the three raters by VET class. A main rater was appointed for every class, but test versions (pre-test, post-test, follow-up test) and experimental/control conditions were permuted and assigned randomly to avoid rater bias.

While independent scoring was used in the pilot study,[8] we preferred the method of consensus scoring for the main survey. In accordance with this method, raters score independently in a first step but subsequently have the opportunity to discuss their results on every criterion in rater teams (main rater A and rater B) in order to arrive at a consensus (Robinson 2000; NAEP 2008). In our study, in case of disagreement, the results of the main rater were counted in the project data set. In any case, situations where raters did not agree were rare (see the results of inter-rater reliability below).

The degree of agreement between the two raters provides a measure of the reliability of the scoring process (Schulz/Ainley/Fraillon 2011: 96). To measure inter-rater reliability, Cronbach's alpha coefficient was calculated, which provides an estimate of the consistency of ratings across multiple judges (Stemler 2004). Because of the consensus scoring, a high inter-rater reliability was expected. This expectation was confirmed by the results, where Cronbach's alpha ranged from .98 to 1.0 for all subscales, and the overall *Writing Competence* scale showed an almost optimal inter-rater reliability (Cronbach's Alpha: .997).

Examples of low, medium and high writing competence of VET students are presented below. The three texts were produced by students from the same VET class and were collected in the post-test phase.

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8   Inter-rater-reliability results (Cronbach's alpha .93) from the pilot study showed a high agreement between the raters regarding the *Writing Competence* scale. Only for the subscales *Correctness* and *Style*, Cronbach's alpha was under .70. This led to adaptations and clarifications of the subscales for the main survey.

Vorname Name
21 Wolfstreet
3013 New York

Generalsekretariat der Bildungsdirektion
Wachenplatz 2
8090 Zürich

New York, 30,1,14

Betriebsbesichtigung.

Guten Tag wir sind die Musterklasse, wir bestehen aus 10Jung die Zurzeit den Musterberuf lernt wir sind im 1. Lehrjahr und haben schon viel erfahrung. Wiso wir teilnehmen möchten, ganz einfach wir sind eine Disziplinirte und Lernfähige klasse die Sehr gerne mehr erfahrung sammel möchte.
Wir würden uns sehr freuen über ein positive antwort.

Liebe grüsse ...
(Unterschrift)

Vorname ...
Musterstrasse 11
0000 Musterstadt

Generalsekretariat der Bildungsdirektion
Wachenplatz 2
8090 Zürich

30.1.2014

Betriebs und Berufsschulbesichtigung

Sehr geehrte Damen & Herren

Wir sind eine Musterklasse mit 11 Schülern aus Musterstadt im Kanton Zürich.

Wir sind eine Motivierte Klasse die zusammenhält und zielorientiert denkt, gerne neue Berufe oder Orte kennerlenen, sich darüber Infos sammelt und gedanken machen. Da das Tessin ein anderer Kanton, eine andere Sprache hat, nimmt es uns Wunder wie man dort den Berufsunterricht gestalltet und wie sie Arbeiten.

Was die Arbeit bzw. die Berufe sind wir offen für Neues. Wir sind auch gespannt was Firmen dort unten im Süden alles herstellen und wo sie auf der Welt tätig sind.

Wir würden uns uber eine Positive Antwort riesig Freuen.

Freundliche Grüsse
(Namen aller Mitschüler und Musterklasse)

Generalsekretariat der Bildungsdirektion
Wachenplatz 2
8090, Zürich

Musterklasse, Musterberufsschule
Musterstrasse 1
1234, Zürich

Musterstadt, 30.1.14

Antrag Berufsschulaustausch

Sehr geehrte Damen und Herren

Im Namen der Musterklasse der Musterberufsschule schreibe ich Ihnen, um Gelder für einen
Berufsschulaustausch mit dem Tessin zu beantragen.

Wir sind eine Klasse bestehend aus interessierten ...-Auszubildenden des ersten Lehrjahres. Als wir
davon erfahren haben, dass die Möglichkeit besteht als Klasse an einem Berufsschulaustausch
teilzunehmen waren wir sofort davon begeistert. Unser Plan sieht vor, dass wir mit dem von Ihnen
erhaltenen Geldern eine Berufsschule im Tessin und mehrere umliegende Betriebe besuchen. Auf
diese Weise ist es uns möglich den Klassenzusammenhalt zu stärken, unser Wissen über die
Kulturlandschaft der Schweiz zu festigen und noch zu erfahren, wie anderswo in Schulen und
Betrieben gearbeitet wird.

Wir sind Ihnen äusserst dankbar, dass Sie uns die Möglichkeit geben möchten, dies zu erleben und zu
erfahren.

Wir hoffen auf eine positive Resonanz.

Freundliche Grüsse
(Unterschrift)
In Verehrung der Musterklasse
(Vorname und Name)

Fig. 1: Examples of low, medium and high writing competence of VET students

3.3 The writing competence scale

As mentioned above, the writing competence scale was defined as the sum of the six rating scales and thus ranging from 0 to 24 points. To check the one-dimensionality of the scale, an exploratory factor analysis (principal component method with varimax rotation) was conducted for each of the test administrations (t0, t1 and t2) with the six rating scales as single items. The suitability of the data for this analysis was confirmed by the results of the KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy: approx. .82 for all three administrations) and Barlett's tests (.000). Based on Kaiser's rule, which drops

all factors with eigenvalues under 1.0 (Bühner 2006: 200), one solid factor capable of explaining 57 to 60% of all the variables' variances across the three administrations was selected. The consistency of the constructed scale was confirmed by a reliability analysis, in which subjects with missing values on one of the items/rating subscales were excluded. The result of this analysis (Cronbach's Alpha .82–.85 for the three administrations) indicates a highly reliable scale.

Tables 4 to 6 show the main results of the factor and reliability analyses. Five of the six items/rating subscales have very good psychometric properties and score high on the main factor, which supports the interpretation of the sum of scores as the *Writing Competence* scale. The subscales *Communicative Impact* and *Structure/Coherence* are the most representative of the overall assessment score.

Table 4: Writing Competence scale t0 (pre-test)

Writing Competence scale t0 (N = 278)	Exploratory Factor Analysis		
	Factor loadings (Varimax)	Corrected item-total correlation	Cronbach's Alpha, if item deleted
Correctness	.72	.56	.79
Style	.83	.69	.77
Formal Conventions	.36	.26	.87
Structure/Coherence	.86	.75	.75
Content	.77	.61	.78
Communicative Impact	.89	.75	.75
Explained Variance	**57%**		
Cronbach's Alpha	**.82**		

Both the low correlation between the *Formal Conventions* score and the *Writing Competence* score (corrected item-total correlation: .26–.35) and the rise in Cronbach's Alpha if the *Formal Conventions* subscale is deleted from the analysis (.87–.88) indicate that the *Formal Conventions* score does not discriminate enough between writers with high and low writing competence (Bortz/Döring 2006: 219). In other words, it is possible that participants who master the formal conventions of the genre receive low scores on the *Writing Competence* scale and vice versa. Similar results were

obtained in the pilot study. In spite of this, we decided to keep the item because formal conventions of letters belong to the curriculum of general education classes in VET schools and students are intensively trained to comply with them. In addition, formal conventions such as genre knowledge are important elements of writing competence according to theoretical writing models (e.g., Swales 1990; Russell 1997; Devitt 2004).

Table 5: Writing Competence scale t1 (post-test)

Writing Competence Scale t1 (N = 275)	Exploratory Factor Analysis		
	Factor loadings (Varimax)	Corrected item-total correlation	Cronbach's Alpha, if item deleted
Correctness	.73	.59	.82
Style	.82	.70	.79
Formal Conventions	.47	.35	.87
Structure/Cohesion	.87	.75	.78
Content	.77	.62	.81
Communicative Impact	.86	.76	.78
Explained Variance	**58%**		
Cronbach's Alpha	**.84**		

Table 6: Writing Competence scale t2 (follow-up test)

Writing Competence Scale t2 (N = 256)	Exploratory Factor Analysis		
	Factor loadings (Varimax)	Corrected item-total correlation	Cronbach's Alpha, if item deleted
Correctness	.74	.59	.83
Style	.86	.75	.80
Formal Conventions	.43	.33	.88
Structure/Cohesion	.87	.76	.80
Content	.76	.64	.82
Communicative Impact	.89	.80	.79
Explained Variance	**60%**		
Cronbach's Alpha	**.85**		

To test the quality of the scales, we carried out factor analyses for the whole sample for the three test administrations. Table 7 shows the results for the *Writing Competence* scale for both groups (experimental and control) combined. In the pre-test, VET students had an average score of 12.09 (SD: 3.7). Their performance was slightly better in the post-test and follow-up test while score variation was almost equally high for all three points of time (SD: 3.7–3.9). In the pre-test condition, VET-students' scores ranged from 1 to 24; in the post- and follow-up tests, none of the students achieved fewer than 3 points. In the follow-up test, no students achieved the maximum score. Skewness and kurtosis give an impression of the scale's distribution. While in the pre-test, the *Writing Competence* scale is slightly heavy-tailed, in the post- and follow-up tests, its distribution barely differs from the norm (see Table 7).

Table 7: Writing Competence Scale – descriptive statistics for experimental and control groups combined

	N	Min	Max	M	SD	Skewness		Kurtosis	
	Stat.	Stat.	Stat.	Stat.	Stat.	Stat.	SE	Stat.	SE
Writing Competence t0	278	1	24	12.09	3.7	.26	.15	1.1	.29
Writing Competence t1	275	3	24	12.84	3.7	-.12	.15	.30	.29
Writing Competence t2	276	3	23	13.36	3.9	-.16	.15	.25	.30

For a comparison of scores on the *Writing Competence* scale between the experimental and the control groups over time, a mixed between-within subject analysis of variance was conducted. The results show a significant main effect for time, $F(2,222) = 16.005$, $p = .000$, η^2 partial $= .07$, with both groups of students showing an increase in the *Writing Competence* scores across the three points of time (see Fig. 2). This main effect, when comparing the two groups of students, was significant with $F(1, 222) = 23.169$, $p = .000$, η^2 partial $= .10$, suggesting a difference in *Writing Competence* scores between the experimental and the control groups. The effect size is moderate (see Fig. 2).
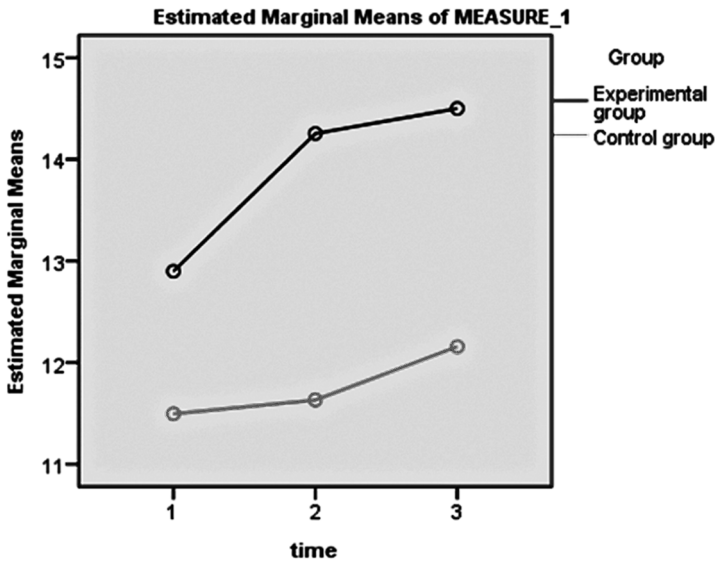
Fig. 2: Intervention effects on Writing Competence

A one-way repeated measures ANOVA conducted for each group shows significant differences in the *Writing Competence* scale values of the experimental group over time (F (2, 118) = 20.956, p = .000) and no change in the *Writing Competence* of the control group (F (2, 103) = 2.567, p > .05). Follow-up comparisons (Bonferroni) for the experimental group show a significant increase in scores not only between the first (M: 12.90, SD 3.8) and the second (M: 14.25, SD: 3.60) point of time, but also across the first and the third (M: 14.50, SD: 3.58). This suggests that the didactic concept had a positive impact on VET students' writing competence and provides evidence of a long-term retention of the learning effect.

Fig. 2 also shows that the experimental and control groups were not comparable regarding their pre-treatment writing ability (EG M: 12.90, SD 3.88 vs. CG M: 11.50, SD: 3.54). For this reason, but also because pre-treatment ability can be a basic or even the single predictor for post-treatment ability (Vanhove 2015), we used the pre-test scores as covariates. The results of the analysis of covariance (ANCOVA) indicate a strong relationship between

the pre-intervention scores and post-intervention scores on *Writing Competence* (F (1, 222) = 228.632, p = .000, η^2 partial = .51). However, the group effect remains significant (F = (1,222) = 25.200, p = .000, η^2 partial = .10).[9]

The quality of a writing test can also be measured by its impact on the individuals involved (especially test-takers and teachers) and the immediate educational system (Weigle 2002: 53). The dissemination of the study results was, therefore, particularly important. After the study, we gave individual feedback to the participating students on the development of their writing competence over time. Additionally, we organized a conference with the participating teachers, stakeholders and experts in order to evaluate the project. The results were beneficial to all involved and led to recommendations for a revision of the writing curricula in VET schools.

4 Conclusion and recommendations

Issues of assessment can teach us many things about our subjects and the educational contexts. The reliability scores of our measurement procedures show that the kind of literacy we aimed to study appeared to be a consistent construct when relevant scales were developed, as was the case with our six subscales of *Correctness*, *Style*, *Formal Conventions*, *Structure/ Coherence*, *Content* and *Communicative Impact*, which can be assigned to the three competence fields Linguistic Competence, Genre Competence and Pragmatic Competence.

Factor analysis has also shown that these scales may be seen as dimensions of a strong main factor, which we interpret as 'general writing competence' and which gives the measured construct consistency and internal validity. The validity of our scales is also supported by the results regarding the impact of the intervention. The change in the teaching of writing was reflected in higher scores for writing competence. We may, therefore, conclude with confidence that the scales developed are sensitive to different modes of teaching and enable differentiation among writing performances even at a very basic skills level.

Respecting the specificity of literacy with regard to educational and linguistic contexts is an essential prerequisite for successful measurement.

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9   For further results, see Hoefele & Konstantinidou (in prep.).

Adaptation to context must be reflected in scale definitions and scoring procedures. Although we believe that the competence fields (Linguistic Competence, Genre Competence and Pragmatic Competence) can be reproduced in many contexts, their measurement must be adapted not only to the achievement level, but also to the task dimension of the literacy field in question with respect to its communicative, textual and educational characteristics. The more advanced students are, the easier it should be to develop scales with enough variability to discriminate between levels of ability simply because texts are longer and skills more differentiated. What we were able to show in this study, however, is that discrimination is also possible at very basic competence levels.

From its very beginnings, our study was not primarily aimed at demonstrating that process orientation is superior to conventional approaches to the teaching of writing, rather, it was designed to address a very practical question of teaching in a field that is practically untouched by research. Teaching writing in VET schools is often regarded as a field of pedagogy where deficits from earlier education prove to be obstacles to substantial progress, and where teachers often resign themselves to the many mistakes their students make even in very short texts. What we have shown is that progress is possible and that a close look at literacy development in this group demonstrates subtle differences in the kinds of skills that literacy comprises at this early stage and in this particular field of education.

Our research has been highly appreciated by both teachers and administrators. In addition to our cooperative approach (creating the writing assignments together with teachers), one of the main reasons for this acceptance was the assessment methodology that resembles examination situations in school (the test situation) and uses rating scales which can pick up relevant dimensions in any kind of text production. The scales allow teachers to understand where deficits in literacy development are located and which types of linguistic, genre-related and pragmatic competence are missing. For this reason, our measurement approach facilitates the improvement of educational practice and the introduction of change in the teaching of writing on the basis of evidence which, by teachers, is considered consistent and well-justified.

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Writing competence profiles as an assessment grid? – Students' L1 and L2 writing competences and their development after one semester of instruction

Abstract

English: For the design of compensatory writing courses and determining the progress that students make after one semester of writing instruction, the L1 (German) and L2 (English) writing skills that German students come with when entering university were assessed using argumentative essays they had to compose at the beginning of writing courses and at their end respectively in either their L1 (n=26) or their L2 (n=35) depending on the type of writing course (German or English) they attended. The essays were evaluated by three raters in a discursive consensual assessment procedure using a (text-)linguistic error classification scheme as well as a holistic evaluation of their argumentative rigour. The application of the error classification scheme yielded assessments of the texts on four levels (formal, lexical, grammatical and textlinguistic correctness), whereas the holistic evaluation yielded an assessment of the texts' argumentative rigour (stringency). A comparison of the results obtained at the beginning and at the end of the courses showed significant improvements at all levels for the English texts (L2) but only at the lexical level and the text level for the German texts. Furthermore, significant correlations were found between the lexical and grammatical sub-competencies, between the lexical and textlinguistic sub-competencies and between the grammatical and textlinguistic sub-competencies within each language at least at the beginning of the courses. Comparisons between languages both at the beginning and at the end of the courses revealed that L2 text production competence significantly lagged behind L1 text production competence at all levels except for the text level at the beginning of the writing courses. These findings are interpreted against the background of the cognitive capacity theory of writing and dynamic systems theory. The visualization of the results in area graphs representing writing competence profiles revealed characteristic patterns which suggest that such area charts, when available for a larger spectrum of writing competences, may be usable as grids for the assessment of writing competence.

German: Zur Konzeption kompensatorischer Schreibkurse für die L1 Deutsch und die L2 Englisch sowie zur Ermittlung der Schreibkompetenzentwicklung nach einem Semester Unterricht wurden die L1- und die L2-Schreibkompetenz von deutschen Studierenden anhand von argumentativen Texten erhoben, die diese zu Semesterbeginn und am Semesterende in Abhängigkeit vom besuchten Schreibkurstyp (Deutsch oder Englisch) in ihrer L1 (n=26) bzw. ihrer L2 (n=35) verfassen mussten. Die Texte wurden von drei Lehrkräften in einem diskursiven Prozess analytisch mit Hilfe eines (text-)linguistischen Fehlerklassifizierungsrasters sowie holistisch bewertet. Die Anwendung des Fehlerklassifizierungsrasters ergab eine Bewertung auf vier Ebenen (formale, lexikalische, grammatikalische und textlinguistische Korrektheit), während die holistische Evaluation zur Beurteilung der argumentativen Stringenz genutzt wurde. Der Vergleich der zu Kursbeginn und am Kursende erzielten Resultate ergab eine signifikante Verbesserung in allen Bereichen bei den englischen Texten (L2), jedoch nur eine Verbesserung im lexikalischen und textlinguistischen Bereich bei den deutschen Texten (L1). Darüber hinaus fanden sich innerhalb der Sprachen zumindest zu Kursbeginn signifikante Korrelationen zwischen der lexikalischen und grammatikalischen Teilkompetenz, zwischen der lexikalischen und der textlinguistischen Teilkompetenz sowie zwischen der grammatikalischen und der textlinguistischen Teilkompetenz. Der Vergleich der Ergebnisse in beiden Sprachen zeigte sowohl in der Erhebung zu Kursbeginn als auch am Kursende, dass die Textproduktionskompetenz in der L2 in allen Bereichen geringer ausfiel als in der L1; eine Ausnahme bildete lediglich zu Beginn der Kurse die textlinguistische Teilkompetenz. Die Ergebnisse werden vor dem Hintergrund der *Cognitive Capacity*-Theorie und der *Dynamic Systems*-Theorie interpretiert und in Flächendiagrammen, die Schreibkompetenzprofile darstellen, visualisiert. Diese Visualisierung lässt charakteristische Muster erkennen, die nahelegen, dass solche Flächendiagramme als Raster zur Bewertung von Schreibkompetenz genutzt werden könnten, wenn sie für ein größeres Spektrum von Schreibkompetenzprofilen vorliegen.

1 The context and rationale of the study

In the wake of the Bologna reform, German universities have realized that more time and effort need to be devoted to the development of students' literacy or text competence, encompassing text reception competence, text production competence and the competence to learn from texts (Portmann-Tselikas/Schmölzer-Eibinger 2008: 5). At least three reasons have led to this insight: First, the development of these competencies is still in progress when students enter university and needs to be fostered actively in its dis-

cipline- and task-specific continuation (see, e.g., Beaufort 2007). Second, shorter university degree programmes give students less time to develop these competencies as a 'by-product' of their academic socialization. And third, an increasing student intake at universities (more than 50% of an age cohort in Germany in 2012) has led to more heterogeneous entrance qualifications among students due to more diverse educational biographies and thus the need for compensatory courses including compensatory writing courses (see also Göpferich 2015).

In order to gear its compensatory writing courses to the actual needs of the students who attend them, a research project was launched in 2012 at the newly established writing centre of the University of Giessen (Germany) in which students' writing skills in their L1 (German) and their L2 (English) were assessed in areas that have frequently been assumed as mastered at university entrance level. Based on the findings of this assessment, L1 and L2 compensatory writing course syllabi were designed which address the needs detected, and students' progress was assessed after one semester of instruction (30 contact hours and 30 hours of homework) in such L1 and L2 compensatory writing courses.

The assessment results were visualized in area graphs, so-called writing competence profiles, which set the individual writing sub-competencies analysed in the study in relation to each other. A comparison of these area graphs from the beginning and from the end of the writing courses and between languages illustrates the progress students made in the course of one semester of instruction and shows the developmental lag between the L1 and the L2 writing skills.

The compensatory writing courses focused on in this study were introduced against the background that basic linguistic skills related to writing, such as writing in a formally, lexically and grammatically correct and coherent manner (for details of the construct of writing competence measured, see Section 3.1), cannot be remedied in discipline-specific writing courses and therefore should be addressed in introductory general writing courses preceding discipline-specific courses for the following three reasons. First, dealing with such linguistic problems in discipline-specific writing courses would offer no challenge for those students who have already acquired the relevant competencies; second, teachers of discipline-specific writing-intensive seminars are subject-domain specialists and cannot be expected

to have the specific linguistic and didactical knowledge to address general language-related issues; and third, discipline-specific writing courses ideally should be devoted to the advanced stages of academic writing socialization. In this manner, domain-specific literacy development and the development of domain-specific knowledge and competences can benefit from each other (cf. Ulmi et al. 2014: 7, 226).

2 Theoretical background and previous studies

This section introduces the models of writing competence development against which the findings from the present study will be interpreted, and sets this study in relation to previous ones comparing L1 and L2 writing skills.

2.1 Modelling writing competence development

Many models and theories of writing competence development that have been suggested to date have their origins in cognitive psychology. They explain processes of writing competence development with reference to automatization or routinization of sub-processes, or lower-order processes, of writing, which is assumed to release working memory capacity with the ensuing possibility of a reallocation of these cognitive resources to higher-order processes. Among these theories are McCutchen's (1996) cognitive capacity theory of writing and Kellogg's (2008) macro-stages of writing skills development, which are compatible with each other. According to Kellogg's macro-stage model of writing skills development, the cognitive capacity that becomes available through increasing automatization of lower-order processes in accordance with the cognitive capacity theory can be used by authors, for example, to take an increasing number of perspectives on their texts into account. Whereas in the early stage of knowledge-telling, authors are limited to their author's perspective (i.e., what the author intends to express, the author meaning), the stage of knowledge-transforming is characterized by authors being able to keep both the author meaning and the actual text meaning in mind and compare them for discrepancies, which can then be corrected. Kellogg's highest stage of writing skills development, knowledge-crafting, then allows authors to keep both their author meaning and the text meaning in mind and, in addition, take into account whether

their prospective readers will be able to derive the intended meaning from the text. This allows them to take a more reader-centred perspective.

Steinhoff (2007) and Pohl (2007) conducted corpus-linguistic studies to analyse the development of students' academic writing competence. Steinhoff, for example, compared academic textual routines or procedures[1] used in German term papers composed by university students at different stages of their academic socialization with their equivalents in articles composed by scholars and functionally comparable routines and formulations in a corpus of journalistic texts. For the interpretation of his data, he drew on Piaget's theory of cognitive development. According to this theory, the driving force in the development of intelligence is the reestablishment of an equilibrium, whenever this has been destroyed, by processes of assimilation, i.e., the adaptation of the environment to the learner's cognitive schemata, or accommodation, i.e., the adaptation of the learner's cognitive schemata to the environment (Piaget 1972: 191; cf. Ortner 1995: 336). With regard to academic writing competence development, the search for this equilibrium means developing writing behaviour that is adequate in academic contexts out of writing behaviour that was acquired for other contexts and is found to no longer fulfil its function in a satisfactory manner in the new context. To determine students' university entrance qualifications in writing, it is exactly the writing behaviour that students acquired for other contexts which needs to be focused on and thus is the focal point of the present study.

In his corpus analyses, Steinhoff (2007: 419) found that the development of students' academic writing competence follows an inter-individual pattern. At the early stages of their academic writing skills development, assimilation processes dominate, i.e., processes in which known behaviour is used to solve new problems, whereas at more advanced stages, accommodation processes take over, i.e., processes in which new strategies are made use of. At the initial stage, two types of problem solving were found to dominate: transposition and imitation. *Transposition* is an assimilating strategy, in which writers try to solve their problems of academic writing by resorting to means and measures that are untypical of academic writing and

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1   The term *textual routines/procedures* ("wissenschaftliche Textprozeduren") refers to cognitive acts or moves, which may be closely connected with specific formulations (cf. Steinhoff 2007: 431).

occur in genres they are more familiar with, for example, in journalistic (or popular-science) texts, in genres that students were required to compose at school, and in oral communication. *Imitation* is an accommodating strategy in which students, unsuccessfully or only partially successfully, try to imitate academic language. Formulations that result from this strategy are characterized by, for example, extreme complexity, excessive nominalizations and the use of an extremely formal style, which often results in a lack of comprehensibility (Steinhoff 2007: 143 ff., 423). The stages of transposition and imitation are followed by a stage of *transformation*, in which, in an accommodating manner, the repertoire of academic formulations that students have at their disposal is expanded. Students begin to learn typical formulations of academic writing and the communicative functions for which they are used in academic contexts. The fact that, at this stage, they have not yet fully reached expert competence, shows in, for example, wrong collocations and an excessive and repetitive use of certain domain-specific formulations. Another characteristic of this stage is that students begin to recognize that certain general-language expressions are used for more specific purposes in academic texts (Steinhoff 2007: 146 ff., 423 f.). Students' writing competence development reaches its (preliminary) final stage, the stage of *contextual adequacy*, when they start to use academic language following domain-specific conventions and employing a differentiated academic vocabulary (Steinhoff 2007: 424, cf. 148 f.).

Another paradigm in which writing competence development can be modelled is dynamic systems theory (DST; Thelen/Smith 1994; Van Gelder 1989).[2] DST has found its way from mathematics into various other fields of research, such as developmental psychology (see Thelen/Smith 1994), second-language acquisition (e.g., de Bot/Lowie/Verspoor 2007; Verspoor/ Lowie/Van Dijk 2008), translation studies (Göpferich 2013) and also L2 writing skills development (e.g., Verspoor/de Bot/Lowie 2004; Verspoor/ Schmid/Xu 2012; Nitta/Baba 2014). In DST, competences or skills are envisaged as dynamic systems, i.e., sets of variables that are interconnected and thus interact over time (de Bot/Lowie/Verspoor 2007: 8). With regard to writing competence, these variables can be regarded as variables for writ-

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2	The outline of DST presented here is based on an earlier version in Göpferich (2013) introducing DST in the context of translation competence development.

ing sub-competencies that, in their entirety, make up writing competence. These individual sub-competencies may not develop at the same pace, nor will they always develop in a linear manner. Some may stagnate while others continue to develop. Certain sub-systems (i.e., sub-competencies or clusters of sub-competencies) may be precursors of other sub-systems in the developmental process. For a specific sub-competence to start developing, it may be necessary for other sub-competencies to have exceeded a certain threshold value. If we start from the cognitive capacity theory of writing (McCutchen 1996), which assumes limited working memory capacity, it appears plausible to assume that the value one variable takes, i.e., the cognitive effort required for a specific sub-process of writing, such as lexical choices, has an effect on all the other variables. For example, if one sub-competence reaches an advanced level, which may result in automatized performance of the respective tasks, working memory capacity is released. This capacity then becomes available for the application of other sub-competencies and their development, such as the capacity to take larger stretches of a text into account to create coherence, for which there may not have been enough cognitive resources left as long as other sub-processes still needed cognitive effort.

DST further assumes that, in dynamic systems, repeller states and attractor states exist. These can best be explained by means of the metaphor of a plane with holes and bumps in it on which a ball rolls. The ball and its trajectory on the plane represent a specific competence and its development path. On its ways over the plane, the ball is attracted by the holes (attractor states) and repelled by the bumps (repeller states). To get it out of a hole, much energy is needed. Such holes can explain fossilization of certain errors or stages of development, as observed in second-language acquisition, which can only be overcome by intensive training. The development that a particular person undergoes, i.e., the trajectory of the ball, may be highly individual, yet attractor states account for the fact that certain sub-competencies seem to occur in a specific order or at a specific stage of competence development because the corresponding attractor states, in an evolutionary perspective, possess qualities that make the application of cognitive resources settle into an equilibrium at these stages. In DST, the fact that a certain competence stage has been achieved becomes visible by a relative stagnation in the development of the values the various variables

that make up the system take at this stage, whereas a move out of the hole, a new competence development burst, shows in a large variability in the set of variables which form the competence system (Thelen/Smith 1994: 97).

What complicates the analysis of writing skills development in a DST approach is that dynamic systems are nested, i.e., every system is always part of a larger system. Accordingly, writing competence forms a sub-system of the larger system of communicative competence among others. The aspects of writing competence focused on in this article (for details, see Section 3.1) again form only one component of the larger academic writing competence system analysed by Steinhoff and Pohl. In their investigations, however, they concentrated on the developmental stages following a writing competence level that students are generally assumed to have acquired already at school, which, as the findings from the present study will show, is not always the case.

An even more encompassing concept of writing competence can be found in recent publications on writing competence assessment that draw on Bronfenbrenner & Morris' (2006) bioecological model of human development. These publications (e.g., Slomp 2012; Driscoll/Wells 2012; Wardle/Roozen 2012) plead for analyses of writing competence development which do not only take into account contextual factors such as the type of writing instruction students were exposed to, but also characteristics of the individual, dispositions, such as value, self-efficacy, attribution and self-regulation (Driscoll/Wells 2012: 7). This nesting or embeddedness of competences makes it difficult to draw a border around the system an investigation focuses on, and drawing such a border always means ignoring factors beyond the border that may have effects relevant to the system in question.

2.2 Language (in-)dependence of writing skills

The main difference that has been found between L1 and L2 text production is the higher cognitive demand involved in choices of lexis and grammar in the L2 as compared with the L1. In accordance with the cognitive capacity theory of writing, however, higher cognitive demands at these lower levels of text production have been found to have negative effects on higher-level decisions (Silva 1992; Devine/Railey/Bischoff 1993; Whalen/Menard 1995; Schoonen et al. 2003; Roca de Larios/Manchon/Murphy 2006; see also the

literature review by Cumming 2001). Such findings provide support for the assumption that the epistemic benefits of writing are less pronounced when this writing takes place in the L2. They also warrant the assumption that the epistemic function of writing can only be fully exploited in the L1 if students have achieved a certain minimum fluency with regard to lower-order processes, e.g., at the lexical and grammatical levels, when writing in this language. This underlines the importance of offering compensatory writing courses which address these issues for preparing students to derive the maximum benefit from discipline-specific writing courses where writing is also used as a means of more profound reflection.

3 Methodology

3.1 The construct assessed and the assignments

The construct of writing competence assessed in the present study was the students' ability to express themselves in a formally and linguistically correct, cohesive, coherent and well-reasoned manner in a genre they were familiar with from their secondary education (for the reasons, see Section 2.1). Requiring them to compose texts of unfamiliar genres could have led to a lack of motivation and, according to the cognitive capacity theory of writing (McCutchen 1996), to cognitive capacity being absorbed by reflections concerning the unfamiliar genre which could then have led to poorer performance on lower levels, such as the levels of formal, lexical and grammatical correctness, that would otherwise have received more attention. In such cases, performance on these lower levels might not have reflected students' real competence at these levels, although their competence was more relevant for the purposes of this study than their performance. Testing students' competencies at these levels in tests which did not require them to compose a text but to fill in gaps or complete sentences was not an option either because in that case students could have fully concentrated on the level in focus, which is an unrealistic situation because communication usually takes the form of texts, and composing texts involves more complex cognitive processes which – at least to some extent – have to be juggled in parallel. Furthermore, assignments had to be selected that did not require specialized prior content knowledge that would have led to failure if students had not possessed it. This was a requirement because neither the

students' prior content knowledge nor their ability to do literature research were part of the construct for which the students were tested, and failure to complete the assignment because of a lack of prior knowledge would not have allowed to elicit data on those aspects of writing skills that were in the focus of this study. In addition, the texts to be composed had to address a readership whose prior knowledge and interests could be judged realistically by the students.

For these reasons, the particular type of assignment selected was writing an argumentative article for a student magazine. This genre could be expected to be familiar to students because the composition of argumentative texts forms part of the German standard school curriculum. Furthermore, the ability to compose a logical argumentation is a central academic skill. The manner in which students connect statements indicates whether they are able to keep their argumentative goal in mind and come to a logical conclusion. To ensure that students did not lack the prior knowledge relevant for completing the assignment, topics were selected about which all students could be expected to have the relevant prior knowledge required. Offering them different topics to choose from was an additional measure to make sure that the topic did not present an obstacle for students.

3.2 Data collection

In their second weekly 90-minutes writing course sessions (out of 15), the participants of general writing courses that were offered at the writing centre of Justus Liebig University in Giessen in the winter semester 2012/13, the summer semester 2013 and the winter semester 2013/14 were required to write an argumentative text of approximately 250 to 350 words on one of three topics they could choose from for a student magazine (see the assignments in Appendix A). Students who attended writing courses for German had to compose their texts in their L1 German; students who attended writing courses for English had to do so in their L2 English. They were not allowed to use external resources. In the last session of their writing courses, students were required to compose another text of the same genre and in the same language on one of three other topics they could again choose from. The texts had to be completed within the 90-minutes sessions. The students wrote the texts in a computer lab using *Microsoft Word* as the word processor they were familiar with.

3.3 Research population

The population of the study presented in this article was composed of two groups: The first group comprised 49 students who attended writing courses in their L1 German (German group). The second group comprised 51 other students who attended writing courses in their L2 English (English group). Out of the 49 students of the German group, only 26 completed their writing assignments at the end of the German writing courses; out of the 51 students of the English group, only 35 did so in the English courses. Only the data obtained from students who completed the writing assignments at both the beginning and the end of their writing courses could be taken into account in the comparisons of their performances at the beginning and at the end of the courses.

The 49 participants who attended the German writing courses came from all faculties. 35 of them were enrolled in BA programmes, 6 students in MA programmes, 6 students in teacher training programmes, 1 student in an 8-semester university diploma programme and another student in a programme for veterinary medicine. They were in their 1st to 22nd semesters (median semester: 3; average semester: 4).

Out of the 51 participants of the English writing courses, 24 were enrolled in study programmes with English language and literature as one of their subjects (21 students in BA programmes, 1 student in an MA programme and 2 students in a teacher training programme). The remaining 27 students came from all faculties. 27 out of the 51 students were in their 2nd semester, 3 in their 4th semester, 4 in their 5th semester, 4 in their 6th semester, and 13 in a higher semester (median semester: 2; average semester: 3.4).

3.4 Treatment

In the German writing courses, the following topics, which address both the weaknesses detected in the texts composed at the beginning of the courses and additional topics, were covered: planning writing projects, time management; finding a topic and specifying a research question; literature research and reading strategies; strategies for overcoming writer's block; writing an outline; text organization; planning one's line of argumentation; specificities of academic writing (in contrast to non-academic writing); prototypical text macrostructures and typical formulations for specific sections

(scaffolding); text coherence and cohesion, advance organizers and logical connectors; register, readability and comprehensibility; systematic revision, peer feedback; grammar: subjunctive, active and passive voice; punctuation rules; and correcting spelling and punctuation errors.

For English, two types of writing courses were offered. One type followed an 'English only' approach, the other one, a contrastive German-English approach. In the latter type of course, students were not only taught, and had to complete assignments, in English but were also confronted with genres in German which they had to compare with their English counterparts and to translate into English. Both types of courses covered the following topics: brainstorming; specificities of academic writing in English, useful vocabulary and formulations (scaffolding); Fillmore's scenes-and-frames semantics and its relevance for academic writing; finding a topic and specifying a research question; planning and writing argumentative texts with a focus on their macrostructure; how to quote and avoid plagiarism; paragraph structure (topic sentence, introduction, supporting details, conclusion/transitions); text coherence and cohesion with a focus on logical connectors, parallelism; introduction to different genres: reading and composing book reviews, instructions ('how to'-texts) and popular-science texts; taking one's audience into account; punctuation rules; refreshing grammatical knowledge: use of articles, prepositions, syntax, functional sentence perspective; editing. In addition, the contrastive German-English course also introduced students to Fillmore's scenes-and-frames semantics and its relevance for translation; criteria for translation quality assessment; using monolingual and bilingual dictionaries; and translating book reviews.

The diagrams that follow indicate for all students whether they were students with English as a major or minor in their degree programme ("Eng") or not ("non_Eng"). For those who had English as a major or minor in their degree programmes, they also indicate whether they attended a course that was taught in English only ("Eng_mono") or a contrastive German-English course ("Eng_Ger").

3.5 Data analysis

The texts produced at the beginning and at the end of the courses were subjected to in-depth analyses, which combine a detailed error analysis with a holistic assessment (cf. Weigle 2002). For the error analysis, the primarily (text-)linguistic error classification scheme in Table 1 was used. Earlier

versions of this error classification scheme, which were slightly adapted for the present study, had been developed on the basis of linguistic errors that occurred in German popular-science articles produced by students of technical communication (cf. Göpferich 2002: 286 ff.) and translation errors made by translation students when translating from their L2 (English) into their L1 (German) (Göpferich 2010: 54 f.).

Table 1: Error classification scheme

Error category	Description/Example
Formal errors	
punctuation	missing or wrong punctuation mark; if both a comma at the beginning and at the end of an insertion are missing, this is counted as only one error; repeated comma errors are counted as repetition errors only if they have the same cause
spelling	spelling mistake which is not an obvious typo
formatting	line break where there should be none (the participants were not required to do any other formatting in the text); italics where there should be none and vice versa
Lexical errors	
semantic	use of words and phrases which do not express the intended meaning either denotatively (semantic: denotation) or connotatively (semantic: connotation). The category "semantic: connotation" includes the use of a wrong register at word level. use of expressions which do not exist; use of word forms from another language which cannot be expected to be understood in the target culture, etc. Note: This only refers to words and phrases, not to longer stretches of text that have been translated literally and are unidiomatic in the target language. See: "idiomaticity/genre". Note: Blendings and wrong illocutionary indicators are classified as separate categories. See also "collocation" and "modality/ illocution".

Error category	Description/Example
collocation	wrong collocation (e.g., *fast speed* instead of *high speed*). This category only includes cases in which the meanings of the words used are appropriate but in which these words cannot be combined for other reasons, such as idiomaticity or convention.
blending	error caused by melding together parts of linguistic units or constructions which enter working memory simultaneously
preposition	use of a wrong preposition (see also "other grammar")
modality/illocution	wrong illocutionary indicator, such as *sollte* (recommendation) instead of *muss* (instruction)
redundancy	superfluous repetition of meaning components, ideas, statements or words including tautologies (see also "text coherence")
Grammatical errors	
tense	use of wrong tense
aspect	use of wrong aspect
case, number, agreement	use of wrong case or grammatical number, mostly after prepositions or in appositions; agreement error
mood	wrong mood, e.g., in indirect speech
voice	active voice instead of passive voice and vice versa; e.g. *Die Truppenstärken erhöhten sich.* (which is wrong because they cannot do that by themselves) instead of *Die Truppenstärken wurden erhöht.*
word form	morphologically wrong word form, such as adjectives instead of adverbs and vice versa; wrong formation of past tense forms. Where in doubt whether "word form" or "semantic: denotation" should be used, "semantic: denotation" was used if the error could be assumed to be due to deficiencies in the lexicon, and "word form", if the error was rather caused by a lack of grammatical competence.

Error category	Description/Example
syntax	syntactic error; participle instead of infinitive and vice versa; missing participle in a construction where German just uses a prepositional phrase without participle; long prenominal modifiers in English (interference from German) which should be transformed into a participle construction after the noun; constructions which are hard to understand due to their length, long parentheses, etc.; utterances which are grammatically correct but which would only make sense if additional lexical elements were inserted, e.g., *The few utterances could not be categorized as either one of the two models.* Comment: For this utterance to make sense it would have to be reformulated into: *The few utterances could not be categorized as belonging to either one of the two models.* lack of parallelism at the syntactical level
valency	missing actant; use of a lexical element that requires further specification; applicable also to nominalised verbs, e.g., *Aufenthalt* (from *sich aufhalten in*), where the indication of a place is required
specifier (article or determiner)	use of a determiner, e.g., an article, where there should be none; use of a definite article where an indefinite article should be used; etc.
infinitive/participle	grammatically wrong use of an infinitive or participle construction (e.g., *Das Wetter war zu schlecht, um schwimmen zu gehen.*)
secondary subjectivization	use of verbs expressing human actions in connection with non-human subjects (possible in English but rare in German); e.g., *This book describes* (correct) vs. *Dieses Buch beschreibt* (wrong).
other grammar	other grammatical errors, such as the use of a prepositional phrase instead of a genitive and vice versa (e.g., *von seinem Vater* instead of *seines Vaters*)

Error category	Description/Example
Text-level (textlinguistic) errors	
text coherence	incoherent text segments, e.g., logically wrong connection of clauses and sentences by the use of semantically inappropriate conjunctions; use of wrong pronouns; sentence not related to its context; referent unclear; missing second part of correlative (two-part) conjunctions; repetition of a noun phrase where a pronoun would be sufficient
sense	incomprehensible or nonsensical section longer than a phrase (otherwise it is counted as a semantic error), contradictory statements
implicitness	too much information left implicit, e.g., author does not express something to which a conjunction, etc. refers (e.g., *There are three types of birch trees. Therefore, I will describe only one.* Here, *therefore* refers to a sentence that was left implicit, i.e., *I cannot cover them all.*)
functional sentence perspective (FSP)	wrong topic-comment structure (theme/rheme)
rhetoric	loss of communicative emphasis or effect (e.g., replacing a poem by a mere description of its content); literal repetitions (see, however, "redundancy" and "text coherence")
Other	
idiomaticity/genre	unidiomatic expression which does not lead to a change of meaning but may make the text hard to understand and betray that it is a translation in a negative sense; use of expressions which do not conform to genre conventions (e.g., *Das Bild ist kein Zufallstreffer.* instead of *Das Bild ist kein Schnappschuss.* and *Anfangend mit Namen* as a title.) Note: If this refers to lexical units and not to longer stretches of text, "semantic: denotation" was used.
cultural specificity	missing adaptation to the target culture or missing cultural neutralisation

Every error identified in the texts was highlighted and annotated with a corresponding error tag (see two examples of annotated texts in Appendix B). To reduce subjectivity, each text was marked by three raters in a discursive process in which discrepancies among the raters were discussed and reconciled and the error classification scheme with its explanations specified to ensure consistent interpretation where necessary. In order to be able to compare the numbers of errors in the texts, which differed in length, the number of errors per 100 words (error ratio) was calculated for each text.

Since text quality cannot be assessed exhaustively on the basis of error ratios alone, each text was additionally subject to a holistic assessment in which its argumentative rigour (henceforth called *stringency*) was determined by the same three raters who performed the error analysis, again in a process of discursive consensual assessment. Stringency is considered a central quality criterion for argumentative texts. Stringency assessments focus on whether the line of argumentation in a text is logical, whether the text has a logical conclusion and whether the line of argumentation leads to this conclusion without deviations. For stringency, the texts were rated on a scale from 0 to 3 points. Three points were awarded for a high level of stringency without deviations and with a logical conclusion; 2 points, for a line of argumentation with few or minor deviations and a logical conclusion; 1 point, for a text with frequent or substantial deviations but a conclusion; and 0 points, for an unorganized text and/or a text without any clear conclusion. The two texts in Appendix B are examples of texts with minimal stringency (0 points) and high stringency (3 points), respectively.

In order to obtain a single overall text quality score for each text, the error ratios (errors per 100 words) that occurred in each rubric of the error classification scheme were converted into points, too, again on a rating scale from 0 to 3 for each rubric so that an overall score could be calculated by adding the scores in each of the rubrics. Three points were awarded for extremely low error ratios in the respective rubric, 0 points, for extremely high error ratios. Errors of the rubric "Other" occurred only extremely rarely, so this rubric could be ignored, leaving the four rubrics "formal correctness", "lexical correctness", "grammatical correctness" and "textlinguistic correctness". The lattermost rubric represents the text-microstructural counterpart of the category "stringency", which takes text-macrostructural aspects into account.

When converting the error ratios into points, potential outliers had to be excluded. This was achieved as follows: For the error ratios the students had in

each of the rubrics indicated above, the medians and standard deviations were calculated. For each rubric, the sum of the median error ratio and the standard deviation (and not the highest error ratio that had occurred) was divided by four. The result indicates the length of each of the four stretches of equal length (quartiles) into which the range of error ratios from 0 to the sum of the median and the standard deviation can be subdivided. The error ratios in the lowest error ratio quartile were converted into 3 points, the error ratios in the second lowest error ratio quartile, into 2 points, etc. (see Fig. 1). In this manner, each text was assessed according to 5 criteria, for each of which it obtained 0 to 3 points. These could then be added to obtain a single quality score for each text.
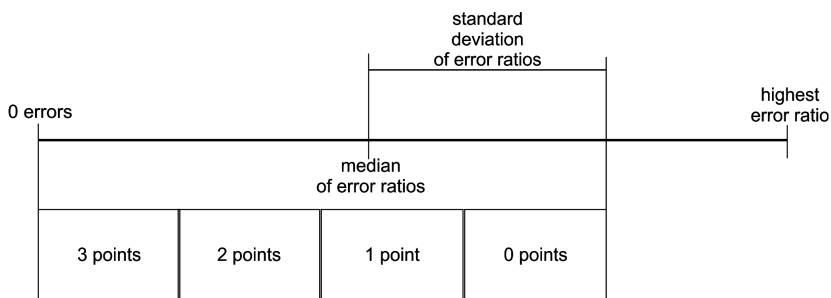

Fig. 1: Conversion of error ratios into points

In order to allow for a comparison of the results of the German and the English texts, the quartiles were calculated on the basis of the error ratios obtained in all German and English texts composed at the beginning of the semesters (n=100), i.e., the error quartiles were calculated on the basis of one median and one standard deviation for 100 texts (49 in German and 51 in English) in each of the four rubrics "formal errors", "lexical errors", "grammatical errors" and "text-level errors". The significance level was set at 10% (p < 0.1).

4 Results

Fig. 2 provides an overview of the mean error ratios that occurred in each of the rubrics of the error classification scheme in Table 1 in the German (L1) and the English (L2) texts composed at the beginning (Pre) and at the end (Post) of the writing courses. It also provides insight into the types of errors that occurred most frequently in the two languages and thus into the topics that were to be covered in the respective writing courses.
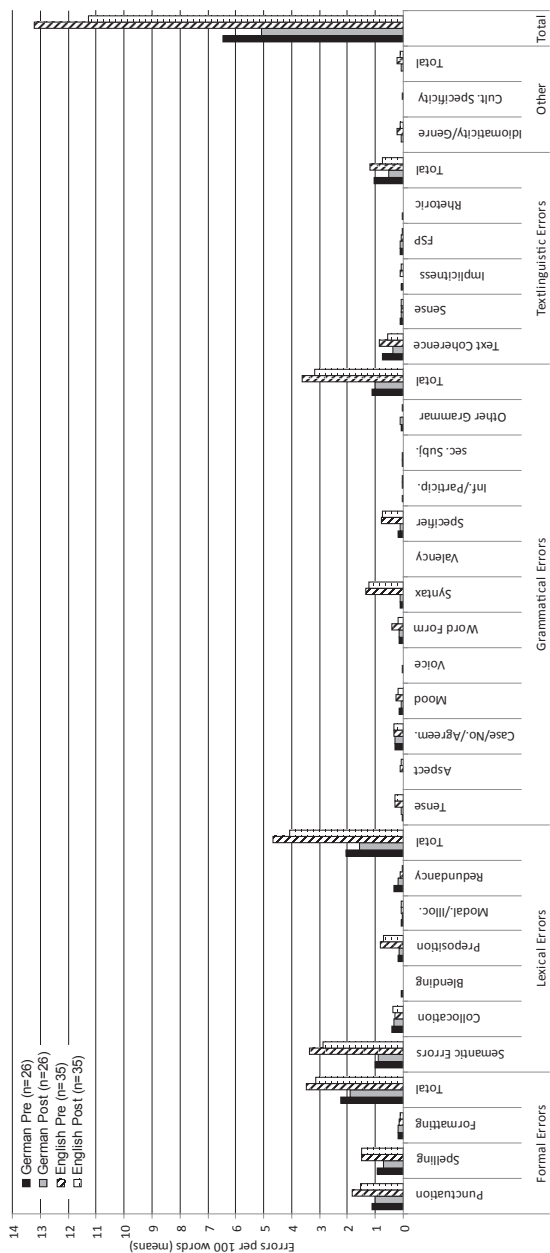
Fig. 2: Error ratios at the beginning (Pre) and at the end (Post) of German and English writing courses compared

A comparison of the mean total error ratios in each of the five categories "formal errors", "lexical errors", "grammatical errors", "textlinguistic errors" and "other errors" at the beginning of the writing courses with the respective values at the end of the writing courses reveals that, in both languages, these error ratios decreased in all five categories. For the decrease in the English writing courses, a Wilcoxon test yielded significant differences at a 10% level ($p < 0.1$) for all error categories, for the decrease in the German writing courses, only for the error categories "lexical errors", "text-level errors" and "other errors" (see Table 2).

Table 2: *Statistical significance of decrease in error ratios from beginning (Pre) to end (Post) of writing courses (Wilcoxon test, $p < 0.1$)*

	decrease formal errors	decrease lexical errors	decrease grammatical errors	decrease text-level errors	decrease other errors
German	0.242	0.060*	1.000	0.001*	0.000*
English	0.057*	0.067*	0.092*	0.004*	0.073*

*: = significant at 10% level

Furthermore, the following correlations between error ratios in different categories were found (see Table 3). The table only lists those error category pairs between which a significant correlation was found in at least one of the two languages at at least one point of measurement.

Table 3: *Correlation between error ratios within languages*

	lexical errors – grammatical errors Pre	lexical errors – grammatical errors Post	lexical errors – text-level errors Pre	lexical errors – text-level errors Post	grammatical errors – text-level errors Pre	grammatical errors – text-level errors Post	formal errors – grammatical errors Post
German – Pearson – significance	0.658* 0.000	0.303 0.133	0.529* 0.005	0.192 0.347	0.546* 0.003	0.071 0.732	0.699* 0.000
English – Pearson – significance	0.503* 0.002	0.583* 0.000	0.596* 0.000	0.309* 0.071	0.553* 0.001	0.490* 0.003	0.269 0.119

*: = significant at 10% level

A comparison between languages shows that the mean error ratios in the students' L1 texts (German) were lower in all five error categories ("formal", "lexical", "grammatical", "text-level" and "other") at both the beginning and the end of the writing courses than the corresponding mean error ratios in the students' L2 texts (English). Whereas the mean error ratios in the L1 and the L2 differed by less than 1.25 errors per 100 words in the rubrics "formal errors" and "other" and even by less than a quarter of an error in the rubric "text-level errors", the differences between the L1 and L2 were more substantial in the error categories "lexical errors" and "grammatical errors". On average, the English texts composed at the beginning of the semester contained 2.61 more lexical errors and 2.53 more grammatical errors per 100 words than the German texts composed at the beginning of the semester. The English texts composed at the end of the semester on average contained 2.49 more lexical errors and 2.14 more grammatical errors per 100 words than the German texts composed at the end of the semester. A Wilcoxon-Mann-Whitney test yielded significant differences at a 10% level ($\alpha = 0.1$) between the L1 and the L2 in all error categories except for text-level errors at the beginning of the semester and between all error categories without exception at the end of the semester (see Table 4).

Table 4: Statistical significance of the quality lag in the L2 as compared with the L1 (Wilcoxon-Mann-Whitney test)

	formal errors	lexical errors	grammatical errors	text-level errors	other errors
Pre					
– Mann-Whitney-U	216.500	129.000	78.000	424.000	239.500
– Wilcoxon-W	594,500	507.000	456.000	802.000	617.500
– Z	-3.635	-4.877	-5.603	-0.689	-4.052
– significance (two-tailed)	0.000*	0.000*	0.000*	0.491	0.000*
Post					
– Mann-Whitney-U	256.500	106.000	69.500	329.500	0.000
– Wilcoxon-W	607.500	457.000	420.500	680.500	630.000
– Z	-2.895	-5.090	-5.623	-1.840	-6.821
– significance (two-tailed)	0.004*	0.000*	0.000*	0.066*	0.000*

*: = significant at 10% level

With regard to stringency, the English texts obtained lower values than their German counterparts at the end of the courses (mean stringency of the German texts: 0.96 out of 3 at the beginning, 1.92 at the end; mean stringency of the English texts: 0.97 at the beginning, 1.07 at the end). The improvement from the beginning to the end of the semester turned out to be more considerable in German (+0.96) than in English (+0.1).

The observation of a decrease of error ratios from the beginning to the end of the writing courses for both languages and the lower values in German (L1) as compared with English (L2) can also be made with regard to the error ratios in most of the individual sub-categories. Exceptions could only be found in some of the sub-categories that occurred very rarely and therefore will not be further discussed in this article.

The significant improvement of the students' results also becomes salient in the line charts in Figures 3 and 4, which represent the students' overall text quality scores (in points) at the beginning and at the end of the German and the English writing courses respectively. The numbers in parentheses indicate the students' semester of study at the time of data collection. The students are arranged according to the total scores they obtained at the end of the semester with the best students appearing on the right and the poorest on the left.
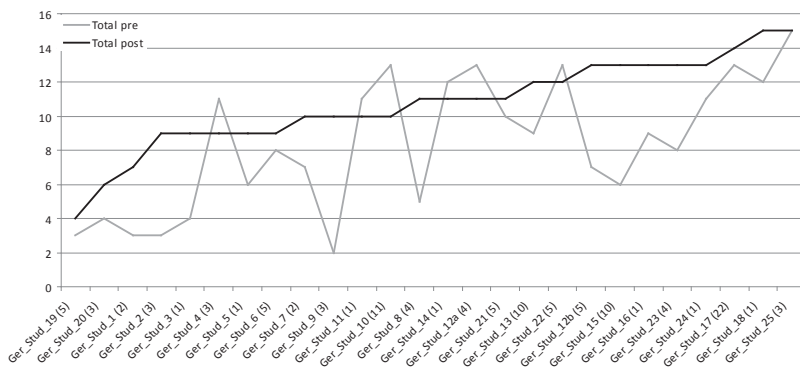

Fig. 3: *Students' writing competence at the beginning and at the end of the German (Ger) writing courses represented in points (sum of the points for formal, lexical, grammatical and textlinguistic correctness as well as stringency)*
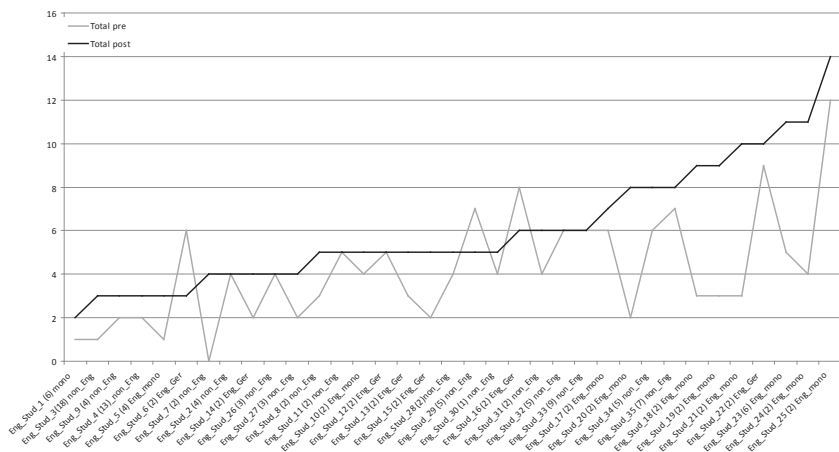
Fig. 4: *Students' writing competence at the beginning and at the end of the
English writing courses represented in points (sum of formal, lexical,
grammatical and textlinguistic correctness as well as stringency)*

Figures 3 and 4 show that most students improved (black lines above grey ones), whereas only few obtained poorer results at the end than at the beginning of writing courses (grey lines above black ones). A comparison between languages shows that the overall scores students achieved in their L2 were lower than the scores they obtained in their L1. Except for the fourth position from the right, the fourteen best positions in Fig. 4 are all occupied by students who were taught following the English-only ("Eng_mono") approach.

Figures 5 to 8 visualize the students' individual scores in each of the five rubrics in relation to each other. In each figure, the students are again arranged according to the total scores they obtained at the respective point of measurement with the best students on the right and the poorest on the left.
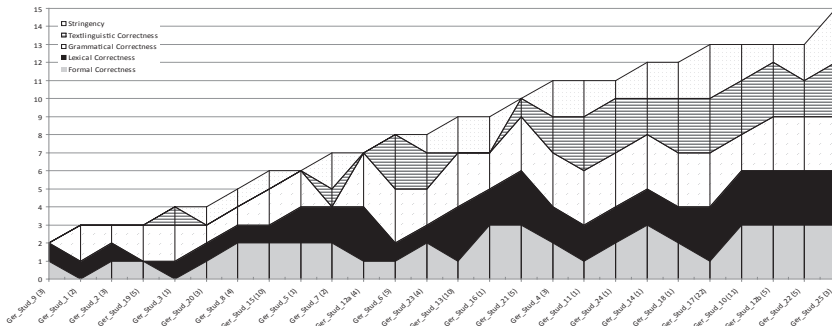
Fig. 5: Students' scores in points for L1 writing (German) in each of the five
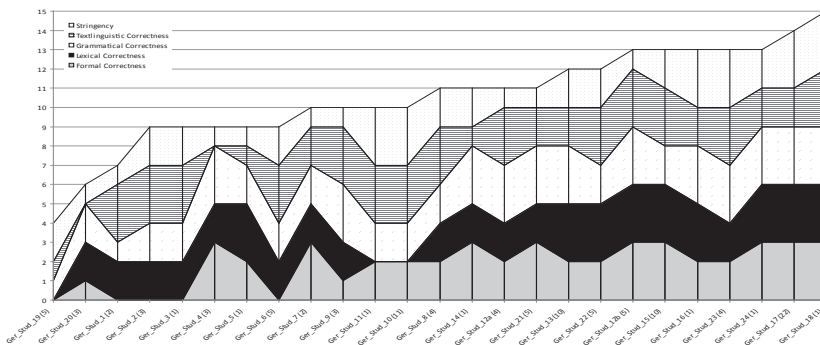   rubrics at the beginning of the semester

Fig. 6: Students' scores in points for L1 writing (German) in each of the five
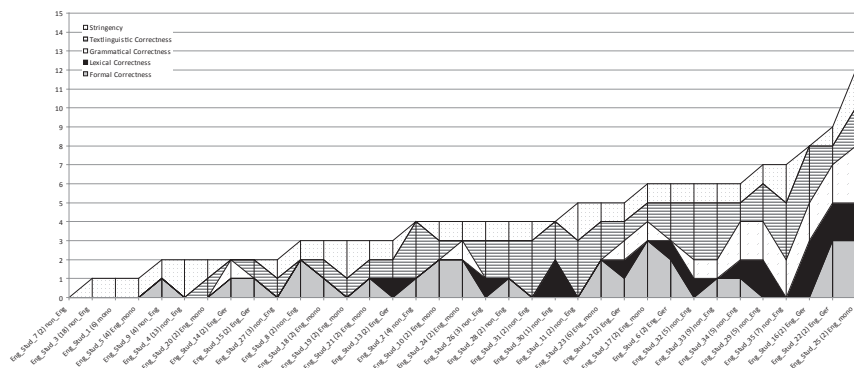   rubrics at the end of the semester

Fig. 7: *Students' scores in points for L2 writing (English) in each of the five rubrics at the beginning of the semester*
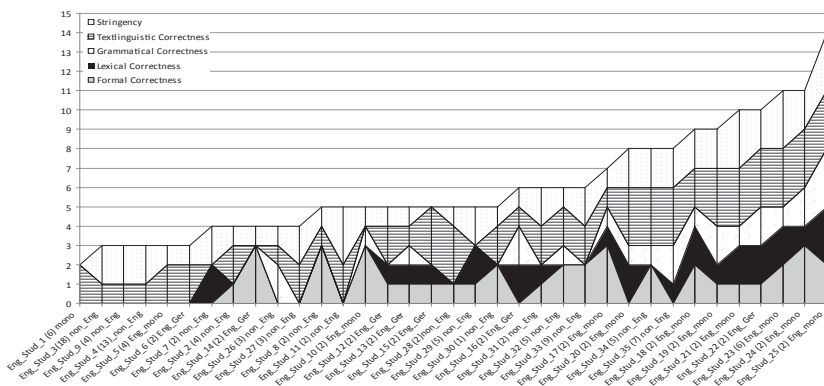
Fig. 8: *Students' scores in points for L2 writing (English) in each of the five rubrics at the end of the semester*

The flatter graphs for the L2 (English) texts show again that the students' writing competence in their L2 lags behind their writing competence in their L1 (German). In the German courses, the weakest students appear to have benefited from the courses more than the strongest students. In the English courses such a tendency cannot be observed as clearly. For both German

and English, the relationships between the scores in the individual rubrics seem to become more harmonious with increasing overall results, i.e., the higher the students' overall scores become, the less the scores in the five individual rubrics differ from each other and the more likely it becomes that the students score in all five rubrics.

With regard to the development of the students' scores in each of the five rubrics, the hypothesis was set up in Göpferich (2014) that, if students had not yet achieved the minimum score of at least one point in each of the five sub-categories, their participation in writing courses would first lead to an improvement of the lower-level competencies as reflected by "formal correctness", "lexical correctness" and "grammatical correctness", before the higher-level competencies "textlinguistic correctness" and "stringency", which require more working memory capacity, continue to develop. Whereas the data obtained for L1 writing competence development seem to support this hypothesis, if formal correctness is ignored[3], the data obtained for L2 writing contradict it. In English, a number of students (the 6 weakest students at the end of the semester) scored in the rubrics "textlinguistic correctness" and/or "stringency" without obtaining any points in the lower-level categories. In contrast, it is interesting to note, however, that Ger_Stud_12, who took a German writing course both in his fourth and in his fifth semester mainly improved his writing skills over these two semesters with regard to text-level competence and stringency (see Fig. 5, where he occurs as Ger_Stud_12a and Ger_Stud_12b).

5 Discussion

The error analyses conducted in the present study have revealed that, upon entering university (and even in later semesters), many students have not yet reached a level of language competence, neither in their L1 nor their L2, that has just to be expanded for the specific purposes of academic writing, but that they also need instruction to close gaps in their general linguistic and

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3   This can be considered legitimate for two reasons: First, although punctuation rules were covered in the courses, they were not focused on. Second, students do not attribute much importance to formal correctness and therefore do not invest much cognitive capacity into this aspect of text quality, which, as a consequence, will then still be available for higher-level decisions.

text competence. The error analyses presented in this article have revealed areas in which this is the case.

A comparison of the qualities of the texts produced by the students at the beginning of writing courses with those produced by these same students at the end of these courses has furthermore shown, for both the German and the English courses, that these courses have led to significant improvements in the students' text production competence. The course syllabi thus seem to have been effective. What we cannot tell from the data analysed, however, is whether modifications in the course syllabi or other teaching methods would lead to even better results and whether the effects observed will be lasting ones.

The findings presented in Figures 7 and 8 might suggest that the "English only" teaching method could be more effective than the contrastive German-English approach. This, however, would be a premature conclusion for the following reason. In order to benefit from a contrastive approach, students need to develop interference resistance. Interference resistance only comes with increasing translation competence and goes hand in hand with the ability to overcome fixedness on a source text and to translate more creatively (cf. Bayer-Hohenwarter 2012). Translation novices have been found to have an inclination to translate word by word and thus to be prone to interference, whereas the translation units tackled by expert translators tend to be larger and their strategies to be more creative (see, e.g., Gerloff 1988: 54 ff.; Dragsted 2005; Englund Dimitrova 2005: 96 ff., 140 f., 231; 2006). Against the background of these findings, it can be hypothesized that the extent to which students benefit from a contrastive approach increases with the level of translation competence they have acquired. The students under scrutiny in the present study were all translation novices, for whom a monolingual approach turned out to be the more effective one. From this finding, however, it cannot be concluded that this would also be the case for students with an advanced level of translation competence. There might be a break-even point with regard to translation competence at which a contrastive approach of teaching writing skills will start to yield better results than a monolingual one. A monolingual approach indeed seems to be the approach to be preferred for translation novices. Further research involving students of various translation competence levels will be needed in order to delve deeper into this topic.

Apart from writing course effectiveness, the present study has also shed some light on the development of writing competence and, more specifically, on the development of individual writing sub-competencies, such as formal, lexical, grammatical, textlinguistic and compositional (stringency) competencies, as components of the dynamic system 'writing competence' in relation to each other. The development of writing competence and its sub-competencies becomes visible in Figures 5 to 8. In these four figures, the patterns at the right ends of the diagrams are more parallel (harmonious) than the patterns at the left ends of the diagrams. Both for the L1 (German) and for the L2 (English), the stretches of the x-axes which show this more parallel pattern are larger for the results obtained at the end of the courses than for the results obtained at the beginning. This suggests that a higher level of writing competence is reflected not only by higher overall scores but also by a more harmonious relationship between the scores in each of the five rubrics, which are assumed to reflect relevant sub-competencies of writing competence. This finding is in line with dynamic systems theory where the reaching of a higher developmental stage has been found to coincide with more stable or harmonious patterns, whereas initial phases of new competence development bursts show in a large variability in the set of variables which form the competence system (Thelen/Smith 1994: 97).

The striking differences in the patterns in Figures 5 to 8 suggest that it might be worthwhile to investigate whether the patterns that occur in the area charts can be correlated with competence levels such as the levels A1 to C2 (at least with regard to the skill 'writing') in the Common European Framework of Reference for Languages (CEFR). A similar endeavour of correlating less advanced learner text characteristics with competence levels of the CEFR (maximum B1) has already been undertaken by Verspoor, Schmid & Xu (2012). The competence levels of the students who, in the study presented in this article, scored 13 or more points might reflect the level C1 or C2. Since students are required to have achieved level B2 of the CEFR in order to be admitted to a BA programme in English language and literature at Justus Liebig University, the average scores of the students who have English as a major or minor should reflect at least this level. The fact that only students who study English obtained more than 8 points might suggest that the scoring system used for the present analysis is sensitive enough to allow for a differentiation between at least the competence levels of B1 upwards with B1 being

the level of English that all German students are expected to have mastered when leaving high school and B2 representing the entrance level required for an English programme. Figures 7 and 8 then also show, however, that not all students admitted to English programmes fulfil this requirement in practice.

In line with McCutchen's (1996) capacity theory of writing, the hypothesis can be formulated that a high stringency score in combination with a high score for textlinguistic correctness can only be obtained when the sub-competencies at the lower levels have been automatized to a certain extent. This hypothesis is based on the assumption that to achieve textlinguistic correctness and stringency, an author has to be able to consider an amount of co- and context that is rather complex compared with the amount of co- and context that has to be considered in order to achieve correctness in the rubrics which represent less complex text-production sub-competencies. Taking into consideration this larger context requires considerable working memory capacity. This working memory capacity can again be assumed to be available only for authors who have acquired a certain amount of confidence and routine with regard to the less complex sub-competencies. Whereas the findings for L1 writing corroborate this hypothesis, the scores that students obtained at the end of their L2 writing courses (see Figure 8) indicate that even students whose lower-level sub-competencies were still underdeveloped managed to obtain relatively high scores for textlinguistic correctness and stringency. An explanation that reconciles this finding with the capacity theory of writing is that macrostructures of argumentative texts as well as the development of a line of argumentation were focused on in the writing courses that students had attended. This may have led to routines for the organization of such texts which then allowed the students to compose stringent and coherent texts without the high cognitive load that this would involve when authors were confronted with the composition of texts for which they did not have fixed genre patterns in their long-term memories to fall back on. If this explanation is correct, this will also mean, however, that the competences students have acquired specifically for writing argumentative texts may not be transferrable to composition tasks that involve different genres. Expert writers are flexible in adapting their higher-order sub-competencies, such as textlinguistic competency and stringency, to new genres, whereas students who have just acquired rou-

tine with regard to a very limited repertoire of textual patterns are not (cf. Steinhoff 2007: 330)[4].

The fact that the lexical and grammatical error ratios were found to correlate at both the beginning and the end of the English courses and at the beginning of the German writing courses corroborates the finding from DST applied to second-language acquisition research that lexicon and grammatical repertoire are connected growers (de Bot/Lowie/Verspoor 2007: 19). No explanation can be provided for the fact that their correlation at the end of the German writing courses was non-significant.

The present study has also provided insight into the interrelationship between L1 and L2 writing skills. The finding that the error ratios at the lexical and grammatical levels were significantly higher in L2 composition than in L1 composition corroborates earlier findings (see Section 2.2). Against the background of the capacity theory of writing, the higher cognitive load involved in decision making at the lexical and grammatical levels in the L2 is a possible explanation for the lower stringency values in the L2 as compared with the L1.

6 Conclusion

The methods of data collection and analysis presented in this article have allowed us to take stock of the linguistic areas in which students commit errors when composing texts, especially argumentative ones, in their L1 and their L2. From the findings presented, conclusions can be drawn as to the topics that should be covered in compensatory writing courses at university entrance level. We do not claim, however, that the topics mentioned in this article are exhaustive.

The methods employed in the present study have also allowed us to 'measure' the impact that one semester of writing instruction has on the development of students' writing skills in their L1 and L2. The study has also allowed us to glimpse into the relationships between writing sub-com-

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4   With reference to Jechle (1992: 55), Steinhoff (2007: 330; our translation) states: "From a social-communicative perspective, highly developed writing skills cannot be assumed before writers are able to adapt to their readerships in a flexible manner, i.e., before they are able to appropriately address their readerships in various texts or genres."

petencies and their development in relation to each other over time as well as into the interdependence between writing skills in students' L1 and L2, where findings of earlier studies could be replicated.

To gain a more complete picture of different stages of writing competence development, the corpus of writing data analysed for the present study needs to be extended to also include data of highly proficient writers on the one hand and writers with a lower competence level than the students under scrutiny in this article on the other hand. In order to investigate the influence of a contrastive or translation-oriented approach on the development of writing competence, the corpus should also comprise data from participants with different levels of translation competence. Ideally, data for both languages should be collected from the same writers composing in each of the two languages, whereas in the present study, the L1 and L2 writers were not identical.

A comparison of area graphs from populations with different levels of writing and translation competence could eventually allow us to address the question whether patterns in the area graphs can be correlated with competence levels, such as the ones of the CEFR. Such comparisons could then also give us more profound insights into the development of individual sub-components of writing competence in relation to each other over time.

Acknowledgements

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Appendix A

Assignment:

Imagine you are writing for a student magazine that covers current controversial issues. For this magazine, compose a text (approx. 250 – max. 350 words in length) about one of the following topics. Your text should be comprehensible (understandable) to your fellow students, i.e., those who are in the same semester at university as you are and have little background knowledge about the topic.

1. Free music for everyone! The Pirate Party in Germany would like to make all music legally available for free download on the internet. Should the copyright restrictions on music and other forms of intellectual property be removed?
2. In an attempt to cut down on pollution in big cities, Germany has created so-called "Umweltzonen" (green zones) in cities such as Berlin, Frankfurt and Hamburg, where the driving of automobiles which do not meet certain environmental criteria is forbidden. Some even recommend banning the driving of cars altogether in big cities. Should there be a general ban on cars in big cities?
3. After having been briefly introduced in 2007 and 2008, tuition fees for university students in Hesse have again been abolished. Should tuition fees be reinstated in the state of Hesse, or should universities charge no tuition to attend them?

Appendix B

Example of an annotated text with minimal stringency (0 points)

The utopia of getting to work in time

Who does not know the decision <semantic: denotation> between taking the bus or <semantic: denotation> driving with the <specifier> own car? There are enough aspects <semantic: denotation> speaking <syntax> for each of it <case, number, agreement>. In Germany, experts want to make this decision easier for travelers: they simply want to ban driving with <preposition> cars in big cities altogether. A brief overview of the advantages and disadvantages of prohibiting cars in German cities <syntax>. <formatting> 7 am. <spelling> <punctuation> and the traffic jam near Frankfurt seems endless. 30 minutes left until work starts. The same every day <genre/idiomaticity>: thousands of workers driving into the city every morning. The same number driving outside <semantic: denotation> every afternoon. The nerverending <spelling> traffic <collocation> is not just bad for the nerves of the poor drivers, it is even worse for the environment around <preposition> Frankfurt, Berlin, <syntax> Hamburg... <formatting> So why not taking <word form> the bus or <specifier> train? Especially with trains <punctuation> there is no risk of getting stuck in the rush hour. Big cities as the above <syntax> can be reached from nearly everywhere <punctuation> and the people who have to go there <text coherence> for work will <modality/illocution> not live too many kilometers away. Another plus: the infrastructure in Germany is highly developed and gets improved regularly. Waiting two hours for the next bus was a long time ago <idiomaticity/genre>. You pay for it <text coherence> and save lots of money you would <syntax> have <tense> to spend for parking lots <semantic: denotation> or tickets because, in a hurry, you passed <semantic: denotation> a red light. Avoiding traffic jams, <punctuation> help <word form> the environment and <punctuation> by <preposition> doing so <infinitive/participle>, save <repetition word form> a lot of money-<formatting> there aren't any disadvantages of banning all cars <implicitness>, are there? <syntax> Of course this <text coherence> can <modality/illocution> just be an <specifier> utopia. <repetition formatting> Taking the bus or the train is a good thing to do <punctuation> but in times of decreasing <semantic: denotation> prices every year <syntax>, it became

<tense> a luxory <spelling> and impossible for people with low wage <word form>. Workers who cannot afford the 30 Euros for the train from Gießen to Frankfurt every day will be excluded <semantic: denotation> from public transport completely. Furthermore, the train or the bus leaves. <punctuation> With <semantic: denotation> you <syntax> in it or not. Your car is always waiting <aspect> for you. A great plus for all vehicles who will bring you to work late just because of your own fault. <sense> Flexibility, independence and always on time <syntax> – advantages no German worker does not want to have. If there will not be <tense> a change in mind <semantic: denotation><formatting>- and in the price-policy-<repetition formatting> banning cars in big cities will stay what it is today: wishful thinking. (410 words)

Example of an annotated text with maximum stringency (3 points)

Warum das Autofahren in Großstädten generell untersagt werden sollte – ein Betrag <spelling> von [XY], ein umweltinteressierter Student <case, number, agreement> der JLU Gießen

In Freiburg, Deutschlands selbstproklamierter <word form> „GreenCity" <punctuation> hat man nun schon seit einigen Jahren Erfahrungen mit einem nahezu vollständigen Verkehrsverbot in der Innenstadt sammeln können. Statt auf den PKW greifen Freiburger nun wie selbstverständlich auf das sehr gute innerstädtische ÖPNV Netz <spelling> zurück, welches durch eine Wiedereinführung des Tram-Netzes enorm an Attraktivität gewonnen hat. Dies erlaubt ein stressfreieres Vorankommen in der Innenstadt und trägt zur großen Akzeptanz des Verbots in der Bevölkerung bei. Einer Umfrage des Freiburger Geographischen Instituts zufolge, <punctuation> sind <case, number, agreement> die Mehrheit der Bürger, <punctuation> sehr zufrieden mit dem Verbot. Den weiteren Gründen für die breite Akzeptanz des Verkehrsverbots möchte ich im Folgenden nachgehen und aufzeigen, warum das Freiburger Modell auch in anderen deutschen Städten umgesetzt werden sollte.

Eine Auswertung der Umfrage der freiburger <spelling> Geographen ergab, dass ein wichtiger Grund für die breite Akzeptanz nicht etwa dem Ursprünglichen <spelling> Ziel, der Verbesserung der Atemluft, zugeschrieben werden muss, sondern dass Freiburgs Einzelhandel nun viel problem-

loser auch fußläufig erreicht werden kann. <punctuation> Ein positiver Umstand, der von allen Befragten hervorgehoben wurde. Nicht nur für den innerstädtischen Einzelhandel, auch für die Freiburger Gastronomie und Hotellerie hat sich die Abschaffung des innerstädtischen Verkehrs als wahrer Geldsegen erwiesen. <formatting> Freiburg, die Stadt der 1000 Bächlein, liegt in der Nähe des Drei-Länderecks <spelling> und zog schon immer Wochenendtouristen, vor Allem <spelling> aus der Schweiz, an. Seitdem sich die Stadt, Dank <spelling> des Verkehrsverbots, als „Shopping-Metropole" des Südwestens fest etabliert hat, verzeichnet Sie <spelling> nun auch unter der Woche Gäste aus allen Nachbarländern. Vor Allem <repetition spelling> die Franzosen schätzen die ruhige Innenstadt mit den zahlreichen Möglichkeiten zum Flanieren und Einkehren und fallen auch unter der Woche regelrecht in der schönen Zähringerstadt ein. Die Freiburger selbst bewerten das neue Interesse an ihrer Stadt im Ausland als sehr positiv und sind stolz auf ihre grüne Stadt mit dem neuen internationalen Flair.

Das Beispiel Freiburg zeigt, <punctuation-> nach Meinung des Autors, <-punctuation> anschaulich, wie eine Regelung, welche ursprünglich der Verbesserung der Umwelt <collocation> dienen sollte, auch viele andere positive Effekte, vor Allem <repetition spelling> für den innerstädtischen Einzelhandel, haben kann. Insofern kann eine flächendeckende Einführung von Autoverboten in allen deutschen Innenstädten nur begrüßt und aktiv vorangetrieben werden. Eine wichtige Voraussetzung für das Gelingen und für die breite Akzeptanz dafür ist jedoch ein sehr gutes ÖPNV-Angebot in der Innenstadt und, damit einhergehend, die Schaffung von ausreichend Pendlerparkplätzen am Stadtrand.

Um dies zu erreichen, sollten zukünftige autofreie Städte als Vorbereitende <spelling> Maßnahme eine Wiedereinführung der Trambahnen überlegen <semantic: denotation>, welche wegen ihres sauberen und kosteneffizienten Elektroantriebs in Fachkreisen als idealer „grüner" Autoersatz in Großstädten angesehen werden. Außerdem ist der Bau einer Tram-Infrastruktur kosteneffizienter als der Neubau eines U-Bahnnetzes, der besseren Alternative für finanzkräftigere Großstädte. (443 words)

Part III
Subjective conceptions
of writing and how to foster it

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Portfolios as a means of developing and assessing writing skills[1]

Abstract

English: Writing portfolios can serve various purposes: They can be used both as a tool for supporting and facilitating learners' individual learning processes and as an assessment tool, which rather focuses on learning outcomes and achievements. Through the use of portfolios, improved learning processes, a more holistic approach to assessing writing skills, and, ultimately, better learning outcomes are expected. The aim of this study is to explore a teacher's and her learners' actual use of a portfolio as well as their perception of portfolio work in the context of foreign language writing instruction in order to reveal patterns and generate hypotheses on portfolio work. Therefore, this study has a strong focus on the actual use of the writing portfolio and the circumstances influencing portfolio work. The major hypothesis generated in this study through qualitative research methods relates to a gain-loss effect of portfolio use. It suggests that the introduction of portfolios in the writing classroom cannot just be viewed as an additional offer to the students and their learning but can also necessitate abandoning established elements and procedures.

German: Schreibportfolios erfüllen verschiedene Funktionen: Sie eignen sich einerseits dazu, den Schreibprozess zu unterstützen und die Individualität der Lernenden zu fördern. Andererseits können sie als Instrument der Leistungsfeststellung genutzt werden, wobei weniger der Prozess als vielmehr die Lernergebnisse im Vordergrund stehen. Durch den Einsatz von Portfolios werden eine Unterstützung von Lernprozessen, die Möglichkeit eines holistischen Zugangs zur Feststellung von Schreibfertigkeit sowie letztendlich bessere Leistungen erwartet. Ziel dieser Studie ist es, den Umgang einer Lehrerin und einer Gruppe von Studierenden mit dem Portfolio sowie ihre Wahrnehmungen hierzu im Kontext der fremdsprachlichen Schreibförderung zu ergründen, um mit der Aufdeckung von Mustern Portfolioarbeit besser zu verstehen.

Dabei liegt das Hauptaugenmerk auf der tatsächlichen Verwendung des Portfolios und dessen Wahrnehmung. Die zentrale Hypothese, die im Rahmen dieser Studie als Ergebnis qualitativer Forschung aufgestellt wird, beschreibt einen Gewinn-Verlust-Effekt der Portfolioarbeit und nährt die Annahme, dass Portfolioarbeit nicht nur als Gewinn verstanden werden, sondern in verschiedenen Bereichen auch einen Verzicht auf zuvor genutzte Elemente und Strukturen bedeuten kann.

1 Introduction

Learning portfolios are widespread in education. They are used in early childhood education, in all types of schools and educational settings, as well as in teacher training. In the foreign language classroom, the European Language Portfolio is prevalent but open portfolio formats are also used, for example audio portfolios focusing on listening and speaking skills, and writing portfolios. The latter are the focus of this study.

The use of portfolios is expected to improve teaching and learning on several levels, for instance by individualizing learning, promoting learner autonomy and by offering an opportunity for a fair and holistic assessment of complex skills or competencies (Grittner 2009; Kara 2007). Recent studies optimistically show that portfolio use in the foreign language (L2) writing classroom can reduce writing anxiety (Öztürk/Çeçen 2007), help to improve self-assessment skills (Poppi/Radighieri 2009) and lead to better texts (Aydin 2010; Khodadady/Khodabakhshzade 2012; Tezci/Dikici 2006). These results show that the positive effects of portfolios can encompass improved language and writing skills, improvements with regard to metacognitive and strategic aspects as well as changes that concern the affective level. However, little is known about the process of portfolio work that leads to these outcomes.

This article first focuses on the potential uses of portfolios and will then investigate a teacher's and her students' perceptions of portfolio work as well as the underlying assumptions that motivate their actions. The research questions are: How does the teacher use the portfolio to promote and assess writing skills? How do students perceive the portfolio as a tool to improve their writing skills? How do they perceive portfolio-based assessment? Based on this deep understanding of the processes of portfolio use and the underlying assumptions and attitudes, implications for the development of tailored portfolio concepts will be presented in the last part of this article.

2 Learning portfolios

In general terms, a learning portfolio is understood to be

> "a purposeful collection of student work that exhibits the student's efforts, progress and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for selection, the criteria for judging merit, and evidence of student self-reflection." (Paulson et al. 1991: 60)

Several features that are common to all kinds of portfolios are subsumed under this rather broad concept: Portfolios are tools to document learning for the learners themselves as well as for others, including teachers, classmates and parents. Moreover, they are tools of reflection and assessment.

As portfolios focus on learning products as well as on the learning process, they may include proof of the learner's accomplishments as well as of poor or even failed attempts. This understanding of learning and achievement differs crucially from widespread forms of 'red-ink' writing instruction that focuses on correctness.

Having their origin in the progressive and reform pedagogy of the late 19th and early 20th centuries, learning portfolios emanated from a desire to renew educational policy with an emphasis on facilitating the individual's learning process and personal development. This included an understanding of learning as a meaningful, complex and individual process (Häcker 2008: 27). These ideas were introduced into the writing classroom in the 1950s with writing folders in Great Britain (Hamp-Lyons/Condon 2000: 15) and in the 1970s with writing portfolios in the United States (Calfee/Freedman 1996: 4), where the concept was refined and further developed.

The current concept of *portfolio* does not just refer to the actual folders but is rather the manifestation of a specific approach to teaching with a set of assumptions, decisions and techniques. This allows, and at the same time requires, the adaptation of this approach to the specific classroom context with the given conditions, especially with learners' individual prerequisites and needs (Ballweg/Bräuer 2011: 4).

3 Portfolios in the writing classroom

The term *writing portfolio* refers to a form of portfolios which centres on writing skills, even though reading skills and all other aspects of language

use are also included. They are expected to make working and writing processes as well as the individual writer's skills more visible and, in doing so, are expected to raise the students' awareness of their own writing processes and support them in improving their writing skills.

3.1 Documenting and facilitating the development of writing skills

The broad understanding of the term writing skills, as it is also used in the context of portfolio work, relates to more than just the ability to write correct and well-structured texts. Writing skills are not solely measured by the output, in this case a good text, but also by an adequate process. For writing in a first language (L1), Fix (2006: 23) acknowledges four subsets of skills which constitute writing skills:

- knowledge-based skills which include knowledge of the topic but also of text types and language use
- methodological skills which enable writers to organize their writing process
- social skills which allow writers to anticipate their readers and to write reader-based texts
- personal skills which include the writers' capacity for self-regulation

For L2 writing, language skills, knowledge of culturally specific features of text types and intercultural competence need to be added to the list. Yet, to be a skilled writer does not only mean to possess these skills but also that they can be translated into action (Beaufort/Iñesta 2014: 149–151). Based on this understanding, writing skills need to be developed by completing writing tasks which have to be specific, embedded in a context and communicative (Ballweg 2015a: 102).

Portfolios are not only a place to display the students' own writing skills but in addition to this, they offer numerous opportunities to practice writing, as they include a large amount of written documentation and reflections (Gläser-Zikuda/Lindacher 2007: 192). In this manner, the students' writing skills are expected to be promoted. In the L2 classroom, this type of ungraded writing assignment is found to be helpful as the students' texts tend to get longer and syntactically more complex with practice (Bonzo 2005: 124; Delett et al. 2001: 559 f.).

3.2 Representation of the writing process

Portfolios were introduced into the writing classroom when the focus of instruction and assessment shifted from the product of writing to the writing process. They display the writing process as they include first drafts of texts, comments and feedback by peers and teachers, learning logs, reflections on the text as well as the comments, revised drafts and a final version (Bräuer 1997: 5). This allows readers to reconstruct the individual learner's writing process.

The underlying understanding of the writing process is often explained with reference to Hayes & Flower's model of writing with its three iterative and recursive phases of planning, translating (i.e., formulating) and reviewing (Hayes/Flower 1980: 11). Despite the criticism levelled against Hayes & Flower's early writing model that it oversimplifies writing processes (e.g., Molitor-Lübbert 1996: 1006–1008), this model serves quite well, and in fact, better than Hayes' later models (1996; 2012), to explain the actual steps of students' use of writing portfolios, as notes, first drafts and revisions are collected and arranged to illustrate the individual's working process.

Yet, the above-mentioned criticism, which is also closely related to post-process theory, has to be taken seriously. The model of a writing process of planning, writing a first draft and revising does not reflect the writing process of all writers and, therefore, can be considered as over-generalizing (Carstens 2008: 83 f., 93). From a post-process theorist's point of view, successful writing instruction should be more flexible and individual and should include creating manifold learning opportunities, offering opportunities for interaction and the negotiation of meaning and facilitating the development of language awareness (Carstens 2008: 86–92), stressing many features portfolio-based instruction includes with its profoundly individual, situational and context-bound view on writing (Ball/Ellis 2008: 504–510). This approach, however, suggests applying the three steps of planning, formulating and revising less strictly as there might be, for example, students who do not work with first drafts in a narrow sense.

The role of feedback and interaction with peers in the writing process and in writing portfolios as mentioned above can be illustrated using a writing process model by Becker-Mrotzek & Böttcher (2006: 27). The authors emphasize writing as an asynchronous way to communicate and refer

to Ehlich's idea of a "zerdehnte Sprechhandlung" (extended speech act) (Ehlich 1983: 32). The anticipation of a readership with its knowledge, expectations, interests and authority strongly influences individuals in their writing process (Becker-Mrotzek/Böttcher 2006: 27).

While these aspects of writing processes and feedback apply to first- and second-language writing, there is a specific feature to L2 writing portfolios: As the first language is considered a crucial part of second-language writing processes (Börner 1989; Grießhaber 2006; Krings 1989), it might be assumed that L2 writing portfolios are bi- or multilingual (Ballweg 2015a: 109). However, this is neither the case in any of the research quoted here nor in the writing class that formed the context of my own study. In general, in many cases L2 writing portfolios do not represent L1 aspects of the L2 writing process.

3.3 Feedback and social interaction

It is self-evident that feedback and interaction with potential readers is essential for developing the ability to write reader-based texts:

> "The consideration of written language as communicative tool implies that every text has an audience. From this point of view, the idea of negotiation between writer and reader is introduced into the composition process." (Milian Gubern 1996: 273)

This kind of negotiation between writer and reader can immediately help writers to improve the texts on which they are working. Furthermore, it can promote their general writing skills, especially with regard to their ability to anticipate the reader's perspective. In her meta-analysis of research on writing, Porto (2001: 40) concludes that writing exercises have only little effect on writing skills if no feedback is provided.

The most common form of feedback is comments by teachers. The findings on effective teacher feedback, however, are contradictory and inconclusive, as Busse (2015) shows in her meta-analysis of recent research on the influence of feedback on writing motivation. This is also true for other aspects: whereas O'Brien (2004) emphasizes that feedback on content and structure is most effective, Gascoigne shows that L2 learners can use feedback on correct language use to revise their texts in most cases but do not or cannot react to feedback on content and structure (Gascoigne 2004: 74 f.).

These findings suggest that it can be difficult to measure the effectiveness of feedback due to the multiple and partly interdependent factors that have an impact on the writing process.

To successfully integrate feedback in writing and learning processes, learners have to take the responsibility and demand feedback at the individually relevant stages in their writing process, which is something they also have to learn (Cresswell 2000).

The need for training is also evident in the provision of peer feedback (Kamimura 2006; Rahimi 2013), which is considered a low-threshold form of support (Bruffee 1984: 637; Hu/Ren 2012: 69, 79). Peer feedback as a form of social interaction (Bräuer 1996: 40) and as a means to mirror the recent status of a text (Bräuer 2004: 24) requires learners to become readers of their peers' texts and to ask questions which then serve to establish how a text can be understood and perceived by an interested reader (Bruffee 1984: 641).

Peer feedback differs from feedback given by teachers and can be understood as being complementary (O'Brien 2004: 9). If learners comprehend its different function, they show a high acceptance of peer feedback and are able to use it to improve their writing. If they feel that peer feedback is offered instead of their teacher's feedback, they do not consider it useful, as a study with 116 learners of English in China shows (Hu/Ren 2012: 78). This may be one of the reasons for the negative attitude towards peer feedback in L2 learners (e.g., Kasanga 2006), which contrasts with findings from studies where it was seen rather positively (Ballweg 2015b; Kamimura 2006: 12; Mawlawi Diab 2010: 92).

In general, peer feedback is considered a useful supplement to teacher feedback as it focuses on comprehensibility rather than on correctness. However, several factors can influence the success of peer feedback, such as the learner's age, the number of learners in the class and their language proficiency (Rollinson 2005: 29). Learners need to be prepared to both give and receive feedback. Furthermore, an atmosphere of trust is essential to allow helpful feedback. It must then lead to action, which again requires a setting in which the revision of texts is valued (e.g., Keller 2010: 72).

3.4 Reflecting the individual writing process and achievements

The awareness and metacognitive control of one's own writing process is essential for successful writing (Glaser/Brunstein 2008: 371; Schoonen/Glopper 1996: 99). This includes the monitoring of the individual writing process, the setting of aims, the evaluation of results at different stages of the process and the awareness of affective aspects (Glaser/Brunstein 2008: 374).

Writing portfolios are used as a tool to reflect on strengths, weaknesses, personal objectives as well as those specified by the teacher, the individual writing process, and more. As it is assumed that the monitoring and control of the writing process does not automatically develop with writing experience (e.g., Aziz 1995: 22), portfolio-based writing instruction also includes the adoption of new writing strategies.

The reflection in the portfolio and in conferences with peers and teachers are shown to have positive effects on the writing performance. Khodadady & Khodabakhshzade (2012) focus on the students' self-assessment activities and give an account of their significantly better results in a standardized IELTS[2] writing test as compared to the control group.

Portfolio-based writing instruction, and specifically reflective activities, are also shown to have positive effects on students' ability to manage their own learning (Hung 2008: 139), their overcoming of writing anxiety (Kabilan et al. 2007) and on the quality of the texts they write. Aydin (2010: 481) presents the following findings from a study with 39 future teachers of English in Turkey:

> "[P]ortfolio keeping has beneficial effects on the improvement of vocabulary, grammar, reading and research skills, organization of paragraphs and compositions, punctuation and capitalization, giving and receiving feedback, paragraph and composition development methods and techniques, and qualifications of paragraphs and compositions" (Aydin 2010: 481).

He shows that as syntax gets more complex, the students' planning phase becomes longer and more elaborate, and the texts are more creative and original (Aydin 2010: 481–483).

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2 The *International English Language Testing System* (IELTS) is a standardized test for English as a Foreign Language.

What the above-mentioned studies have in common is that their authors strongly emphasize the potential of portfolio use and that their findings point in this direction as well. Despite this, some critical aspects are mentioned, for example, the students' rejection of peer feedback (Aydin 2010: 484). In general, more research into considering the settings and the way in which portfolios are used is required in order to better understand the described effects and the conditions that are necessary to achieve these effects.

3.5 Portfolio-based assessment

Another field in which portfolios are expected to have much potential is assessment. As language learning is considered a complex activity that requires knowledge, meta-knowledge and the capacity for self-directed learning (Kohonen 1997: 11), the assessment of language learning should include all these aspects. Portfolio-based assessment seems to be an opportunity to transfer recent ideas of teaching, which are characterized, among others, by concepts of flexibility, diversity and equality (Conacher/Kelly-Holmes 2007: 28), into assessment. In a modern understanding, learning achievements are product- as well as process-oriented, individual, diverse, describable by the learners themselves and by others, communicable, reflectable and made cooperatively (Breuer 2009: 72–77; Legutke 2002: 107). This can neither be assessed using standardized tests that focus on vocabulary or morphosyntactic correctness, nor can it be assessed using essays. If learning takes place in complex contexts and in interaction with others, assessment cannot be detached from the context (Lissmann 2007: 276).

Portfolio-based assessment can take account of most of these ideas. Products and processes are both shown and contextualized. Achievements are presented over an extended period of time so that ideally development can be assessed (Hamp-Lyons/Condon 2000: 4).

It must be considered that portfolio-based assessment may cause difficulties: it is time-consuming and work-intensive for teachers and learners (Legutke 2002: 108) as well as difficult to integrate into a system with an institutional and curricular need for grades. While portfolios invite feedback on the individual learner's development, they are not made for grading in a rather competitive learning environment, especially as grading might

hinder not only honest reflections (Calfee 2000: 285) but also the inclusion of poor first text drafts in the portfolio. The portfolio concept has to fit the respective learning culture or the learning culture has to develop in a way that allows for new approaches to assessment (Breuer 2009: 210–212).

Even in a Montessori primary school where no grades are given, portfolio-based assessment is not without challenges, as Grittner (2009) points out in an extensive study on parents', teachers' and learners' perspectives on portfolio-based assessment. In spite of the potential difficulties, she concludes that portfolios are useful to give students and teachers information on the learners' achievements and developments. Most interestingly, the teachers' feedback encompasses the students' working processes but tends to neglect the learning content (Grittner 2009: 170).

With regard to the effect of portfolio-based assessment in writing and drawing, Tezci & Dikici (2006) point out that the learners who were working with portfolios produced significantly better texts than the control group. These positive consequences are chiefly attributed to the frequent feedback sessions with peers and teachers.

Similar findings were made by Khodadady & Khodabakhshzade (2012) for 59 learners of English in Iran. The students who were working with a writing portfolio achieved better results in an IELTS essay test than those in the control group. For the examined aspects of writing performance, portfolio-based instruction and assessment seems to have clear effects. However, in these studies it is not always evident how portfolio-based instruction differed from that in the control group and how the teachers' motivation and commitment might have differed, and how this might have subsequently influenced the results. The broad understanding of learning outcomes discussed above, and also described by these authors as a major benefit of portfolio use (i.e., the student's individual development, their individual writing process, self-assessment, and reflection), is not represented in the studies, as eventually only text quality rather than personal development, the individual process and adjacent factors is measured. It can be assumed that the idea of learning achievements and assessment described above is hard to introduce into the classroom and into research likewise.

4 The study

As stated above, portfolio work is based on a set of assumptions and techniques of foreign language teaching. Only few of the studies cited in this article that show the positive effects of portfolio use in the L2 classroom describe how portfolios were actually used in the classroom and thus which aspect of the portfolio has ultimately led to these positive effects. Therefore, my study (Ballweg 2015a) aimed at exploring the use and the perception of writing portfolios in German as a Foreign Language at tertiary level. In this chapter, I will present one aspect of this bigger study and elaborate on it.

The study is based on the assumption that there is a major gap in research on portfolios because apart from an action research study on the introduction of the European Language Portfolio by Kristmanson et al. (2011), a vast majority of research was conducted in courses with experts on portfolio work as teachers, mostly in the form of action research. However, in practice only few teachers in Germany using writing portfolios have actually been prepared to use them. For that reason, I focused on how an experienced language teacher with no prior experience in portfolio work introduces and uses this tool.

For this purpose, interviews with individual students and the teacher as well as videography of classroom activities and portfolio conferences were used to gain insight into processes, the underlying assumptions and the individuals' perceptions of portfolio work. The results show how the teacher is constantly struggling to find an adequate way of using the portfolio while a multitude of options is available and difficult decisions have to be made (Ballweg 2015a: Chap. 8). Moreover, the data show in detail which prerequisites make portfolio work positive and useful to learners and to the teacher (Ballweg 2015a: Chap. 9).

In the following, I will focus on the use of portfolios in the L2 writing classroom and on the students' and the teacher's perceptions.

4.1 The context of the study

The study was conducted in the context of a course on "Writing in an Academic Context" in German as a Foreign Language for 16 engineering students at a German university. The level of language proficiency was B1 to B2 according to the Common European Framework of Reference for

Languages (CEFR), and the course took place weekly with three hours per week over nine weeks with an additional session for portfolio conferences.

The teacher was an experienced teacher for German as a Foreign Language. She had heard and read about portfolios and worked with checklists from the European Language Portfolio before. In the semester before the study was conducted, she had tried to introduce portfolio work into a course with the same title. Still, she considered herself a novice in using portfolios in the classroom.

The students were asked to keep a portfolio with several drafts of texts. Apart from three shorter texts of only one paragraph, the students were asked to write a summary, a discussion essay, a further essay, a CV and a cover letter for a job application. At the beginning of the semester, the teacher had intended to give more writing assignments but as portfolio work proved to be time-consuming, she refrained from this.

Classes were used to give input on how to write a good text and to prepare for the writing assignments. The texts were written as homework and discussed with the peers in the session that followed. Two of the texts had to be handed in via e-mail for feedback but the teacher encouraged the students to hand in more than two texts so that she could better support the students. However, only one student made use of this opportunity. The others sent in two texts or even fewer.

The teacher's focus clearly was the students' reflection on their individual writing processes and their knowledge about writing and texts. She offered them information on the structure of texts as well as on strategies for planning, writing and revising texts. She did so by discussing these aspects in class and working with sample texts from the students. Moreover, she used peer feedback to encourage students to reflect on text quality in general and especially on the quality of their texts by applying the criteria discussed to the texts of their peers and to their own texts.

The students kept a portfolio folder – digital or in print – that included their own learning biography, the first drafts and the revisions of the five texts (summary, two essays, CV, cover letter) and a learning log. The teacher gave several suggestions on what to include in the learning log but did not give any guidelines. So in most cases they consisted of notes on the content of each class and a list of vocabulary. Apart from these instructions on the content of the portfolios, the students were free to decide on how

to organize their portfolios and what to include. The teacher encouraged them to include material from other language or engineering classes if they considered them useful to demonstrate their writing skills in that semester. For this reason, the portfolios that the students submitted for grading at the end of the semester differed significantly in length.

In addition to the weekly classes, the teacher held a portfolio conference with groups of two to four students at the weekend before the last session in class. While portfolio conferences can have a wide range of foci, for this specific conference, the teacher asked the students to prepare general questions on the organization of their portfolios and to present their most recent versions of them. In most cases, the students took turns reporting on their work with the teacher giving feedback to each of them while the others were listening. Only in one group, the students started discussing their portfolios and their questions with each other.

4.2 Research questions

Whereas previous research on writing portfolios placed a strong emphasis on the effect of portfolio use on writing proficiency (e.g., Khodadady/ Khodabakhshzade 2012; Tezci/Dikici 2010), this study aims to shed light on the usefulness of portfolios from the students' and teacher's perspective. More specifically, the following questions will be addressed:

1. How does the teacher use the portfolio to promote and assess writing skills?
2. How do students perceive the portfolio as a tool to improve their writing skills?
3. How is the portfolio used and perceived as an assessment tool?

4.3 Research methods

As the research questions indicate, the study aims at an in-depth exploration of portfolio-based writing instruction over the course of nine weeks. Portfolio work is supposed to be understood from the perspective of teacher and students, considering that their views and perceptions are influenced by numerous individual factors and subject to change in a constantly changing environment (Gibbs 2007: 5). Therefore, this study does not intend to develop a universally applicable explanation of portfolio work but rather

attempts to gain a deep understanding and to provide a rich description (Geertz 1973; Ponterotto 2006) of perspectives, influences and processes in a specific course at a specific time that – through a purposeful selection of participants, an extensive corpus of data and a traceable as well as comprehensible research method – allows us to understand the use of portfolios in other contexts and forms a basis for further research.

To this end, a qualitative research approach was used, which is characterized by the aim of exploring and understanding a phenomenon with a focus on the individual, a holistic perspective and a consideration of the context (Mayring 2003: 20; Riemer 2014: 21; Riemer 2006; Settinieri 2012: 250 f.). Grounded Theory methodology (Glaser/Strauss 1967; Strauss/Corbin 1996) proved to be an adequate means for exploring an aspect of portfolio work that has not been investigated extensively before and therefore required a "systematic, inductive, and comparative approach for conducting inquiry for the purpose of constructing theory" (Bryant/Charmaz 2010: 1). The result is not the presentation of causal connections but rather the identification of patterns in the data that allow an understanding of a phenomenon on a more abstract level.

For the generation of data[3], the lessons and the portfolio conferences were audio-taped. The core of the 25 hours of audio-taped and transcribed data, however, was formed by four interviews with the teacher and three interviews with each of the seven students participating, which were conducted over the course of one semester. The students came from France (2), Australia (1), China (1), Brazil (1), India (1) and Iran (1) and were in their early 20s. Four of them were enrolled in degree programmes in engineering, three were exchange students in the same field. Four of them were female, three were male. The time they had already spent in Germany ranged from one month to two years at the start of the semester.

After transcription, the data were coded in accordance with Grounded Theory.[4] The first step was the open coding of the data from the classroom

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3   From a constructivist perspective, I prefer the term *data generation* to *data collection* and *data interpretation* to *data analysis* as these terms better stress the subjectivity of perception and understanding.

4   For an extensive discussion of Grounded Theory in language research, see Ballweg (2015a: Chap. 6).

observations and from the interviews for which initially codes close to the data, or in-vivo codes, were used, which means that the wording used by an informant was used in a code itself or that the codes were very close to the literal meaning with a minimum of interpretation and abstraction. This step was followed by focused coding.

> "Focused coding means using the most significant and/or frequent earlier codes to sift through large amounts of data. Focused coding requires decisions about which initial codes make the most analytic sense to categorize your data incisively and completely" (Charmaz 2006: 57).

Focused coding is used to bundle codes into categories. Hints to what aspect might be relevant are, among others,

a) statements that are connected or contradict other research
b) statements of general interest
c) repetitions, breaks and changes in the narratives and emphasized elements and aspects connected to former research

The second step of data interpretation in accordance with Grounded Theory is axial coding. Here, the data are taken to a further level of abstraction. Data that have been segmented during the phase of the open coding are put together again. In the case of the study at hand, data from the portfolio conferences were added. According to Strauss & Corbin (1996: 118–131), the categories are arranged according to a coding frame that names a core category, which is a central phenomenon, and groups other categories around it to explain causes, intervening conditions, context, the stakeholders' strategies, context and consequences (Strauss/Corbin 1996; Strübing 2008: 28). In this manner, all facets of a phenomenon as well as its conditions and influences can be reconstructed.

The third and final step is selective coding (Strauss/Corbin 1996: 94), where all the data are viewed again and deductively coded to support or dismiss the results of the axial coding.

The results can, in the sense of Grounded Theory, lead to what is to be understood as alterable, flexible "middle range theory" (Merton 1968) that explains a phenomenon at a certain moment in a defined context and serves as ground for further research (Strübing 2008: 10).

5 Results: The students' and teacher's perspectives on writing portfolios

The data in this study were coded and interpreted as described above to answer the research questions and to shed some light on the way the teacher used the portfolio in the writing classroom (5.1), on the students' perception of the portfolio as a tool to improve their writing skills (5.2) and on the portfolio as an assessment tool (5.3). The findings can best be summarized by the term of a gain-loss effect (5.4).

5.1 The teacher's use of the portfolio

To understand the students' perceptions of the portfolio, the first step of data interpretation must focus on how the teacher used the portfolio. The aim is not to evaluate or even judge the teacher's actions but rather to describe and retrace them. As there was only one teacher in this study, the results are not to be understood as saturated but they rather describe an individual teacher's actions, perceptions and assumptions and thus form the basis for the interpretation of further data concerning the students' perspectives. However, it can be anticipated that the results of this case study are of a high explanatory value and can be used as a starting point for further research.

The teacher explained that she aimed to prepare students with a proficiency level in German of B1 to B2 according to the CEFR for academic writing, teaching them the features of different text types and helping them to understand their own writing process (UB 1, 28–48)[5]. In the second interview in the middle of the semester, she stated that through teaching this class, she would gain experience that would be necessary to use portfolios reasonably in the following semesters.[6] From this statement it becomes

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5 Explanation of abbreviations: UB (= Unterrichtsbesuch) – observed class; I_LP (= Interview Lehrperson) – interview with the teacher [plus number of interview I–IV]; I_[+ student's name] [+ number] – interview with student [name] plus [number of the interview].

6 All data excerpts have been paraphrased or translated from the original German into English in line with the language policy of the volume. As translations are to be understood as a form of interpretation, the character of the original data excerpts may hence not be represented in its entirety.

evident that she was aware that her use of the portfolio showed problematic elements. She considered herself a novice in using portfolios and felt she was struggling to introduce the tool into her teaching, which showed in different ways in the data. Several statements like the one referred to above imply that, from the teacher's point of view, learning how to use a portfolio is primarily based on trial and error, which corresponds with findings by Kristmanson et al. (2011).

How a novice perceives portfolio work is closely related to the category of insecurity, which served as one of the head categories under which several other categories were subsumed during axial coding. In this manner, the quality and context of the insecurity could be described in more detail: Elements of insecurity, doubts and fears showed and were explicitly mentioned at several points in all of the interviews with the teacher so that it can be understood that her insecurity was not an initial one that was caused by the confrontation with a new challenge but was present all the time. As the mentioning of fear and insecurity was characterized by a certain manner of speaking, namely stammering, frequent pausing, abrupt break-offs and the repeated use of modal particles with a mitigating function, especially *a bit* ("so=n bisschen"), these features served to identify other potentially relevant statements in the data. It is interesting to note that the teacher's insecurity was related to portfolio activities and, in the data, did not show with regard to other aspects of language teaching and classroom management. A crucial element was the connection between her insecurity and her desire to promote the students' individuality. When she mentioned her strong fear to give too much information about portfolios to the students and, in so doing, limit their individuality in learning (I_LP IV, 652–654), she made a connection that might not have been obvious to outsiders. However, the data showed that her understanding of supporting learners' individual needs was more or less to leave them maximum freedom in all decisions and actions. For this reason, she introduced the portfolio with all possible functions at once, namely as a tool for reflection, self-assessment, personal development, learning, documentation, consultation and promotion of writing skills. Furthermore, she explained that it could replace a textbook, would help her to give the students feedback on their texts and that it could be used for assessment (Ballweg 2015a: 248). She left it to the students to shape the portfolio concept according to their needs, which they

actually did (Ballweg 2015a: Chap. 9). She stated that she did not want to give many explanations at the beginning but was prepared to be more specific when the students were seriously struggling with their portfolios (I_LP I, 112–116).

What might be interpreted as the teacher's helplessness in using the portfolio, rather – or at least also – proved to be the effect of a misunderstanding of the concepts of learner autonomy and individualized language teaching. Her actions were guided by the general idea that portfolios, learner autonomy and individualized learning are positive but she did not have more profound knowledge on how to adapt these broad concepts to her teaching. Expecting students to become autonomous, to reflect their learning and writing processes and to adapt the portfolio to their needs may have been too ambitious an endeavour on both sides that most likely was to be disappointed.

The portfolio was used for several purposes and, with this multitude of options, was eventually reduced to its very basic function, namely arranging the texts. Helping students to arrange the portfolio also became the major focus of the portfolio conference and of the last classes.

The students' main aim in this class, however, was not to become more autonomous and reflected but rather to improve their writing skills and their general language skills (e.g., I_Qian I/II, 104–138). Encouraged by what she had found out about the opportunities writing portfolios can offer, the teacher placed a strong emphasis on cognitive and metacognitive aspects of writing and aimed at teaching knowledge about texts, for example, about the structure of texts and the features of different text types. This focus made students aware of their writing process and induced them to reflect on writing strategies and text quality and to use peer feedback to stress the writer-reader relationship. All this led to less time left for writing, which was further reduced because the explanation and organization of the portfolios as well as activities of reflection and self-assessment proved to be rather time-consuming as well (I_LP II, 335–341).[7] Other opportunities for writing in the portfolio (learning log, reflection) were not extensively used, as most students used short bullet-point lists instead of fully formulated texts.

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7   This phenomenon also shows in Grittner's study of portfolios in a Montessori primary school (Grittner 2009: 181).

The cut-back on writing activities not only showed in class but also in the teacher's assessment at the end of the semester (I_LP IV, 234–239), when reflection and the organization of the portfolio became increasingly important, while writing skills seemed to matter less (see Section 5.3).

In general, portfolios in L2 writing instruction offer a multitude of opportunities that cannot all be used at the same time. Therefore, teachers have to make many decisions as to both the focus of their teaching of writing and the use of the portfolio. The necessity to make decisions can reveal insecurities, incongruities and a lack of knowledge on the part of teachers that had previously existed but were only revealed through portfolio work. Instead of making decisions based on instinct, teachers have to set priorities, to consider the multiple aspects of writing and portfolio use as illustrated in Fig. 1.
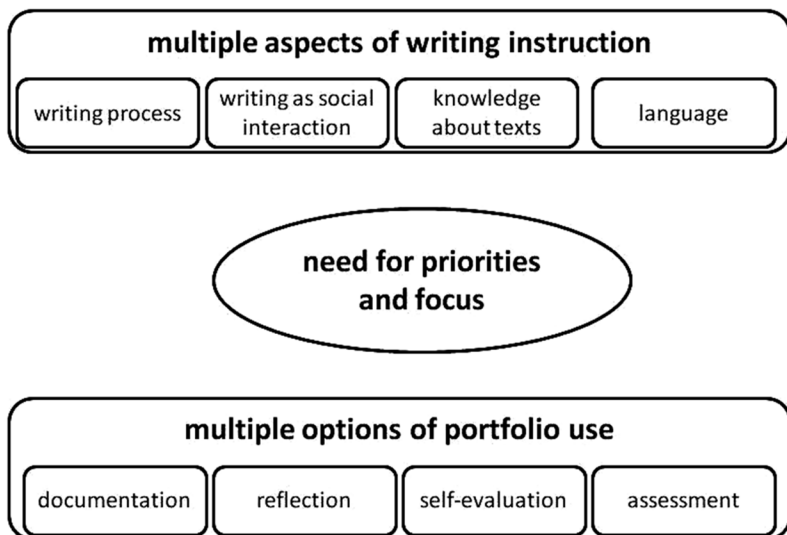

Fig. 1: Need for priorities and focus in using a writing portfolio

5.2 The learners' perception of the writing portfolio

As the students had initially expected a stronger focus on writing in this class, some of them were disappointed and did not find the class and the portfolio useful. This is of course in part due to the teacher's specific use of the portfolio. Instead of perceiving the portfolio as a tool to promote their writing skills, these students experienced it as separate from their learning. Tom stated that rather than doing portfolio work he would have preferred to "learn German" (I_Tom I, 184–185).

Other students were more interested in, or at least open to, learning more about text structures and specific features of text types. This was the case when they acknowledged that they would benefit from the emphasis on metacognitive learning (e.g., I_Nilesh II, 49–53; I_Aline II, 8–17). It is interesting to note that the teacher's lengthy and repeated explanations on these benefits hardly changed the students' attitudes: Those students who were open to this approach right from the start were more positive. Those who did not see any usefulness in it, especially Tom and Atena, rejected the portfolio for at least the first five weeks despite the teacher's attempt to point out its benefits. Later, a change towards a more positive stance was observed in some students: They acknowledged that the display of their achievements in the portfolio made them feel better about their writing skills but they still had the feeling that the portfolio did not help them to learn German or to improve their writing skills. However, the affective dimension (feeling proud) and the metacognitive dimension (having a broad repertoire of writing strategies available) were valued more highly than in the beginning (I_Atena III, 134–140; I_Qian III, 131–135; I_Tom III, 46–47).

In general, students' expectations and attitudes at the beginning of a course seem to have a stronger impact on their perception of writing portfolios than the teacher's explanations. Their own experiences might be more likely to lead to changes in their perception of the usefulness of portfolio work.

5.3 Assessment: Individualizing vs. arbitrariness

Portfolio-based assessment also caused a wide range of reactions among the students. Their interest in good grades was a vital criterion for how

they judged portfolio work. Whereas weaker students recognized that portfolio-based individualized assessment was to their advantage (I_Renato I, 117–122), others were afraid of arbitrariness and unfair grades:

> "and then to corr/correct it but somehow I am under the impression that maybe the teacher doesn't like my my structure the structure of my portfolio and then I will get poor grades but there will be someone who is weaker in writing than me but knows how to structure everything well and then . that's a bit not fair" (I_Atena III, 231–237; cf. also I_Atena I, 90–97).[8]

As a matter of fact, by considering additional aspects of the students' achievements in assessments, such as their individual development and the quality of their reflections on their texts, the traditional criteria of writing assessment, especially the quality of texts, are devalued. The extent of this devaluation can vary and was taken to an extreme by the teacher in the present study, who did not mark her students punitively (I_LP IV, 267–276). She rather stated that she did not feel able to judge the quality of texts (I_LP IV, 301–313), even though she had been doing this for years in her classes. There are at least two possible interpretations of this phenomenon: Either her insecurity concerning the portfolio led to insecurity in assessment or else an already existing insecurity concerning the assessment of texts was revealed through the use of the portfolio and the necessity of revealing criteria for assessment. Unfortunately, the data do not allow concluding statements on this aspect.

Another relevant result of the study refers to the affective dimension of portfolio-based assessment. With feelings of insecurity, pride, dislike of the portfolio and fear of unfair assessment as explained above, the affective dimension proves to be important in the understanding of portfolio work. In assessment, there is an additional aspect to be considered: As has been stated previously, the new opportunities that portfolio-based assessment offers and the holistic view of learners mean that the focus of assessment shifts from the learning outcome to the learner (see Section 3). In this specific class, personal reflections and a learning log were included in the portfolio. Moreover, the teacher asked the students to add a learner's

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8   Explanation of transcription conventions: . – pause of 1 second; .. – pause of 2 seconds; ... – pause of 3 seconds; = – amalgamation of words; " – strong emphasis; / – break-up; (lt) – loud; * – end of commented speech; # – laughter.

biography (UB 1, 246–248), which made the portfolio a very personal document. The example of one student, Atena, shows how this can lead to feelings of vulnerability:

> "erm … well I don't know . well . for the first time I under"stand why ms. x [the teacher] erm . she used to say don't you feel good when someone criticizes it [the portfolio] and so on and I didn't bother and it was okay with me (lt) but now it is really my "product * # now if it get poor grades it might be – yes: – it won't feel good" (I_Atena II, 281–289).

The teacher had similar doubts when she stated that she was trying to be fair but was finding it difficult because due to the personal nature of the portfolios, she rather had the feeling she was judging a person instead of assessing their achievements (I_LP IV, 212–222).

It seems that the personalization and individualization of writing classes through the use of portfolios collides with traditional ideas of assessment in the institutional set-up at a university.

5.4 The gain-loss effect of portfolio use

The phenomena described above may be summarized as the gain-loss effect of portfolio use: While portfolios are expected to add something to the teaching and assessment of L2 writing – reflection, language (learning) awareness, individualization, peer feedback, intensified interaction with teachers, more attention to affective aspects, and much more – learners in this study also experienced portfolio use as subtractive. They stressed that peer feedback was introduced at the expense of corrections by the teacher, work on language was replaced by reflection, writing activities were cut back for organizational matters, and considering additional aspects in a more holistic approach to assessment led to a devaluation of the importance of text quality.

Even though this effect is strongly related to the teacher's use of the portfolio in this study, it has to be acknowledged that, generally, the addition of elements to teaching and assessment in most cases inevitably leads to the subtraction of others. To concede that this is also true for the use of writing portfolios is an important basis for the development of suitable, context-specific portfolio concepts.

6 Discussion and conclusion

The results of this study highlight the gain-loss effect of portfolio use but should not be reduced to it. The results explain how the complexity of the portfolio idea forces teachers to make choices on what to add to teaching and what to exclude and how learners perceive these choices as both gains and losses.

The teacher in this study had to make numerous difficult decisions as she was confronted with the complex task of including writing portfolios in her teaching, which entails challenges as well as opportunities. She tried to introduce all possible functions at once in order to achieve a maximum benefit for the learners. This again was challenging and time-consuming for her and for her learners, so much so that the learners were under the impression that they had to give up many aspects of learning that were important to them, and they did not appreciate the additional opportunities offered by the use of a writing portfolio. The teacher's explanations did not suffice to convince them of the benefits. If they could be convinced, this was rather due to the actual experience of using the portfolio.

One way of dealing with this dilemma is to consider the genuine benefit of introducing portfolio-related activities in relation to the loss that this involves in other areas. It is not a matter of introducing a portfolio with all aspects or not using it at all. Rather, teachers and decision-makers have to analyse the learning needs of each group of learners and the benefit each new element could bring. A matrix for analysing the prerequisites of portfolio use can be based on the model of positive influences of portfolio use (Ballweg 2015a: 312), which comprises criteria in four different fields:

- learning aims and expectations
- the learners' prior knowledge and personal features, such as their attitude towards mistakes and their self-efficacy
- personal habits and preferred ways of learning and studying
- institutionally and culturally influenced learning habits

Based on an analysis of the prerequisites and aims of portfolio work, teachers have to develop an individual approach to portfolio work for each group of learners that encompasses the following considerations:

- The benefits of introducing writing portfolios in the L2 classroom should outweigh the necessary efforts and subsequent cut-backs on important contents and aims that this introduction might bring for the whole group as well as for individual learners.
- The writing portfolio should not be an add-on to writing instruction but should be combined with the content to be acquired in such a way that it is clearly a tool to facilitate both the learning of writing and of content instead of an additional burden.
- The focus of the writing portfolio should be clear and comply with the learning aims set by the institution and by curricula as well as by the learners themselves.

The development of a suitable portfolio concept is extremely challenging for teachers as they have to be able to analyse all possible influences and they have to know all options of portfolio use and writing instruction well enough to make informed decisions. To be able to do so, it is necessary to prepare teachers for portfolio use and to support them in the process.

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"Prepare an outline first and then just write spontaneously" – An analysis of students' writing strategies and their attitudes towards professional writing

Abstract

English: Students' beliefs about writing and writing strategies may interfere with their acceptance of writing support. Therefore, it is helpful for writing instructors to be aware of these beliefs and attitudes. This article provides insights into students' attitudes towards planning and spontaneous writing, both for short assignments in non-academic genres and longer texts in academic writing. For this purpose, statements from 163 students were analysed, which were posted during four courses of the BA programme "Transcultural Communication" at the Centre for Translation Studies of the University of Vienna. The courses were designed around writing in German as an L1 or L2. The results reveal numerous individual writing strategies and beliefs about writing. Students who take the 'conscious craft' position are keen to learn more about writing strategies, whereas students with the 'kiss of the muse' position doubt whether writing support might be helpful for them at all. Between these opposing poles, various forms of individual habits of writing and beliefs about writing (strategies) occur. Additionally, the didactic potential of online forum discussions about writing was analysed. These written discussions provide first insights into students' conceptions about writing and can help them to re-consider their beliefs and attitudes through exchange with others. Discussions can then be further expanded in subsequent lessons to resolve misunderstandings, to foster students' reflection of their individual writing approaches and to design and administer assignments geared to their specific needs.

German: Was Studierende über Schreiben und Schreibstrategien denken, kann ihre Aufgeschlossenheit gegenüber Schreibdidaktik und Schreibbegleitung beeinflussen. Dementsprechend wichtig ist es für Lehrende, die subjektiven Schreibtheorien Studierender und ihre darauf beruhenden Einstellungen zu kennen. Im vorliegenden Beitrag wird analysiert, wie sich Studierende selbst über ihr Schreiben äußern. Im Mittelpunkt des Interesses steht dabei das Spannungsfeld von Planen und Drauflosschreiben, einerseits im Kontext wissenschaftlichen Schreibens, andererseits bei

der Produktion von kurzen Gebrauchstexten. Für den Beitrag wurden Statements von 163 Studierenden analysiert, die diese im Rahmen von vier Lehrveranstaltungen des Sprachbereichs Deutsch im Bachelor-Studiengang „Transkulturelle Kommunikation" am Zentrum für Translationswissenschaft der Universität Wien auf Lernplattformen gepostet haben. Für einen Teil der Studierenden ist Deutsch die L2. Die Ergebnisse zeigen eine Vielfalt von individuellen Schreibstrategien und (ideologischen) Annahmen über das Schreiben. Studierende, die Schreiben als „Handwerk" betrachten, sind sehr interessiert an Empfehlungen aus der Schreibdidaktik und setzen sich gerne mit ihrem Schreibprozess auseinander, während Studierende, die einer „Musenkuss-Position" anhängen, nicht sicher sind, ob Schreibdidaktik für sie überhaupt hilfreich sein kann. Zwischen diesen Extrempositionen finden sich vielfältige Formen individueller Annahmen über das Schreiben und individueller Schreibgewohnheiten. Weiterhin soll das didaktische Potential solcher Forendiskussionen über Schreiben und Schreibstrategien beleuchtet werden. Der Austausch mit Peers in den Online-Foren kann einen Ansatzpunkt dafür bieten, dass die Studierenden ihre persönlichen Zugänge reflektieren. Die Diskussion kann – und sollte – im Präsenzunterricht fortgeführt werden, nicht zuletzt um Missverständnisse in Bezug auf das Schreiben und Zielsetzungen von Schreibdidaktik zu klären. Schreibdidaktische Konzepte, wie sie im letzten Kapitel des Beitrags diskutiert werden, können die Reflexion über Schreibstrategien noch fortführen und erweitern. Ziel ist, die Studierenden bei ihrer individuellen Professionalisierung zu unterstützen.

1 The context of the study: Writing instruction and its objectives at the Centre for Translation Studies of the University of Vienna

Professional writing in a minimum of three working languages is considered a key competence in the Bachelor's programme "Transcultural Communication" at the Centre for Translation Studies of the University of Vienna.[1] The students are expected to acquire and develop the necessary language, text and cultural competences. Particular emphasis is placed on writing for specific audiences and within intercultural contexts (Zentrum für Translationswissenschaft 2011). In accordance with Beaufort & Iñesta (2014: 146 ff.), the learning objectives involve "subject matter knowledge", "rhetorical knowledge", "genre knowledge", "discourse community knowledge" and "writing process knowledge".

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1 For the entire curriculum, see Zentrum für Translationswissenschaft (2011).

At the Centre for Translation Studies, these objectives are addressed in several courses for text analysis and text production, which are offered at several levels and for a number of languages. While the courses are taught by different teachers, all of them address similar issues (albeit in different ways), and continuous exchange between instructors ensures comparability and a consistent quality of teaching. Most of the courses are taught in a blended-learning scenario.

The tasks students complete in these courses constitute "exercises of rhetorical problem solving" of the sort described by Göpferich (2015: 181). The students have to compose relatively short, non-academic, but nevertheless high-quality texts based on source material and specifications of the intended use of the texts and their target groups, thus simulating professional writing situations. The genres to be composed vary from task to task and comprise, among others, press releases, texts for company websites, parts of audio guides and journalistic texts (e.g., reports, portraits, reviews, and newspaper comments). Due to time constraints and the limited number of courses that constitute the curriculum, only a selection of genres can be addressed. The assignments, however, are embedded in students' writing instruction in such a manner that students can acquire expertise on a meta-level, which allows them to transfer the knowledge acquired to writing situations they had not experienced before. To further this process, both product-oriented and process-oriented approaches are integrated into the courses. In order for the students to reflect the process of text improvement and to support their learning processes, drafts and revisions of the assignments are collected in portfolios. This form of reflection is, however, centred more on the text than on the writer. In order to "produce better writing through better writers" (Göpferich 2015: 197), an additional focus on writing strategies and writing habits is required. The tasks described in this article were designed to fulfil this desideratum.

In order to increase active engagement with and reflection of their writing and their writing processes, the students were invited to discuss their writing habits (what they usually do when writing) and their attitudes towards writing (what they think about their writing habits and certain strategies) during a self-study period on a *Moodle* platform. The combination of the above-mentioned approaches and means allows lecturers to further the development of academic literacy.

2　Research goals

Recent studies have shown that writing habits and strategies can differ significantly in both professional and academic writing (Chandler 1995; Wyllie 2000; Ortner 2000; Kellogg 2008: 10; Lange 2012). Various paths can lead to a text, and while not all of them might be equally smooth and efficient, each of them can prove successful in the end. Furthermore, writing habits often interact with individual beliefs about writing and writing strategies, which may be experience-driven or ideological, or both. Previous research (e.g., White/Bruning 2005 and Baaijen/Galbraith/de Glopper 2014) has shown that certain beliefs about writing can also influence the quality of the target text. Moreover, certain beliefs about writing and about writing instruction (which are often based on misunderstandings) can lead to attitudes towards writing which may interfere with writing support. University teachers, as well as everybody involved in writing support, such as writing instructors and tutors, should be aware of these attitudes towards writing and writing instruction in order to be able to support their students efficiently.

The present study hopes to add to this research by analysing students' (n=163) comments on writing, their strategies and attitudes. It is based on data from *Moodle* discussions of students from three courses and one seminar taught at the Centre for Translation Studies of the University of Vienna. Two main research goals were pursued: 1. to analyse students' attitudes towards what they consider good writing processes and, more specifically, towards planning and spontaneous writing, and 2. to evaluate the didactic usefulness of discussions on writing strategies inspired by impulse questions and/or an impulse text – in order to identify areas in which students need further support. The results can help writing supporters to "understand – and adapt to – student dispositions in classrooms" (Driscoll/Wells 2012). In this manner, the research results can be fed back into the classroom for didactic purposes.

3　Data collection and methods

In the following, the educational context of the study as well as the methods of data collection and analysis will be described.

3.1 Study context: the course concepts, Moodle discussions and impulse questions

The *Moodle* discussions that eventually provided the data for analysis originally solely served didactic purposes: First, in discussing their writing habits and attitudes with others, students were obliged to reflect upon their writing processes and attitudes towards writing in order to convey their thoughts to others in a comprehensible manner. Second, verbalizing individual habits (and problems) formed a basis for comparison with others' individual habits (and problems). Third, students obtained comments from peers and sometimes also suggestions for improving their writing process.

The discussions in question took place during four classes taught at the Department of German of the Centre for Translation Studies of the University of Vienna between the winter semester 2012/13 and the summer semester 2014. A total of 163 students contributed to the *Moodle* discussions, which were scheduled during self-study phases in the middle of the semester and subsequently reflected upon in class.

The study setting consisted of three courses entitled "Text analysis and production"[2], in which students produce short non-academic texts, such as newspaper articles, letters to the editor, and comments. In these courses, which consist of a lecture component and a more interactive tutorial, particular emphasis is placed on genre awareness, text types and text quality, as well as effective writing. Students are supposed to aim for high-quality texts that are in line with professional standards. These classes address both students whose L1 is German and those with German as an L2 and are offered separately for both groups. Here it should be noted that the terms L1 and L2 might not always correctly describe the language background of some students, since their language repertoires are more complex and multifaceted (see Dengscherz 2014).

The fourth class in which students contributed to the *Moodle* discussion was a seminar from the Bachelor programme that focused on text and discourse. Instead of several short texts, students write a term paper and are supported in their writing during the seminar, as well as during a tutorial held by peer tutors.

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2   All course titles have been translated from German into English by the authors.

In the following, the four courses will be referred to as course L1_w12/13 and L2_w12/13 (meaning course offered for students for their L1 German or their L2 German respectively in the winter semester 2012/13), course L1_s14 (meaning course offered for students for their L1 German in the summer semester 2014) and seminar SE_s13 (meaning seminar "Text & Discourse" offered in the summer semester 2013).

In order to increase motivation and provide inspiration for the *Moodle* discussions, the students were presented with a number of prompts. These prompts differed between the groups, since the students had attended different classes and thus received slightly different input as well. Therefore, students were given either specific questions on their writing habits and strategies, more general questions on their attitudes concerning academic writing, or specific questions on a particular text they had read in class.

The students who attended the text production courses in the winter semester 2012/13 (course_L1_w12/13 and course_L2_w12/13) received the following impulse questions (in German):

- How would you describe yourself as a writer? How do you approach writing?
- How do you get into the right mood for writing?
- What are good writing times and writing places for you?
- How do you arrive at the best ideas? Primarily by planning your text in advance or rather by writing spontaneously?
- When do you develop a structure for your text: before writing, during writing or during revising?
- Do you write in a linear fashion, i.e., from the first to the last sentence, or do you jump between text parts?
- What else is important for you when it comes to writing?
- How satisfied are you with the organisation of your writing process? What works well, and where do problems occur?
- To which extent does your approach vary concerning different genres, writing tasks and languages?

The students who attended the seminar "Text & Discourse" in the summer semester 2013 (SE_s13) received impulse questions that focused on academic writing (as opposed to writing other short texts, such as newspaper articles):

- Do you already have experience in academic writing? If yes, what kind of experience?
- How do you motivate yourself to start writing?
- Do you know any helpful strategies for writing?
- Do you have any tips and advice for your peers?

The students who attended the text production course in the summer semester 2014 (course_L1_s14) had focused on a specific text on intuitive and professional writing (Trappen 2003: 171 ff.) prior to the self-study phase. In this text, Trappen presents writing as a complex and often underestimated activity and distinguishes between "intuitive" and "professional" writing. He claims that the reasons for problems in writing are often ascribed to a variety of causes – but seldom to a lack of writing expertise. Trappen furthermore maintains that writers have an oversimplified attitude towards writing and argues for another perspective, emphasizing that professional writing requires preparation, reflection, revisions and planning. In his view, professional writing equals proficient writing.

The impulse questions students received in this course were based on the text and specifically asked them to agree or disagree with Trappen's view:

- On which aspects do you agree with the author? On which aspects do you disagree?
- What is your experience with writing so far?
- How professional do you perceive yourself when writing?
- How could successful text conceptualization work in professional writing? Which steps does it need? Which aspects should be taken into consideration?

All the students participating in the *Moodle* discussion were invited to not only post their own thoughts and ideas, but also to respond directly to postings of their peers and thus enter into a discussion. In order to increase motivation, the students were encouraged to decide on which questions they wanted to comment and either to focus on or neglect specific aspects of the questions. Thus, not all students provided information on every aspect. The statements are interwoven, and the topics connect inter-textually, forming a "discursive swarm" ("diskursives Gewimmel"; Jäger/Jäger 2007: 25).

Table 1: Overview of the groups and respective prompts

Course	No. of students	Prompt
L1_w12/13	57	Impulse questions focused on writing habits and writing experiences
L2_w12/13	40	
SE_s13	22 (13 "new")[3]	Impulse questions focused on academic writing
L1_s14	53	Impulse questions on a text: Trappen (2003)

3.2 Data and research focus

Due to the special nature of the *Moodle* discussion, the corpus consists of relatively short texts. The statements on one topic are often scattered over several postings in one forum (and in the case of 9 students, in two forums). When analysing the postings, it has to be taken into account that the varied nature of the impulse questions and texts as well as the different course formats and the input provided by peers might have influenced the nature of the statements. Furthermore, the students were undoubtedly aware of the fact that their comments would also be read by their instructors, which may have had an impact on the way they expressed themselves. Nevertheless, these postings can be considered as a valuable source. At the time the forum discussions took place, it had not yet been decided that the postings would be used for analysis, and thus the students were not influenced by the knowledge that they were producing data for research. Only when the postings were examined prior to being discussed in class did it become apparent that they would lend themselves perfectly to analysis, and thus students were asked for permission for the further use of the data.

Due to the above-mentioned range of prompts being used and the difference in course content, the research focus was in each case adapted to fit the specific context. This allows the analysis of the most relevant issues for each group, as described in the following overview:

(a.1) The discussions in the groups course_L1_w12/13, course_L2_w12/13 and seminar SE_s13 revolved around writing activities (especially the

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3 Eight students had already attended course_L1_w12/13 and one student course_ L2_w12/13.

activities of planning and spontaneous writing). Therefore, the ana-
lysis of these groups focused on writing and planning as activities.

(a.2) In course_L1_w12/13 and course_L2_w12/13, the students mainly
referred to the production of short texts (as described in Section 1.1),
whereas the students of the seminar group SE_s13 discussed academic
writing (in German as L1 or L2). Thus, one chapter of the article will
address planning and writing activities that were commented on in
this latter group in the context of academic writing as a genre.

(b) Since all students commented on their attitudes towards planning and
spontaneous writing, these attitudes were analysed for all four groups.

(c) The discussion in the group course_L1_s14 centred on criteria of and
attitudes towards what constitutes good writing processes, and thus
a special focus will be placed on these aspects for this group.

(d) A specific subgroup of 9 students who attended both a course on text
analysis and text production (L1 or L2) first and then the seminar
SE_s13 was analysed with regard to how they said they adapted their
planning and spontaneous writing strategies to academic writing as-
signments as compared to non-academic texts.

Table 2: Research focus adapted to groups and prompts

Research focus	Groups	No. of students
(a.1) Planning and spontaneous writing as activities of the writing process	course_L1_w12/13, course_L2_w12/13, SE_s13	110
(a.2) (Additional) focus on academic writing	SE_s13	22
(b) Attitudes towards planning and spontaneous writing	course_L1_w12/13, course_L2_w12/13, SE_s13, course_L1_s14	163
(c) Characteristics ascribed to good writing	course_L1_s14	53
(d) Differentiation between writing repertoires (from course_L1or L2_w12/13 to SE_s13)	subgroup of SE_s13	9

3.3 Methods

In accordance with Grounded Theory, the data were submitted to a qualitative content analysis. In order to analyse the statements systematically, several cycles through the material were necessary, beginning with what Kruse (2015: 363) calls "cross-eyed hermeneutics" ("schielende Hermeneutik"). This was based, on the one hand, on prior knowledge and theory about writing, and, on the other hand, on reflective openness (Breuer 2010: 28 f.), remaining sensitive to the fine nuances of the data (Strauss/ Corbin 1996: 25). Early run-through phases were devoted to explorative development of main and subcategories by "initial coding" (Charmaz 2006: 47 ff.) and further "focused coding" (ibid. 57 ff.). The subsequent text analysis focused on the main categories "planning" and "spontaneous writing." For this analysis, all statements that cover planning and/or spontaneous writing were coded in MaxQDA11 by two raters in a consensual assessment procedure. Quantitative methods were only applied to main categories, in order to determine how often statements that fall into the respective category occurred.

The statements were coded by wording as well as by content: (a) *wording*: students mentioned "planning" or "spontaneous writing"[4]; (b) *content*: students referred to planning or spontaneous writing in other words. This includes reporting, for example, the outlining of a concept, taking notes and arranging them before writing or writing in an "organised" manner as well as the mentioning of inspiration, intuition, and the "journey" of writing which could "lead" in one direction or another. A certain degree of interpretation was required for this type of thematic coding (see also Bryman 2012: 297).

The statements were further classified according to their tendency towards a certain position (either planning or spontaneous writing) or divided into subgroups (in the case of professional writing criteria). Additionally, typical examples were selected and highlighted for the sake of illustrating particular discourse positions.

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4   Students commented in German. Their statements have been translated into English by the authors.

4 Results

In the following sections, the results will be presented. Section 4.1 focuses on the characteristics that the students associated with professional writing in general, while Sections 4.2 and 4.3 are devoted to students' reports on planning and spontaneous writing as specific activities and on their writing habits and attitudes towards planning and spontaneous writing. The subgroup of students who combined planning and spontaneous writing is addressed in Section 4.4, whereas Section 4.5 compares writing strategies for short non-academic assignments with those used for academic writing.

4.1 Characteristics ascribed to professional writing

With the inspiration of the impulse text (Trappen 2003), the 53 students of the group course_L1_s14 discussed professional writing in a general and abstract sense, mentioning criteria for proficient professional writing and collectively painting a multifaceted picture. An exhaustive list of the criteria that the students mentioned is provided in the following. The criteria have been divided into five larger categories. Within each of these categories, the criteria mentioned are arranged by frequency, with the figures in parentheses indicating how often they were mentioned.

Text requirements (product-oriented level): adequate use of vocabulary, including correct connotations (21), genre conventions (18), thread/central theme (11), structure (9), style (9), cohesion (5), adaptation to the audience (7), coherence (7), comprehensibility (5), orthography (4), requirements differ according to the situation (4), clarity (3), adequate coverage of the topic (3), adequate syntax (2), fluency (2), boiled down to an essence (2), text logic (1), layout conventions (1), adequate language register (1), adequate microstructure (1), adequate introduction (1), adequate ending (1).

Professional skills: experience (10), feeling for language (7), writing competence (3), competencies (without further explanation) (3), language and writing skills (2), basic knowledge of text production (1), awareness of own mistakes (1), ability to apply theoretical concepts in practice (1).

Personal skills and emotional, motivational, and mental background: spontaneity (18), reflection (9), creativity (5), talent (3), awareness of the process (3), variety of ideas (3), intuition (2), gut instinct (2), power of imagination (1), good mental state (1), self-confidence related to writing (1), satisfaction (1), self-appreciation (1), do the best you can (1), inspiration (1), joy and commitment (1), stamina and patience (1).

Requirements for the writing process (management): planning (31), revising (13), proofreading (12), preparation (11), task analysis (3), investigation (3), organisation (2), time management (1).

External parameters: institutional setting (3), other aspects or factors (without further explanation) (3), time (2).

The most varied criteria were mentioned for texts as products. Seven students questioned the possibility of rating text quality in an objective manner altogether. They consider this a matter of individual taste. One student regards professional texts as uncreative. Such views could also be found concerning the process level where professional writing was regarded as a craft using consciously applied techniques. Twelve students explicitly pointed out that intuitive writing on the one hand and professional writing on the other are not opposing poles but are compatible, and that professional writing requires intuition as well as experience, reflection and writing techniques. Four other students even considered "too much thinking" or "too much theory" as obstacles to be overcome.

Furthermore, 20 students discussed writing mood: Sixteen of them stated that all writing (including professional writing) depends on the right mood; one student added that professional writers are able to recognise the right mood for writing, and four students claimed that being 'professional' means that one is able to write in every mood.

In addition, 17 students reflected on the learnability and teachability of writing. Nine of them consider writing to be learnable and teachable, another three, as at least partially learnable and teachable; five students stated that a rich repertoire of strategies does not automatically lead to better texts.

Concerning the writing process, planning was discussed most frequently: 43 students mentioned planning, 31 of them listed it as a requirement of professional writing (see the list above). In the following section, it will be analysed how the students of the other three groups (course_L1_w12/13,

course_L2_ w12/13, SE_s13) implement planning in their individual writing processes.

Finally, it is interesting to note that external parameters seem to play a minor role in this context as they were hardly addressed at all. The students seemed to focus on those aspects of writing which they can, should or want to control or at least influence. This might indicate that they interpret "professional writing" in accordance with Kellogg (2008: 7) and Trappen (2003: 171 f.) as having expert proficiency in writing, and were possibly also influenced by their previous reading of the latter text.

4.2 Reports on planning and organising activities

Since in the seminar a longer text had to be composed, it is not surprising that planning activities were reported on more frequently here than in the other courses. Most of the students in the seminar were aware of planning as an activity that should at least be considered for academic writing. 77.3% of the students in SE_s13 mentioned planning as a topic in their statements. In the courses L1_w12/13 and L2_w12/13, by contrast, only 50.9% and 57.5% of the students discussed planning. A reason for this might be that students are not always aware of the actual planning activities that are required for shorter non-academic texts, possibly because these activities are closely linked with other writing activities they undertake and are thus less obvious.

Surprisingly, however, the percentage of self-declared 'non-planners' is higher in SE_s13 than in the L2 writing group of course_L2_w12/13 (though lower than in course_L1 _w12/13). Three of the six 'non-planners' in SE_s13, however, stated that it would be better to plan. In contrast, the 'non-planners' in course_L2_w12/13 seem to be more convinced of their strategy: Only two out of eight stated that planning would be preferable, but five described planning as restrictive or hindering and were thus comfortable with their non-planned writing. Table 3 gives an overview of the reported planning activities in the three groups:

Table 3: Reported planning activities in the courses L1_w12/13 and L2_w12/13
and in the seminar SE_s13

Students …	Course_L1_w12/13 (57 students)	Course_L2_w12/13 (40 students)	SE_s13 (22 students)	All 3 groups (119 students)
plan themselves and consider it useful	**9 (15.8%)**	**15 (37.5%)**	**11 (50%)**	**35 (29.4%)**
do not plan	**20 (35.1%)**	**8 (20%)**	**6 (27.3%)**	**34 (28.6%)**
… but think planning would be better	9 (15.8%)	2 (5%)	3 (13.6%)	14 (11.8%)
… consider planning ok for others (but not for themselves)	1 (1.8%)	1 (2.5%)	1 (4.5%)	3 (2.5%)
… consider planning restrictive and hindering	2 (3.5%)	5 (12.5%)	2 (9.1%)	9 (7.6%)
… do not supply information why they don't plan	8 (14%)	0	0	8 (6.7%)
Did not write about planning	28 (49.1%)	17 (42.5%)	5 (22.7%)	50 (42%)

Some students explained how the role of planning differs in various writing tasks and situations. One student, for example, does "preparatory work", such as task analysis, mind-mapping or structure planning if his head "is empty" (student in course_L2_w12/13). Two students in course_L2_w12/13 write "creative texts" spontaneously and tend towards planning for texts that follow specific genre patterns, use planning for "less creative" texts (student in course_L1_w12/13), for situations when they have to investigate a topic (student in course_ L1_w12/13) and for argumentative texts (student in course_L1_w12/13). Three others reported that they write short assignments spontaneously and tend to plan longer academic texts at least roughly and at the macro level. One participant in course_L1_w12/13 tends towards more planning when the text has to be short. However, she also reported that she writes opinion-based texts spontaneously in order to find out what ideas on the topic may be "lying dormant" in her mind.

A remarkable position taken among the 'planners' is the so-called 'conscious craft position': For some students, it is entirely obvious that planning must be the superior strategy, even if they do not plan (enough) themselves:

> "I often start spontaneously, by simply writing away, only to realize that this is going to end in chaos, so I then try to structure the text afterwards. It would of course be much easier if I wrote down some thoughts before the actual production of the text and structured them right away. I definitely want to do this in my future text production. :)" (student in course L1_s14).

The student is not entirely satisfied with her current strategy and reflects on alternative strategies. Her use of the phrase "of course" indicates that she is thoroughly convinced that outline planning is the preferable (and more proficient) strategy – for everybody. This belief or misconception is also indicated by recent research: Baaijen, Gabraith & de Glopper (2014) found that writers with extremely high transactional beliefs[5] produce worse texts when they write an outline first, as compared to preparing for the task by writing down a simple sentence that sums up their opinion.

Some students admire others' planning of writing procedures, especially because they do not plan themselves, and use more negatively connotated wording when referring to spontaneous writing, such as being "susceptible" to it (student in course_L1_s14). All in all, the students who take the 'conscious craft position' seem to consider spontaneous writing as a bad habit or a kind of unfavourable predisposition, which can only be a hindrance to proficient professional writing.

In the seminar group, the term *planning* was used to refer not only to conceptualization and structuring but also to time management. Seventeen students out of 22 mentioned planning: three of them addressed only text planning, three others only time management, and 11 students both. Four students expressed satisfaction with their time management; one student rated it as sufficient and six others stated that they tended towards procrastination. Two of them felt that they needed time pressure for writing; one claimed time pressure to be at least an extrinsic motivation. Five students explicitly declared that they consider it challenging to find a beginning for

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5   Baaijen, Gabraith & de Glopper (2014: 82) distinguish between transactional and transmissional beliefs. According to the authors "the transactional beliefs scale represents the belief that writing is an emotional experience which involves the development of understanding as the text is built" while „the transmissional beliefs scale represents a belief that writing involves the transmission of information from authoritative sources to the reader".

their texts. One claimed effective use of time for writing to be difficult if there is only one hour available.

Three students took the first steps towards establishing a writing group: One of the students who attended both the course L1_w12/13 and the seminar SE_s13 reported difficulties with academic writing in her posting, especially with starting to write and overcoming procrastination. She also mentioned strategies that worked for her: setting intermediate goals, writing a rough outline and then just getting started. Another student, who had also attended both course L1_w12/13 and the seminar SE_s13, liked those ideas and made the following suggestion in her answer: "We could set a date together by when we want to have achieved something, for example, the first 5 pages. In this manner, we would both have to sit down and start (and just simply write ;))." Another seminar participant answered immediately: "I would like to join you, because I am never disciplined enough to reach a goal by a certain point of time if I am only responsible for it by myself". These statements exemplify how the *Moodle* discussions helped students not only to become aware of their writing procedures but also to learn from each other.

4.3 Reports on spontaneous writing

When writers have the "optimal experience" of flow (Csikszentmihalyi 1988), idea generation and structuring take place seemingly effortlessly in a "black box" – beyond the realm of rationality – and the words seem to join together "somehow" and "as if by themselves" to form a coherent text. Writing becomes easy, and the writers are no longer aware of the complexity of text production. For many students, spontaneous writing is connected with this kind of flow in writing and thus regarded as something positive and desirable (see Table 4).

Nevertheless, the students also reported disadvantages of spontaneous writing: its susceptibility to the writers' moods and external conditions; the random occurrence – or even non-occurrence – of ideas. One student in course L1_w12/13, for example, was quite satisfied with her writing "on good days", but on other days, "when the words do not hit the paper automatically", she would "give anything for an already drawn-up

concept ;)". Table 4 shows, though, that there is a predominately positive attitude towards spontaneous writing.

Table 4: Spontaneous writing reported by the students

Students …	Course L1_w12/13 (57 students)	Course L2_w12/13 (40 students)	Seminar SE_s13 (22 students)	All 3 groups (119 students)
enjoy the flow of spontaneous writing	30 (52.6%)	15 (37.5%)	9 (40.9%)	54 (45.4%)
find spontaneous writing leads to chaos	3 (5.3%)	4 (10%)	1 (4.55%)	8 (6.7%)
did not write about spontaneous writing	24 (42.1%)	21 (52.5%)	12 (54.55%)	57 (47.9%)

As can be seen from Table 4, the flow of spontaneous writing seems to work better in the L1 than in the L2 and better for short assignments than for longer texts. One challenge for spontaneous writers is to get started. Difficulties can result from a lack of ideas as well as from an overload of ideas, an "embarras de richesse" (Ortner 2002: 237), causing a "knot in the head" (ibid.) that needs to be "untied" in order to resume writing.

Moreover, the students interpreted "beginning" in different ways: For some of them, it referred to the introduction or first sentence of a text, for others, to the initial moments of the writing process. Particularly when it comes to academic writing, the students also mentioned a kind of "fear", which disappears when a plan for "dealing with the matter" becomes clearer (student in SE_s13) or when there is an idea of "where the journey may lead" (student in course_L2_w12/13_SE_s13).

The feeling of insecurity at the outset of a larger writing project can affect motivation and lead to procrastination, especially in academic writing. For example, some students tend to have difficulties with the transition from investigation to writing, as reported by Keseling (2004: 43 ff.). Interaction with others could be helpful at this point. Some students also suggested solutions for problems with the first sentence. Some of them do not start with the first sentence of the introduction but rather elsewhere in the text or they just write any beginning, being aware of the option to revise it later. For short assignments, however, two other students reported that they find

it impossible to start anywhere else than with the introductory sentence. Further strategies that were reported for dealing with the beginning were to write a rough draft or to generate ideas by doing research or talking to others.

Other students, however, consciously refuse planning for their writing, and might be said to adhere to a so-called 'kiss of the muse' position. They argue that they generate ideas best while writing spontaneously; they enjoy the flow (see Table 4). Following a pre-devised plan is considered a limitation; they might even consider it boring to already know at the beginning where the writing could ultimately lead. Four students referred to the proverbial 'kiss of the muse' as an extremely positive experience, with one student even calling it "wonderful", even in academic writing (student in SE_s13). The same student claimed to need "this 'thrill', which arises when there is absolutely nothing left to stand between me and the blank page (or the empty computer screen)".

Some students seem to fear that professional writing could lead to a loss of what they perceive to be the adventurous aspects of writing, causing the act of writing in a flow to be replaced with more "technical" approaches. As a consequence, they may doubt the possibility of planning their writing:

> "It may be a professional process, but isn't it also partly creativity or even power of the imagination? Can creative talent and originality be called up at the flick of a switch? I don't think so." (student in course_L1_s14)

This scepticism can also refer to time management for writing: "I am a person who cannot plan writing and say today I will write for 1 hour and tomorrow maybe half an hour." (student in course_L1_w12/13_SE_s13) Furthermore, the scepticism can refer to text analysis. One student in course L1_s14 stated, for example, that "too detailed planning and too much reflection" did not help her but led to writer's block instead. Thus, many students who take the 'kiss of the muse' position tend to have a conception of professional writing that contains everything they dislike about writing: strict guidelines on the product level as well as "technical" approaches on the process level. Moreover, one student in course_L1_s14 added (commingling the process and product levels) that a novel was written spontaneously and only "professional texts" required planning and preparatory work. For students who subscribe to this position, it could be helpful to address

this perceived inevitability of their own approach, especially if they are not satisfied with their writing process or its outcome.

4.4 Combining planning and spontaneous writing

Concerning planning and spontaneous writing, the data shows positions between two opposing poles, which point to some extent to the dichotomy between "structure followers" ("Strukturfolger") and "structure creators" ("Strukturschaffer") described by Bräuer & Schindler (2011).

However, the students who mentioned "spontaneous writing" did not always mean "creating structure while writing" (Bräuer/Schindler 2011) without any kind of planning activities in advance. Some students take at least some notes first, and the rest of the text just "happens somehow" (student in course_L1_w12/13). Other students plan the text structure prior to writing "spontaneously": "When I have to write longer texts, I mostly consider in advance how I could arrange the relevant topics. After that, I just write spontaneously." (student in course_L1_ w12/13)

Other students take it for granted that a writer needs to figure out a basic structure or a rough outline of the text before it becomes possible to "write spontaneously":

> "Of course, I need the main structure first, but then it is better if I write spontaneously, quickly taking up creative flashes of thoughts. These provide enough inspiration while reading my text for the second and third time; at that point I start to have a lot of additional good ideas." (student in course_L2_w12/13)

The comments show that this kind of "spontaneous writing" is not a way of starting early without a plan as described by Keseling (2004: 55 f.), but a way of taking advantage of the momentum, which carries the writer from one thought to the next and which can also be carried out after planning activities. Thus, one of the students in course_L1_w12/13 referred to herself as a "planned spontaneous writer" ("geplante Draufloschreiberin").

In this study, 29 students (a total of 24.4% of all students) described variations of "planned spontaneous writing". It occurred mainly in the group of L1 writers who were producing short texts and less often in the seminar group or among L2 writers. Some of the students devise their first plan only in their minds; some change their plan during writing. Table 5 provides an overview of the distribution of these aspects.

Table 5: "Planned spontaneous writers" (subgroup of 29 students)

Students …	Course L1_ w12/13 (17 out of 57: 29.8%)	Course L2_ w12/13 (7 out of 40: 17.5%)	Seminar SE_s13 (5 out of 22: 22.7%)	Total (29 out of 119: 24.4%)
develop a rough structure and then write spontaneously	**17 (29.8%)**	**7 (17.5%)**	**5 (22.7%)**	**29 (24.4%)**
They previously work out their outline in their minds	4 (7%)	2 (5%)	0	6 (5%)
They change the outline during writing	6 (10.5%)	3 (7.5%)	4 (18.2%)	13 (10.9%)

In this context, it is interesting to note at which stage of the writing process the students work out the macrostructures of their texts. A total of 72.3% of the students in the courses L1_w12/13 and L2_w12/13 and in the seminar SE_s13 provided information about their structuring activities (27.7% of students did not mention structuring at all). Table 6 provides an overview.

Table 6: Structuring activities at different stages of the writing process

Students …	Course_L1_ w12/13 (57 stud.)	Course_L2_ w12/13 (40 stud.)	SE_s13 (22 stud.)	Total (119 stud.)
structure in their minds before writing	16 (28.1%)	6 (15%)	4 (18.2%)	26 (21.9%)
outline the structure (on paper)	7 (12.3%)	10 (25%)	5 (22.7%)	22 (18.5%)
develop the structure while writing	15 (26.3%)	8 (20%)	4 (18.2%)	27 (22.7%)
structure the text during and after writing	2 (3.5%)	2 (5%)	1 (4.55%)	5 (4.2%)
structure the text at the end	3 (5.3%)	1 (2.5%)	1 (4.55%)	5 (4.2%)
structure the text during the whole writing process	1 (1.7%)	–	–	1 (0.8%)
did not mention structuring	13 (22.8%)	13 (32.5%)	7 (31.8%)	33 (27.7%)

The results show that both the "planned spontaneous writers" as well as the other students tend to structure texts in their minds or develop the structure while writing, especially when working on short texts in their L1. For writing in the L2 and for academic writing, written outlines become more important, but that does not necessarily mean that the outline has to be followed and that the macrostructure cannot be changed during the writing process. Structuring the text at the end or throughout the whole writing process was rarely mentioned, which indicated that most of the students seem to consider it more efficient to develop a structure before or during their writing.

4.5 Adapting writing strategies to academic writing

Nine of the students in seminar SE_s13 had already posted in another forum during the previous semester (8 students in course L1_w12/13; 1 student in course L2_w12/13). As already mentioned, course L1_w12/13 and course L2_w12/13 focused on short non-academic assignments, whereas the seminar required academic writing. Therefore, it is interesting to compare the statements of those students who contributed to both forums. Two of the students applied planning even to short texts, five characterised themselves as spontaneous writers and two combined planning and spontaneous writing. Their reports on adapting their strategies for academic writing differ individually. Nevertheless, certain trends could be observed:

(1) Flexible planning for academic texts: One student in course L1_w12/13 described making a plan for short texts and maintaining it while writing. She claimed to also need such an outline for academic writing, though acknowledged that she changed some items or newly arranged them while writing. This indicated that she uses her writing strategies more flexibly for academic writing than for short assignments. Another student in course L2_w12/13 reported a broad spectrum of writing strategies for short non-academic texts. For academic writing, he tries to plan a macrostructure for at least one chapter. However, this structure is subject to numerous changes, since he also tries to remain flexible in his thinking and writing.

(2) Spontaneous writers discuss planning: Three of the five spontaneous writers express a wish to outline their term papers "to avoid getting totally lost" in writing and then "just" write, staying aware of the possibility to

change everything at any time. One student who took both course_L1_ w12/13 and SE_s13 was not entirely satisfied with spontaneous writing – even for short texts – and stated that she should devote more time and energy to planning and revising. For term papers, she considers "mind mapping and other techniques not helpful for her personally" but develops a macrostructure by noting important thoughts in the form of headlines. She and another student, who also attended both a writing course and the seminar, consider time management for academic writing particularly challenging.

For the other two spontaneous writers, however, planning is not a satisfactory solution. One student does not even intend to create an outline for her term paper. Her writing procedures have become habitual over the years, and, therefore, she does not want to change anything. Another student, however, would also like to apply spontaneous writing when working on her term paper, but her strategy has only proven successful for short texts. She considers this a great pity because she likes writing most when carried out spontaneously. She enjoyed free-form writing, which she attempted for the first time in a previous lecture, and is happy to have learned about this strategy. For both students, writing in a flow is very important.

(3) "Planned spontaneous writers" refine their repertoire: Two students value the freedom of spontaneous writing. An outline, however, serves as a helpful guideline. One of them, a student in course_L1_w12/13, prefers to plan mentally: she has "quite definite ideas" before starting to write, but changes them, nevertheless, during her writing. She intends to plan her term paper mentally as well and is "less than thrilled by mind mapping or clustering", because she can usually imagine the structure in advance, and writing it down would be a "waste of paper". Nevertheless, she is open to other suggestions. For instance, as one of her fellow students reported on talking to friends and peers about her research topic and thereby gathering ideas, she picked up this hint and stated she would try this as well. Another student also attempts to enhance her strategies: during the seminar, she mentioned a writing guide (Kruse 2010) that she had already read for course L1_w12/13, noting that it contained some valuable advice for beginners.

The results show that the two planners try to organise their writing process more flexibly for the purpose of academic writing than for short non-academic assignments. The two students who combine planning and

spontaneous writing seem to be quite satisfied with their writing strategies, but nevertheless try to enhance and refine them. The spontaneous writers, on the other hand, first consider planning activities when it comes to academic writing. Four out of five of the spontaneous writers try to plan more. Three of them consider this helpful, but for the fourth, spontaneous writing is so important that planning leads to a loss of motivation. For her, a "loop writing"-method (Elbow 1981: 59 ff.), "sit there method" or "many pages method" leading to a zero draft, which may be the starting point for a first and subsequent drafts (Bolker 1998: 44 ff.), might work better than writing an outline in advance.

5 Discussion and pedagogical implications

In order to become professional writers, students need to gain expertise on the product level as well as on the process level. In terms of genre requirements, writing a posting for a *Moodle* discussion is an easy task for the students. On the content level, however, the exercise is complex and requires self-analysis. A student in course_L2_w12/13 stated: "I consider this task as very useful, because I have never analysed my own writing process before. Now I understand what I have to work on in order to write more efficiently."

Our data confirm that discussing individual writing procedures with others can be, as Lehnen, Schüler & Steinseifer (2014: 227) have argued, "a starting point for reflecting upon and improving one's own approach. In the light of alternative methods for developing a text, one's own approach loses its inevitability." This was mirrored by one of the students in the seminar SE_s13: "What is terrific about this exchange of experience is that one can learn very much from others and see how others deal with writing."

The students seized the opportunity to discuss individual writing strategies and to give and receive advice, for example, for using mind maps or letting the first draft of a text sit before revision. Not all of the strategies mentioned in the forums are very sophisticated and not all of them will work for everybody in every situation. In any case, discussions on writing strategies support the interaction between "knowing how and knowing that" (Ryle 1949) and thus establish first steps in promoting reflexive professionalization (Knappik/Dirim/Döll 2014: 82 ff.).

For writing teachers and coaches, it is important to understand how students adopt terms and concepts from writing research and instruction and instil these with their own meaning (such as with "spontaneous writing" in our data, which may be carried out after an initially developed macrostructure). Encouraging students to discuss their writing habits and writing procedures can reveal their understanding of certain terms and make their attitudes towards writing accessible for the purposes of writing support.

In order to deepen the reflection, the discussion should not be limited to the forum but be continued and further evaluated in the following lessons. This provides the additional opportunity of resolving misunderstandings about the dos and don'ts of writing, which enables instructors to support students in a way that is compatible with their individual positions. For example, if students refuse professionalization because they consider it incompatible with their 'kiss of the muse' position, it could be helpful to convince them that they do not have to convert to a sort of 'Taylorism of writing' and that spontaneous writing and intuition can be part of proficient professional writing – especially when integrated into a process that includes extensive revision phases. This insight may also provide relief for the students who are convinced that academic writing is impossible without previous planning activities, but who nevertheless lose their enjoyment of writing when they feel forced to plan.

Students might also learn that planning does not necessarily mean giving up flexibility. An outline may prove to have been helpful in the end, even in the case that the final draft has, at least seemingly, nothing more to do with this early text plan. It is not clear to all students that they are not forced to adhere to a certain initially developed macrostructure.

Discussions centring on writing strategies also provide insight into beliefs about writing, as the students do not only share information about their writing procedures, but often additionally reveal whether they like or dislike a certain strategy or habit, sometimes stating reasons for their affinities for and aversions to specific writing techniques as well. Learning more about their attitudes and reservations is important for writing teachers and coaches, as it enables writing support to address the students' current states of development and thus coach them more individually and efficiently.

Additionally, the discussions about strategies may prepare the students for further didactic approaches, which will help them to discover suitable

writing strategies. For this purpose, Girgensohn (2007), for example, provides useful online material (in German) with exercises that are supposed to help students to find out which writing strategies are useful for them. The material is organised in 10 learning stations based on the writing strategies described by Ortner (2000). Each assignment calls for the use of one of these strategies. Planning is addressed among others in Station 7, which focuses on writing a text in several steps "following the logic of production" and resembling the stages in antique rhetoric (Ortner 2000: 484 ff.), and in Station 5, in which the students are supposed to write a fairy tale following a strict plan (Girgensohn 2007). As this exercise uncouples strategy from genre (fairy tales are not typically associated with planned writing), the task might lead to a deeper understanding of the function of writing strategies – and of individual strategic preferences. Similar tasks for letting the students experience the independence of genre from the writing process could be to plan a poem in detail or to write the first draft of a newspaper dispatch spontaneously.

For planning in academic writing, the suggestions of Gruber, Huemer & Rheindorf (2009: 24 f.) for structuring the working process might be helpful. The authors distinguish between orientation, research, the structuring of material, text planning, phrasing and revising and also give (mainly product-oriented) advice for structuring the text (Gruber/Huemer/Rheindorf 2009: 89–134). For more process-oriented exercises in the context of academic writing, Grieshammer et al. (2012) suggest a broad spectrum of tasks, which were successfully implemented in the Writing Centre of the European University Viadrina in Frankfurt/Oder (Germany). Originally, these tasks were developed for writing consultations, but they can easily be implemented into writing courses as well. Their practical guide gives an overview of various exercises to be used at different stages of the writing process of a term paper. Planning exercises include the so-called "limitation table" *(Eingrenzungstabelle)*, which can be used to narrow down a topic and structure the paper at the beginning of the writing process (Grieshammer et al. 2012: 176 f.). The "planning pentagon" *(Planungsfünfeck)* can prove useful during the process of getting an overview of research question(s), working hypotheses, theories and terminology, research method(s) and material for the paper (Grieshammer et al. 2012: 200 f.).

For those writers who gravitate towards extended planning and have difficulties to start writing, a stronger focus on techniques based on spontaneous writing might be helpful. Besides the often recommended freewriting exercises (Elbow 1973), the suggestions of Bolker (1998) and Elbow (1981) may be fruitful in this context. Both provide exercises aiming to (temporarily) sedate the (exaggerated) inner control of text quality, which leads to the procrastination of writing (Keseling 2004: 108 f.). These exercises include the "sit there method" (sit down for a "fixed amount of time […] every day") and the "many pages method" ("pick a reasonable number of pages and write the same number every day") (Bolker 1988: 44 f.). Both methods focus on the regularity of writing and postpone the quality management of the text to a later point in time. Since the suggestions of Bolker (1998) aim at dissertations, it might be useful to reduce the allotted time and workload for shorter assignments. When it comes to term papers, one page per day might already be considered a good achievement.

For students who need more specific suggestions on *how* to start writing, the "loop writing" suggested by Elbow (1981) can offer adequate starting points: to note down first thoughts, prejudices, lies, errors or an instant version in a spontaneous way can be useful. Other possible strategies are to write stories, scenes, portraits or dialogues or to try narrative thinking or vary the audience or time (Elbow 1981: 77). These writing procedures are possibilities for a "voyage out", allowing writers to gain new insights in allowing themselves to "lose sight" of the topic. The loop is going to be completed by a "voyage home", which is the "process of bending the curve back toward the original goal" (Elbow 1981: 75). The "voyage out" is the place for spontaneous writing, whereas the "voyage home" is dedicated to conscious problem-solving strategies. The "loop writing" method might be an appropriate strategy for those students who feel a loss of motivation if they are forced to plan a text, because "the voyage out" consciously implements various kinds of spontaneous writing.

Particularly when dealing with students' beliefs and attitudes towards writing, we would argue for a holistic approach that includes a combination of guided discussions of writing strategies and exercises that help students explore various writing strategies. Creating an awareness of the many possibilities they have in writing and of the fact that there is not one best way will help them to develop their individual ways of writing. This allows stu-

dents to experience that planning and spontaneous writing, struggling for order and creative methods for gaining new insights are in fact not opposite poles but complement each other. Gaining more knowledge of alternative approaches to writing as well as adding to their writing experience will enable students to refine their writing strategies and thus constitutes an important step in the process of individual professionalization.

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