5 Fostering Multilingual Academic Writing Knowledge in Interdisciplinary EMI Degree Programs

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This contribution presents a course curriculum as well as conclusions drawn from a quasi-interventional study on the development of advanced English writing skills in an interdisciplinary English-medium instruction (EMI) management degree program at the master's level, offered at a Midwestern German university. Two English for specific purposes (ESP) writing instructors and seven discipline-specific lecturers in the life and social sciences contributed to a writing-intensive course design in team-teaching partnerships (Lasagabaster, 2018) formed during the implementation of a 14-week core module in the interdisciplinary degree program. The student group in the present project (n=20) provides an illustrative example of today's superdiverse student populations in higher education (Donahue, 2018). In order to document developments in the students' EFL writing skills, EFL source-based academic writing assignments were collected from the students prior to and after the module. Also prior to and after the module, students completed extensive writing-focused surveys, documenting the students' declarative writing skills and the students' attitudes towards different types of advanced EFL writing.

Based on the writing curriculum implemented in the module, on the texts produced by the students, on the student surveys, and on the responses gathered in a lecturer workshop discussion, the present contribution discusses how writing-intensive course designs informed in team-teaching partnerships between writing instructors and discipline-specific faculty can help EFL writers in interdisciplinary EMI programs develop their EFL professional writing knowledge.[1]

1 I would like to dedicate this publication to the memory of Prof. Dr. Susanne Göpferich

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In today's increasingly globalized and interdisciplinary landscape in higher education, discipline-specific lecturers as well as language teachers and writing instructors more often than not have to cater to the highly heterogeneous needs of *superdiverse* student groups. Today's student bodies' *superdiversity*, according to Blommaert and Rampton (2012), is characterized by a "tremendous increase in the categories of migrants, not only in terms of nationality, ethnicity, language, and religion, but also in terms of motives, patterns and itineraries of migration, processes of insertion into . . . the host societies" (p. 1). In order to remain academically, educationally, and economically attractive, universities in Europe currently advance their institutions' internationalization in a variety of ways (Göpferich et al., 2019).[2] The institutions' measures of internationalization contribute substantially to the superdiversity of students and faculty, as was precisely the case for the interdisciplinary management degree program at the master's level in which the course detailed in the present contribution was taught with a *superdiverse* group of students and a *superdiverse* group of lecturers. Importantly, Madiba (2018, p. 508) points out that the appropriateness of the term *superdiversity* may be contextually dependent, particularly when languages in higher education are concerned. Educational settings in the global South, for instance, have historically been characterized by a different kind and extent of linguistic diversity than educational contexts in the global North, so that learning environments striking people as *superdiverse* in the latter would represent familiar diversity in the former. The argument why the term *superdiversity* is indeed applicable in the present context is twofold: First, the sheer number and combination of languages in the present context (plus the fact that the language of instruction was a foreign language for most persons involved) is still relatively uncommon in the context of higher education in Germany (Göpferich et al., 2019, p. 114). Second, the diversity of the people involved in the project transcended linguistic diversity and also comprised disciplinary, cultural, and national diversity. Courses in the interdisciplinary management degree program are usually held with *superdiverse* student groups since the program accepts both domestic and international students with undergraduate degrees in business and economics, agriculture, legal studies, nutrition, environmental sciences, and the social sciences. Accordingly, this interdisciplinary master's program offers an institutional opportunity to foster students' academic literacies by transcending the disciplinary boundaries students have experienced during

who single-handedly created a fertile institutional background for our projects in the form of a versatile writing center. It was thanks to her dedication and expertise that we were able to form interdisciplinary partnerships for writing instruction across the university. She is deeply missed.

2 Please note that Professor Göpferich's 2019 publications followed her death in 2017.

their undergraduate studies (Barrie, 2006). The student group in the present project (n=20) can be regarded as an illustrative example of today's *superdiverse* student populations in higher education (Donahue, 2018) with 14 different native languages, seven different undergraduate disciplinary backgrounds, and English proficiency levels between 4 and 7 on the IELTS scale (British Council, 2018) present in the course. Additionally, there were also a number of English native speakers taking the class.[3]

Based on the wide accessibility for German students as well as for students from abroad, the program can be classified as a hybrid between two modes in which universities introduce English Medium Instruction (EMI) and internationalization into their institutional portfolio: (a) The "internationalization at home modality," as described by Dafouz (2014), is characterized by the introduction of international foci and lecturers into the curriculum; (b) The "student mobility modality" defined for EMI programs by Baker and Hüttner (2017) enables a considerable internationalization of universities' student body. Both of these modalities usually necessitate the switch from local languages of instruction to English as *lingua franca*, as was the case for the program in question here.

The present study was completed collaboratively by two English for specific purposes (ESP) writing instructors and seven discipline-specific lecturers in the life and social sciences in team-teaching partnerships (Lasagabaster, 2018) formed by a top-down mandate during the implementation of a 14-week core course in the program. Importantly, adding to the *superdiversity* of the teaching context was the fact that the discipline-specific lecturers involved in the course also represented a range of different disciplinary, linguistic, and national backgrounds, with each lecturer contributing distinct disciplinary input to the course.

In the interdisciplinary collaboration between the writing instructors and the discipline-specific lecturers, the latter providing input to varying degrees, attitudes towards EMI differed markedly from, e.g., the attitudes among faculty documented by Galloway et al. (2017). Surveying students and lecturers in several universities across China and Japan, the authors reported a substantial mismatch between students' and lecturers' expectations and attitudes towards EMI classes. Students conceptualized the instruction delivered to them in English as sites for engaging in English-language-learning (ELL) activities,

3 Please see also Dengscherz and Zenger/Pill, this volume, who offer insights into the multilingual, multicultural professional writing that students need to be prepared for in increasingly superdiverse educational environments. In the present contribution, participants were first introduced to multilingual writing strategies in an international context. Allowing students to draw on their full idiosyncratic linguistic repertoire may serve as a steppingstone towards the more advanced, layered multilingual writing processes illustrated in Dengscherz and Zenger/Pill, where personal multilingual writing strategies intersect with multilingual learning environments.

while lecturers positioned themselves as oblivious or even sceptical towards including ELL opportunities in the content courses they were teaching in English. Findings similar to Galloway et al. (2017) were reported by Airey (2012) for a European science, technology, engineering, and mathematics (STEM) context. Airey (2012) identified commonly held beliefs among the physics lecturers surveyed for the study who taught their courses in English as a foreign language. For instance, the lecturers in Airey (2012) appeared to hold the implicit belief that no particular introduction to *English for physics purposes* was necessary for students even if these students were taking the physics EMI courses as part of non-physics degree programs and might not be familiar with the conventional English discourse in physics courses. Also, the lecturers surveyed in Airey (2012) were mostly skeptical towards introducing students' dominant languages (mostly Swedish) as a valid linguistic resource in an EMI physics classroom. Finally, the lecturers contributing to the data set in Airey (2012) refrained from specifying language learning outcomes for their courses and, accordingly, did not engage in any dialogue with students about the English language requirements of the courses. Similar attitudes among STEM lecturers in other European EMI contexts were reported by Block and Moncada-Colmas (2019) in an interview study. Importantly, the lecturers shared that they themselves would need formal specialized training to position themselves as competent enough to address English language issues in their STEM classrooms, a training that none of the lecturers had received or planned on seeking out (Block & Moncada-Colmas, 2019, p. 13).

Thus, in contrast to findings and positions reported in studies like Galloway et al. (2017), Airey (2012), and Block and Moncada-Colmas (2019), the following shared beliefs and positions for the team-teaching collaboration were established in the present project: First, the course developed in collaboration was clearly designed as a course with an integrating content and language in higher education (ICLHE) framework in mind. As Pecorari has noted (2020), course formats that combine content teaching with some form of language instruction come in many forms and under many designations, among them ICLHE or also content and language integrated learning (CLIL). In comparison to CLIL, ICLHE designs cater to the specific exigencies in post-secondary academic education (Dafouz, 2020). The co-operative teaching approach in the course stands in noticeable contrast to merely "CLIL-ized EMI," criticized adamantly by Block and Moncada-Colmas as

> what happens when [Higher Education] stakeholders—program administrators and lecturers—draw on a naïve theory of language learning, seemingly based on an under-theorised

> version of Krashen's (1985) input hypothesis. In effect, they assume that the mere fact of sitting in classrooms in which content is taught in English will lead to the learning of English. (Block & Moncada-Colmas, 2019, p. 3)

In contrast, the ICLHE approach in the present project was clearly aligned with the conception of CLIL put forward by Gustafsson and colleagues (2011) who contend that "CLIL appears to require collaboration not only in materials or curriculum development but also in course design, learning activities, teaching and assessment" (p. 8). The authors stress that CLIL approaches should "be sensitive to where the students are coming from, building on home languages/literacies to transition into content area language/literacy" (2011, p. 5), specifically the approach taken in the present project.

The team-teaching approach in the present project could be termed *transdisciplinary*, as suggested by Hendricks (2018), since it allowed for "interdisciplinary faculty [to] be granted proactive input into curricular design" (p. 58). However, since each lecturer retained specific evaluative tasks that would not be shared with the writing instructors, a more apt classification for the present project would be *interdisciplinary*. Since lecturers and instructors collaborated mainly in topic choice, material selection, material design, and evaluation, instead of teaching lessons together, the team-teaching partnerships established in the present project can be described a hybrid between two modes of team-teaching suggested by Creese (2005), namely (a) the *temporary withdrawal mode*, in which subject teachers and language teachers inform each other about the material covered and support each other in selecting material and activities, and (b) *observational and advisory support mode*, in which language teachers provide feedback and support to content lecturers on how they can establish more clear-cut language requirements and intended language learning outcomes for their EMI courses, and also on how they can communicate these requirements and intended outcomes more clearly to their students. Accordingly, the present course design was implemented with two-fold intended learning outcomes in place, including subject-matter knowledge and writing knowledge development outcomes.

As a second general position in the collaborative course design, it was decided to introduce students' multiple linguistic backgrounds as potentially valuable resources into the superdiverse EMI course sessions. Adopting this approach was deemed relevant especially for the superdiverse context of the group as a range of empirical investigations have provided support for the idea that students' dominant language, especially for students with lower and intermediate foreign-language proficiency, can serve important self-regulatory functions in

students' private and inner speech (cf. De Guerrero, 2018). Private speech is defined as speech that students employ subvocally to guide themselves through cognitively taxing tasks (Ewert, 2010; Jiménez Jiménez, 2015), and that in all probability mirrors their inner speech, which is not actually pronounced. Superior results for bilingual cognitive strategies used by bilingual speakers in comparison to monolingual cognitive strategies have been documented in comparison to monolingual cognitive strategies for non-linguistic tasks (Centeno-Cortés & Jiménez Jiménez, 2004; Van Rinsveld et al., 2016). In a similar vein, using their dominant language for private and probably also inner speech appears to support students' writing performance in a foreign language and can help students perform better on the basis of multilingual writing strategies than on the basis of monolingual writing strategies (Kobayashi & Rinnert, 1992; Uzawa, 1996; Woodall, 2002). Thus, a collaborative multilingual teaching approach was chosen in the present project in accordance with the recommendations by Palmer et al. (2014), where specifically one writing instructor and occasionally the discipline-specific lecturers would (a) model dynamic bilingualism in front of the students in the course by responding to students and to fellow lecturers in English, German, French, Spanish, or Russian, as far as possible, for addressing language, content, as well as administrative issues; (b) instruct and encourage students to draw on their full linguistic repertoires for completing the content- and writing-related assignments in the course; and (c) celebrate in-class interactions in which students spontaneously contributed meta-linguistic comments whenever they realized how their prior knowledge about other languages or writing in general could benefit them when completing the course-specific writing tasks in English as a foreign language.

What students were thus encouraged to accomplish in the interdisciplinary writing context of the course can be termed *adaptive transfer*, which DePalma and Ringer (2011) define as "*the conscious or intuitive process of applying or reshaping learned writing knowledge in order to help students negotiate new and potentially unfamiliar writing situations*" (p. 135; emphasis in the original). This approach was judged by the interdisciplinary collaborators to be particularly relevant for the course in question since a range of students indicated that, after completing their master's degree, they might not necessarily stay in Germany, but instead, e.g., return to the countries where they had completed their primary, secondary, and undergraduate education in a language other than English.

The purpose of the present chapter is twofold. First, the course design including the writing assignments and strategies discussed with the students in the superdiverse course group are presented. The assignments and strategies were designed specifically to help the students (a) differentiate between intradisciplinary and interdisciplinary writing in terms of target audiences in

and beyond the university (Gustafsson et al., 2011); (b) draw on their full linguistic repertoire in two or more languages at different times and for different purposes during their English writing processes (Baker, 2003; Canagarajah, 2011); and (c) draw on their individual writing knowledge to establish shared communicative goals and strategies in interdisciplinary collaborative writing projects. The second purpose of the present contribution is to shed light on the developments in the students' individual English-language writing knowledge and in the students' beliefs and attitudes towards writing: English-language source-based academic writing assignments were collected from the students prior to and after the course. Also prior to and after the course, students completed extensive writing-focused surveys, documenting the students' declarative writing knowledge and the students' attitudes towards different concepts in connection with advanced English writing. Based on the writing curriculum implemented in the course, on the texts produced by the students, and on the student surveys, the present contribution discusses how teaching materials and strategies developed in team-teaching partnerships between writing instructors and discipline-specific faculty can (a) cater to student and lecturer groups that are highly diverse in terms of linguistic, cultural, and disciplinary backgrounds, and English-language proficiency levels; and (b) lay the groundwork for the development of professional English writing knowledge in highly diverse student populations.

Project Framework: Course Design of the ICLHE Course

For implementing English writing training in the course, seven discipline-specific lecturers cooperated with two writing instructors from the university's writing center. The course was taught during a regular semester with four hours of instruction per week. The mandatory structure of the course was that of a lecture series, with each lecturer providing different disciplinary input. Different discipline-specific lecturers held 90-minute lectures in English, introducing their specific area of expertise and their current research projects. A range of these lectures were followed by English writing training sessions tailored to the content of each previous lecture. The disciplinary foci of the seven lecturers involved ranged from food security, eco-efficiency, groundwater management, and field spectroscopy to ecosystems services. Five of the seven lecturers had already completed their Ph.D.s and were working on post-doctoral research projects while two lecturers were in the process of completing their Ph.D. degrees. One of the seven lecturers held a position as course coordinator for the present project. All of the lecturers had learned English as a foreign language and described themselves as advanced users

and writers. While employed at the university, they had not participated in faculty development courses providing support to faculty teaching in English as a foreign language.

As the first step in the course development, one of the writing instructors provided a substantial online survey[4] to the collaborators serving as a basis for a "transaction space" (cf. Winberg et al., 2013, p. 96). In this "transaction space," discipline-specific lecturers and the writing instructors could articulate and negotiate their understandings of the intended learning outcomes for students in the course. In the online survey, the discipline-specific lecturers indicated in which genres the students enrolled in the interdisciplinary master's degree program should be able to write well in English, and also which genres the lecturers felt students struggled with the most. The survey also asked lecturers to indicate which of five core areas they thought students needed to progress in most substantially in order to meet the communicative standards of the degree program. The five core areas targeted in the survey were *source-based writing*, *audience awareness*, *rhetorical writing competence*, *genre knowledge*, and *linguistic correctness*. The lecturers ordered these concerns in accordance with the priority they thought the core area should have in the interdisciplinary degree curriculum. The writing tasks and approaches implemented in the collaborative course design directly reflect the priorities identified by the discipline-specific lecturers. The discipline-specific lecturers also collaborated with the two writing instructors in a course debriefing meeting (cf. Winberg et al., 2013) to evaluate the course design in a focus group discussion. Thus, the project offers both individual and group "transaction spaces": Session designs in individual collaborations were complemented with a joint debriefing, as a communal "transaction space."

The ICLHE course framework designed by the interdisciplinary faculty team was first implemented in the fall semester of 2018/2019. Table 5.1 illustrates the task types (pre-writing, in-class writing, out-of-class writing, assessment, feedback, revision, meta-cognitive reflection, or collaborative writing) that were used in the six training sessions in the course design. In the remaining weeks of the 14-week semester, lectures and input were provided by faculty who were not involved in the implementation of the writing training. In three of the remaining 14 sessions, students gave oral presentations. Table 5.1 also specifies which tasks were completed monolingually and in which other tasks students were encouraged to draw on their personal multilingual repertoires. Additionally, the table specifies the intended learning outcomes for each training session.

4 Thank you to Dr. Janine Murphy for designing this elaborate and versatile instrument.

Table 5.1. Course Design

Writing training: Session 01		
Task type	**Intended learning outcome**	**Task**
Pre-writing monolingual	Ability to gage time needed for • reading • note-taking in source-based English writing tasks	Timed *reading and note-taking tasks* with academic journal articles, discipline-specific and interdisciplinary
Pre-writing monolingual	Ability to identify • readers' genre expectations for **summaries** of specialized articles • the level of detail and the range of specialized vocabulary appropriate to use in **summaries** for different clients depending on the clients' professional background and the clients' inquiry • relevant types of information for **summaries** and where to find these types in specialized articles	Composing and discussing *written client profiles* based on fictitious client scenarios
In-class writing monolingual	Ability to choose between 12 paraphrasing strategies for article **summaries**, e.g., • listing • condensing, etc.	*Discussion and revision* of sections from the students' pre-semester **summaries** of English academic articles
Writing training: Session 02		
Task type	**Intended learning outcome**	**Task**
Pre-writing multilingual + In-class writing monolingual	Ability to switch between L1 and FL for different sub-processes of English source-based writing, e.g., • note-taking • planning • formulating, etc.	***Summary*** of main findings in an English research article *Description* of main observations illustrated in figures and charts
Revision multilingual	Ability to draw on the L1 in English revision processes, e.g., for • grammar assessment • content assessment, etc.	*Discussion and revision* of **summaries** of research findings provided by the lecturers
Meta-cognitive mono/multi	Ability to determine individually which language/s serve/s best for which sub-process of source-based writing	*Critical reflection* writing task, documenting perceived advantages & disadvantages of multilingual writing strategies

Writing training: Session 03		
Task type	**Intended learning outcome**	**Task**
Pre-writing multilingual	Ability to draw on full multilingual idiolect irrespective of sub-process of writing, e.g., by • switching • mixing • meshing For a differentiation between language switching, mixing, and meshing, please see Michael-Luna and Canagarajah (2007).	*Annotation* of English academic articles, identification of CARS components
Collaborative mono/multi	Ability to draw on full multilingual idiolect irrespective of sub-process of writing, but respectful of interlocutor	*Discussion and revision* of article annotations

Writing training: Session 04		
Task type	**Intended learning outcome**	**Task**
Assessment mono/multi	Ability to identify and remedy ambiguous formulations in research reports	*Discussion* of **summaries** of research findings provided by the lectures
Pre-writing multilingual + In-class writing monolingual	Ability to • identify readers' genre expectations for **summaries** of specialized articles • establish text structures & use connectors in **summaries** for different clients depending on the clients' professional background and the clients' inquiry	Composing and discussing *written client profiles* based on client simulations Composing text *outlines*
Out-of-class writing monolingual + Collaborative mono/multi	Ability to • adapt **summary** writing strategies to the composition of funding applications • organize & monitor collaborative writing processes • compose & revise texts in groups	Composing *annotated outlines* of funding proposals for interdisciplinary boards

Writing training: Session 05		
Task type	**Intended learning outcome**	**Task**
Pre-writing multilingual	Ability to understand and apply findings from applied linguistics research to • assess & optimize English writing processes and products • assess & optimize multilingual writing strategies in English writing processes	*Annotation* of English academic articles from other disciplines *Documentation* of applicable multilingual writing strategies
In-class writing monolingual + Peer feedback multilingual	Ability to • differentiate between higher-order and lower-order concerns in peer feedback processes • deploy one's own multilingual resources in peer-to-peer discussions of English texts	Composing *memos* Giving and receiving *feedback* in bilingual pairs
Assessment mono/multi	Ability to • identify appropriate sources and publications in accordance with specific writing purposes • avoid different forms of plagiarism	*Classifying* source types *Classifying* types of plagiarism
Pre-writing monolingual	Ability to identify • readers' genre expectations for **summaries** of specialized articles • the level of detail and the range of specialized vocabulary appropriate to use in **summaries** for different clients depending on the clients' professional background and the clients' inquiry • relevant types of information for **summaries** and where to find these types in specialized articles	Composing and discussing *written client profiles* based on client simulations
Out-of-class writing monolingual + Collaborative mono/multi	Ability to • adapt **summary** writing strategies to the composition of funding applications • organize & monitor collaborative writing processes • compose & revise texts in groups	Composing & revising *funding proposal drafts* for interdisciplinary boards Using written & oral feedback for proposal revisions

Writing training: Session 06		
Task type	**Intended learning outcome**	**Task**
Pre-writing mono/multi	Ability to • make use of oral feedback for the revision of extensive texts produced in collaboration. • organize & monitor collaborative revision processes • revise texts in groups	Composing & revising *complete funding proposals* for interdisciplinary boards Using written & oral feedback for proposal revisions

Five of the total of six writing training sessions followed immediately after the lectures given by the discipline-specific lecturers and lasted between 90 and 180 minutes. In the last of the six writing training sessions, students received oral feedback on their writing. Each of the writing training sessions comprised different combinations of *pre-writing tasks*, *in-class writing tasks*, and *collaborative out-of-class writing tasks*. The tasks were based either on journal articles that the discipline-specific lecturers had provided to the writing instructor to design writing tasks with or on journal articles that the writing instructor had suggested to the discipline-specific lecturers in connection with their research foci.

Session 01 of the writing training sessions was dedicated to discussing the strengths and weaknesses of the students' pre-semester summaries, and to clarifying appropriate summarizing strategies for interdisciplinary writing. In this session, the writing approach was still a monolingual one.

Session 02 marked the first introduction of the *translanguaging* approach as championed by Baker (2003), among others. In this approach, specific functions are assigned to specific languages in the classroom, i.e., by distinguishing clearly between input and output language for source-based writing tasks. For example, as their first introduction to multilingual writing strategies, students were given two types of English source material, i.e., a short excerpt from an academic article as well as a figure illustrating findings from an empirical study. Students were asked to formulate summaries of the main observations detailed in the article excerpt as well as of the findings illustrated in the figure. For their summaries, students were asked to use their dominant language, i.e., the language in which students felt most flexible, comfortable, and confident. Importantly, students were told not to switch between, mix, or mesh languages, but to remain in their dominant language for writing. Students who had indicated that English was one of their dominant languages were asked to compose their formulations in a noticeably less formal register than they would usually be expected to use in academic settings. The stu-

dents who shared dominant languages with other students in the class were encouraged to compare formulations and discuss the excerpt and the figure in their dominant language together. The subsequent joint discussion of the observations and findings was held with all students in the course in English.

A complementary form of *translanguaging* was introduced in Session 03. Students were asked, as a pre-writing assignment, to use their dominant language for annotating an English journal article. As a basis for the annotation, students were introduced to the CARS model that would help students recognize a range of different textual moves that are used in academic writing and that can be used in funding proposal writing to articulate (a) the research or the funded projects already available in a certain field of expertise, (b) the gaps or shortcomings of the research and funded projects that are already available, and, importantly, (c) the findings and projects the writers wish to produce or accomplish with their own contributions to the field (Swales, 1990). Students read an introduction from a research report that one of the discipline-specific lecturers had published as a co-author in a joint project; subsequently, students identified the CARS moves in the text. As a *translanguaging* strategy, students were introduced to the translanguaging approach suggested by Canagarajah (2011) and by García (2009), namely "intermingl[ing] linguistic features that have hereto been administratively or linguistically assigned to a particular language or language variety" (p. 51). Instead of formulating their text annotations exclusively in their dominant language, students were told to use whatever type of language use felt most comfortable and cognitively economical to them; students were allowed to switch between languages and to mix or mesh languages as they saw fit. Whenever students wanted to discuss passages from the text with other students sharing the same linguistic repertoire, students were encouraged to also switch, mix, and mesh in their conversations where they saw fit. The subsequent joint discussion of the English article was held with all students in the course in English.

In session 04, the writing instructor illustrated how the summarizing strategies students had been using with full articles, with excerpts, and with figures, were to be applied in the out-of-class collaborative writing tasks. The writing instructor explained the task in English and in German and the explanations were repeated by one of the discipline-specific lecturers in Russian. Whenever possible, the writing instructor also used French or Spanish with individual course participants.

Session 05 started with introducing students to two texts chosen not from their fields of study, but from applied linguistics. First, students were given the opportunity to familiarize themselves with a theoretical text on the expected benefits of multilingual writing strategies for FL text comprehension

and FL text production (cf. Göpferich, 2017). Subsequently, students read the findings from a study conducted among EFL writers where the EFL texts that the study participants had produced in their dominant language first and subsequently translated into English received significantly better ratings than texts that the students had produced directly in the foreign language (cf. Uzawa, 1996). Thus, students in the present course discussed how using their dominant language during EFL reading and writing processes could help them allot their cognitive capacities more effectively, e.g., by completing pre-writing activities in their dominant instead of a foreign language.

A central pre-writing task used repeatedly in the writing training was the written *client profile task*. This task was integrated into sessions 01, 04, and 05, as well as referenced repeatedly in the task descriptions and guides for the summaries and the collaborative writing project. The client profile task was also referenced in the written and oral feedback that students received on their writing. In this task, students were given different scenario descriptions in which different fictitious clients reached out to them and asked for summaries of the source material that students were working with. The fictitious clients represented a range of different disciplinary backgrounds and specified different foci and purposes for the summaries that they requested. Students had to discuss which kind of background knowledge they could expect the different clients to have, which level of specialized or general vocabulary would be appropriate for the clients, and where to find the specific information that the clients were asking for in the sources that the students worked with.

In the present project, the *summary genre* was chosen as the central genre for the writing training. The summary task was agreed upon since it represents a written version of what Cheng and Feyten (2015) term "legitimate peripheral participation" (p. 8). The task comprises *legitimate* reading and writing activities, such as extrapolating relevant information from legitimate specialized journal articles and presenting the information to a particular target audience; the summarization task is *peripheral* in that it does not conform to the standards set for actual scientific papers and publications, but instead is tailored to the students' current semester and academic abilities. Lastly, the summarization task is *participatory* as it constitutes direct written engagement with the research basis of the interdisciplinary degree program. Also, the summary task was chosen because Graham and Perin (2007) report the highest effect-size in terms of fostering writing knowledge development for writing interventions that specifically train summary writing knowledge. The overall rationale for selecting the summary genre was to help students learn how to present specialized literature to interdisciplinary readerships in a comprehensible and concise manner. Thus, students composed individual summaries as well as

summaries that constituted the building blocks for their collaborative interdisciplinary writing projects. The *collaborative writing projects* built directly on the summary tasks discussed with the students in the writing training, as students had to summarize both theoretical as well as empirical publications in order to articulate the interdisciplinary backbone of extensive funding proposals in groups of students with different disciplinary backgrounds.

The course coordinator collaborated with the writing instructor in designing guiding documents that would help students revise and expand their texts in an iterative process. The guiding documents (a) identified the main points that the students had to summarize in the different text drafts, (b) provided specific tasks that students needed to complete in writing to argue their point, and (c) contained examples of well-formulated as well as ill-formulated text sections. Table 5.2 provides a section of the instructions that students were given in the guiding document for revising their initial drafts to create further drafts.

Table 5.2. Section from the Documents Designed by the Writing Instructor in Collaboration with the Course Coordinator

Focus	Specific Objectives
Overall task	**Summarize** the specific objectives of the project = What is necessary to achieve the main objective? Specific objectives should be achieved within the project duration.
Specific tasks	*Consult* the feedback that you have received on the initial draft. *Revise* your descriptions of your specific objectives in your initial draft. Make sure that your descriptions of the specific objectives EXACTLY fit your main objective stated earlier in your initial draft. *Indicate* your sources with precision.
Examples	NOT: "Each nutritional base value will be addressed." ☠☠☠ INSTEAD: "There are in total xx nutritional base values not met by the population in the region (SOURCE). For the base value of yy, this means that people lack bb (SOURCE). Accordingly, the supply of bb needs to be stabilized. The next problematic base value is cc (SOURCE). Here, people lack hh (SOURCE). Accordingly, the supply of hh needs to be increased in the target region." 👍👍👍

For the individual as well as the collaborative writing tasks, the students received written feedback from the writing instructor focused on the appropriate use of source material, the comprehensibility of the texts for the intended interdisciplinary readership, the lexical precision and structural coherence of the texts, the adherence to genre conventions, as well as the linguistic correctness of the texts. The discipline-specific lecturers provided oral and written feedback on the students' drafts by assessing the proposed projects'

feasibility and persuasiveness. The lecturers and the writing instructor involved in the course design coordinated their feedback to the students and agreed that a clear division of responsibilities would be communicated to the students: Students received feedback on the comprehensibility, lexical precision, register, style, and linguistic correctness only from the writing instructor. The content lecturers assessed and provided feedback mainly on the scope, practicality, and feasibility of the students' projects.

Data Collection

Data were collected prior to and after the semester, in the form of individual English summaries, and responses to a self-assessment survey as well as to two beliefs-and-attitudes surveys. The collaborative team assumed that students would develop a more nuanced view of the purpose of their writing, upon participating in writing training that was (a) closely linked to the discipline-specific lectures; (b) specifically focused on text comprehensibility for interdisciplinary readerships; (c) inclusive of writing-to-learn recommendations; and (d) sensitive to the individual students' multilingual profiles. Their learning might also translate into improved text quality (cf. Crosthwaite, 2017). Table 5.3 offers a chronological overview of the phases of data collection in the present project.

Participants

In the present project, twenty students in their first year in the interdisciplinary management master's degree program enrolled in the mandatory course, seven of them female, and thirteen male, with a mean age of 25.6 years (SD=3.7 years). Eighteen of them had learned English as a foreign language, while two indicated that they had been raised as bilinguals from birth and that they regarded English as one of their native languages. On average, the EFL students in the course had been learning English as a foreign language for 12 years (SD= 4.2 years), with two of the students having started learning English as recently as three and six years ago. As an English language proficiency test, the online assessment offered by the university's language center was administered prior to the start of the course; this test is a c-test, a timed online cloze-test in which students are presented with a number of texts in order of increasing difficulty in which the second half of every second word is deleted and students have to fill in the blanks (see Eckes & Grotjahn, 2006, for a detailed analysis of the c-test assessment logic). In the course, there was no significant correlation between the English language proficiency score achieved in the online c-test and the number of years for which the students had been learning English as a foreign

language (r_s=-.052, p >.05, n = 18). Table 5.4 illustrates the range of languages and educational backgrounds represented in the group of course participants, with the number of participants represented in parentheses. English proficiency levels are indicated in terms of IELTS score equivalents.

Table 5.3. Chronological Order of Data Collection

Data Collection: One Week Prior to the First Session (PRE)	
Data collection instrument	**Resulting data type**
Individual *summary* task	English summaries of ca. 600 words each
Self-assessment *survey*: English writing knowledge	(a) Source-based writing (6 closed items) (b) Audience awareness (6 closed items) (c) Coherent writing (8 closed items) (d) Genre knowledge (3 closed items) (e) Linguistic correctness & stylistic appropriateness (6 closed items)
Self-report *survey*: beliefs and attitudes towards writing	(a) Usefulness of Academic Writing for Writing in the Professions (max. no. of points: 24) (b) Using writing as a learning tool (max. no. of points: 32)
Self-report *survey*: beliefs and attitudes towards multilingual writing strategies	Usefulness & appropriateness of multilingual writing strategies in academic writing processes (max. no. of points: 44)
English *proficiency* test	c-test results expressed in IELTS scores
Data Collection: Final Week of the Semester (POST)	
Data collection instrument	**Resulting data type**
Individual ***summary*** task	English **summaries** of ca. 600 words each
Self-assessment *survey*: English academic writing knowledge	(a) Source-based writing (6 closed items) (b) Audience awareness (6 closed items) (c) Coherent writing (8 closed items) (d) Genre knowledge (3 closed items) (e) Linguistic correctness & stylistic appropriateness (6 closed items)
Self-report *survey*: beliefs and attitudes towards writing	(a) Usefulness of Academic Writing for Writing in the Professions (max. no. of points: 24) (b) Using writing as a learning tool (max. no. of points: 32)
Self-report *survey*: beliefs and attitudes towards multilingual writing strategies	Usefulness & appropriateness of multilingual writing strategies in academic writing processes (max. no. of points: 44)

Table 5.4. Participant Characteristics

Native languages	Russian (4), English (2), Mandarin Chinese (2), Persian (2), Spanish (2), Amharic (1), Azerbaijani (1), German (1), Indonesian (1), Tamazight (1), Tatar (1), Turkish (1), Urdu (1), Vietnamese (1)
Bachelor's degrees	Business and economics (10), environmental studies and agriculture (4), social sciences (4), legal studies (1), history (1)
Languages of instruction: undergraduate degree	Russian (5), English (4), Mandarin Chinese (2), Persian (2), Arabic (1), French (1), German (1), Spanish (1), Tatar (1), Urdu (1), Vietnamese (1)
Country of instruction: undergraduate degree	Russia (4), Afghanistan (1), Azerbaijan (1), Belarus (1), Brazil (1), Cameroon (1), China (1), Colombia (1), Germany (1), India (1), Indonesia (1), Iran (1), Morocco (1), Pakistan (1), Poland (1), Turkey (1), Vietnam (1)
Results in English proficiency test	IELTS 7/proficient English users (4) IELTS 6/upper-intermediate English users (6) IELTS 5/lower-intermediate English users (5) IELTS 4/basic English users (3) Additionally, two of the 20 students taking the course self-identified as native speakers of English.

None of the students had ever been diagnosed with any language-related disorder or learning disability. Out of the twenty students in the class, three indicated in the survey that they had taken bilingual classes during secondary education, combining either English with Urdu or Persian with German. Six students had completed their bachelor's degree in a language other than the language they grew up speaking at home. Twelve of the students indicated that they had had no formal training in either translation or interpreting, while eight students indicated that they had received at least some training in either translation or interpreting.

Data Collection Instrument: Individual English Summary Task

Students were asked to summarize English journal articles for interdisciplinary readerships. The summary was well-suited as the genre of the pre- and post-tests as one can perform a more or less clear comparison of what the writers might have wanted to express and what they eventually formulated in their text: summary writing, as stated by Byrnes (2011),

> bypasses the dilemma for L2 writing research of determining what an author intended to mean in the first place.

> Though that dilemma can never be entirely removed, the task of summary writing proves a sufficiently knowable environment of objectively stable criteria—derived from the source text—to investigate the writer's meaning-wording choices not just in terms of occurrence or non-occurrence but in terms of the nature and significance of either of these options. (p. 144)

For the writing task prior to the first session and after the last session of the course, the writing instructor and the discipline-specific course coordinator selected two academic articles topically suited to the content of the course, one article each for the pre- and post-test on the basis of which students' individual writing knowledge were assessed in the summary writing task. The following measures were taken to ensure that the original articles were equal in terms of a range of key parameters. Both the discipline-specific course coordinator and the writing instructor had to agree that the articles would be equal in terms of three critical parameters:

1. *Content fit*: the articles had to discuss one of the topics covered in the lectures offered in the mandatory in-class sessions of the course.
2. *Representativeness*: the articles had to be representative of the type of source material that students were expected to use for the summaries in the written group proposal.
3. *Familiarity*: the articles had to be chosen from specialized journals in which one or more of the discipline-specific lectures involved in the collaborative design of the course had already published.

Both articles were roughly equal in terms of number of words, average number of words per sentence, average number of syllables per word, and additional parameters such as the Flesch Reading Ease Score, as listed in Table 5.5.

Table 5.5. Measures of Equality for the Journal Articles Used in the Pre- and Post-Tests

Parameter	Pre-test article	Post-test article
Number of tables	4	4
Number of images	4	4
Number of words	6,700	6,000
Average number of words per sentence	25.53	26.92
Average number of syllables per word	1.77	1.79

Parameter	Pre-test article	Post-test article
Gunning Fog Index The Gunning Fog Index is calculated based on the number of words comprising one or two syllables and the number of words comprising more than two syllables in a text (Kincaid et al., 1975).	17.42	18.00
Coleman Liau Index The Coleman Liau Index is computed on the basis of the average number of words per sentence and the average number of syllables per word (Kincaid et al., 1975).	13.90	14.22
Automated Readability Index The Automated Readability Index is computed on the basis of the average number of words per sentence and the average number of strokes per word in a text (Kincaid et al., 1975).	16.03	16.92
SMOG The SMOG Grading is calculated based on the number of words of three or more syllables in a text (McLaughlin, 1969).	16.09	16.89
Flesch Reading Ease Score The Flesch Reading Ease Score is computed on the basis of the average word length in syllables and the average number of words per sentence in a text (Flesch, 1948). Texts with a Flesch Reading Ease Score equal or lower to 30 are classified as "Very difficult," i.e., "scientific" (1948, p. 230).	30.31	27.92

From both articles, the abstracts were removed so that students would not use them as examples for their own summaries. Additionally, the students themselves were asked immediately after submitting the post-test summary to compare the article used for the post-semester writing task with the article that was the basis for the pre-semester writing task concerning the following six parameters:

1. *Perceived text length*: students were not asked to actually count the words in the different documents, but to indicate whether they had perceived the two texts to be of equal length;
2. *Reading effort*: students were asked whether they felt that they had to put an equal amount of effort intro reading the text prior to the semester as they had into reading the text after the semester;
3. *Summarizing effort*: students were asked to indicate whether they felt they had to put an equal amount of effort into summarizing the article

they worked with prior to the semester as they had to put into summarizing the article they worked with after the semester;
4. *Difficulty of vocabulary*: students were asked to indicate whether they felt that both texts contained an equal amount and range of difficult vocabulary;
5. *Relevance*: students indicated whether they perceived both texts to be equally relevant for the course topic; and finally,
6. *Personal interest*: students were asked to indicate whether they had found both texts equally interesting.

In designing the writing task itself and specifically the written task instructions that students had to observe, the following five criteria were applied in accordance with Bachmann and Becker-Mrotzek (2010) to make the writing task instructions maximally comprehensible and accessible to the students:

1. *The final text's function was specified in the task description*: it was made clear that the students had to produce a summary serving a purely informative function without interpretative, persuasive, or evaluative elements;
2. *The readership for the final text was specified in the task description*: students were asked to compose their summary for fellow students in the same interdisciplinary degree program who had not yet enrolled in the core course and had not read the academic article that students were asked to summarize;
3. *The intended impact or outcome was specified in the task description*: it was explicitly stated that the prospective interdisciplinary readers, after reading the students' summaries, should be well-informed about (a) the hypothesis undergirding the study detailed in the academic article, (b) the empirical testing procedure and the data collected to verify the authors' hypothesis, (c) the observations that the authors reported, and (d) the specific conclusions that the authors drew based on their observations in light of their initial hypothesis;
4. *The task description was tailored to the students' assumed general knowledge, i.e., genre conventions*: a list of the specific features of academic summaries was provided to the participants so that they would be aware of, e.g., citation conventions.
5. *The task description comprised linguistic specifications*: the expected text length, the level of formality, and the required textual structure were indicated in the task description. Students were also explicitly informed that they were not allowed to use direct quotations, but that they had to explain the study entirely in their own words.

Students also completed (a) an online self-assessment survey concerning their English writing knowledge; (b) an online self-report survey on their beliefs and attitudes towards improving their professional English writing knowledge; (c) an online self-report survey on their beliefs and attitudes towards using multilingual writing strategies; and (d) an online English proficiency test. With the exception of the English proficiency test, all data collection instruments were used again immediately after students had completed the course, in the second round of data collection.

Text Quality Assessment

The text quality assessment for the study was focused on the summaries that students produced prior to and after the course. In the present team-teaching design, it was decided to forgo assessing the final funding proposal together mainly for workload reasons (for a discussion of common pitfalls in team-teaching partnerships, including the negotiation of workload, see Lasagabaster, 2018). Each of the summaries produced prior to and after the semester was assessed by two independent raters using a five-point scale (1 = "excellent"; 2 = "good"; 3 = "average"; 4 = "sufficient"; 5 = "insufficient"), first focusing on the overall quality of the complete text and assigning a holistic rating, and subsequently with an analytical text quality scheme comprising eight different parameters of text quality, provided in Table 5.6. For both, the holistic assessment and the assessment for eight sub-parameters, raters were instructed to base their evaluation on the task description that the students received for the summary task. In the task description, the purpose and the intended audience were explicitly specified. See Table 5.6 for the eight parameters the raters used.

All raters involved had substantial experience in text feedback, editing, and proof-reading. In two separate training rounds, raters received the task description students had been working with, a model summary of each of the academic articles that the students had summarized, as well as a number of summaries with the rating schemes already completed. The two independent raters were given the opportunity to ask individual questions and the responses were collected in a written training summary. Each rater was given several training summaries to rate and received feedback on each of the training rounds by the researcher. After the final training round, the two raters had reached the following levels of interrater agreement as indicated by Cohen's kappa: *holistic*: $\kappa = .874$, $p < .0005$; completeness & accuracy $\kappa = .676$, $p < .0005$; focus: $\kappa = .504$, $p < .0005$; *macrostructural coherence* $\kappa = .637$, $p < .0005$; *microstructural coherence* $\kappa = .776$, $p < .000$; *lexical precision* $\kappa = .729$, $p < .0005$;

stylistic appropriateness $\kappa = .814$, $p < .0005$; *source use* $\kappa = .50$, $p < .000$; and *linguistic correctness* $\kappa = .586$, $p < .000$. Cohen's kappa was chosen as an indicator of interrater agreement as it "indicates the proportion of agreements between two raters after adjusting for chance agreements" (Tinsley & Weiss, 2000, p. 112). The values for Cohen's kappa that are commonly deemed acceptable in studies where two raters provide ratings independently from one another usually are $\kappa \geq 0.65$ (cf. Lesterhuis et al., 2018). Accordingly, the kappa values for interrater agreement achieved in the present study for the *holistic* rating, for *completeness & accuracy*, for *microstructural coherence*, for *lexical precision*, and for *stylistic appropriateness* are within the realm of the values accepted in the literature. In contrast, acceptable values for the agreement concerning *focus*, *macrostructural coherence*, *source use*, and *linguistic correctness* were not achieved. Accordingly, different training rounds will be implemented in subsequent installments of the project.

Table 5.6. Parameters for Text Quality Assessment

Parameter	Guiding questions
Completeness & accuracy	Does the summary include all the information needed by the interdisciplinary target audience as detailed in the task description? Is the information in the summary correct?
Focus	Does the summary focus on the relevant information specifically asked for in the task description? Does the summary contain irrelevant details that might be misleading for an interdisciplinary readership?
Macrostructural coherence	Does the argument in the summary progress clearly from a hypothesis to a design description, to a description of the observations and, finally, to the conclusions drawn based on the observations? Does the summary establish a clear connection between the closing sentences and the study rationale established in the beginning of the summary?
Microstructural coherence	Are the sentences in the summary ordered in a comprehensible manner? Does the summary contain appropriate connectors to link the sentences with one another?
Lexical precision	Does the student use precise and unambiguous formulations? Has specialized terminology been appropriately explained for an interdisciplinary readership?
Stylistic appropriateness	Is the register of the summary sufficiently formal for the interdisciplinary professional setting specified in the task description?
Source use	Is the source article indicated in accordance with the style sheets commonly used in the interdisciplinary degree program? Are prepositions like *according to source* used correctly?
Linguistic accuracy	Is the summary correct in terms of grammar, spelling, and punctuation?

The ratings were completed anonymously, and raters were not aware of the pre/post-design of the study. For the values in the actual rating in which the raters did not agree, the mean value was calculated for those ratings where the raters disagreed by merely one level. For the remaining disagreements, a third rater, in this case the researcher, adjudicated between the two disagreeing raters.

Data Collection Instrument: The Self-assessment Survey

The self-assessment survey for the students enrolled in the course was based on the survey that the lecturers had completed as the first step in the course design and comprised three components. The survey asked students to (a) pick genres from an open list that the students felt they could already write well in English; (b) rate their overall English academic writing ability on a five-point scale ("Unable to assess"; "Basic"; "Intermediate"; "Advanced"; "Mastery"); and (c) use a six-point scale ("Unable to assess"; "Unsure"; "Basic"; "Intermediate"; "Advanced"; "Mastery") to self-assess their *source-based writing* ability, their *audience awareness*, their ability to *write coherently*, their *genre knowledge*, and their ability to produce *linguistically correct and stylistically appropriate* texts in English. For assessing their abilities, students were given between six to eight parameters per component to self-assess. The exact number of items per core area is indicated in Table 5.3. For instance, the core area of *source-based writing* was represented through items like "I can use sources to generate my own ideas," while *audience awareness* was captured in items like "I can identify my readers' expectations." Items like "I can establish an outline for my texts" represented the core area of *coherent writing*, and *genre knowledge* was represented with items like "I can select appropriate genres for specific purposes." Finally, the core area of *linguistic correctness & stylistic appropriateness* was represented in the self-assessment survey through items like "I can use a broad range of appropriate vocabulary."

Data Collection Instrument: The Beliefs-and-attitudes Surveys

The beliefs-and-attitudes survey comprised three components designed to measure (a) students' beliefs about the relevance of advanced writing knowledge for their future professional lives (*writing in the professions*); (b) students' attitudes towards using writing as a learning tool (*writing-to-learn*); and (c) students' attitudes towards using multilingual writing strategies (*multilingual writing strategies*). Students were given between nine and eleven closed items per component and had to indicate their opinion on a four-point, bipolar Likert-scale ("I strongly disagree"; "I disagree"; "I agree"; "I strongly agree"). For each of the survey components, a maximum number of points could be

achieved by completely agreeing to each of the items in the section, indicating a high degree of interest and a positive attitude towards *writing in the professions*, *writing-to-learn*, or *multilingual writing strategies*. The component *writing in the professions* (maximum number of points: 24) was represented with items like "Formulations from my academic texts will also be useful for my texts in my future profession." Items like "Writing helps me organize my ideas about the topics from my field of studies" constituted the component *writing-to-learn* (maximum number of points: 32). Finally, items like "During my English writing processes, I use all of my languages for my reflections" represented the *multilingual writing strategies* component (maximum number of points: 44) in the beliefs-and-attitudes survey.

Findings

Of the 20 students enrolled in the course, 19 completed the c-test prior to the semester (one student of the two self-identifying as English native speakers did not complete the test) as well as the self-assessment survey prior to and after the semester. Among these 19 students, one did not hand in the post-semester summary and did not complete the post-semester beliefs-and-attitudes survey.

Student perceptions of the original article

A total of 15 students submitted their comparisons for the articles used in the pre- and post-writing task. Although the articles can be said to have been more or less equal based on the parameters listed in Table 5, a more substantial variety of impressions can be documented in the students' responses, as documented in Table 5.7.

Table 5.7. Number of Students Per Response Option: Comparing the Pre/Post Articles

Parameter	Equal	PRE	POST	Total
Which article was perceived to be longer?	6	8	1	15
Which article necessitated a higher reading effort?	6	8	1	15
Which article necessitated a higher summarizing effort?	6	8	1	15
Which article contained more difficult terminology?	7	8	/	15
Which article was more relevant for the course?	13	1	1	15
Which article was of higher personal interest?	5	5	5	15

The most obvious agreement among the students can be seen for students' view on the texts' relevance for the overall course theme: most students agreed that the studies reported in the articles the students were working with corresponded well to the overall course design and the topics discussed in the course. The most substantial variation can be seen in students' personal interest: the same number of students found both articles equally interesting as the number of students who found the first the most interesting or the number of students who found the second more interesting than the first.

Text quality

The text quality of the summaries composed prior to and after the semester was assessed first *holistically*, and subsequently separately for *completeness*, *focus*, *macrostructural coherence*, *microstructural coherence*, *lexical precision*, *stylistic appropriateness*, *source use*, and *linguistic correctness*. Table 5.8 shows the percentage of students who improved the quality of their EFL texts, ordered by parameters of text quality.

Table 5.8. Percentage of Students Who Improved, Ordered by Parameters*

Macrostructural Coherence	**Source use**	**Lexical Precision**	**Microstructural Coherence**	**Stylistic Appropriateness**
61.0%	50.0%*	33.0%	33.0%	33.0%
Linguistic Correctness	**Completeness**	**Focus**	**Holistic**	
28.0%	11.0%	6.0%	6.0%	

**Planned comparisons showed that only the difference between pre- and post-scores for source use reached statistical significance (pre mean = 4.4; post mean = 3.7; exact Wilcoxon-test z = -2.234, p = .01, n = 18; r = .5).*

The two parameters for which most students improved were *macrostructural coherence* and *source use*. This means that 61 percent of the students were able to convey the argumentative structure of the original article in their summaries better after the course than before. Likewise, 50 percent of the students improved their ability to cite and paraphrase purposefully and to indicate their source where needed. On average, students progressed from a sufficient level to a lower-intermediate level in their ability to use and indicate sources appropriately.

The Self-assessment Survey

In the self-assessment survey, most students indicated that they felt their abilities in the core areas had improved, while a lower percentage of students had become somewhat more critical of their own writing knowledge. For instance, as Figure 5.1 illustrates, most students felt that their abilities had improved particularly where *audience awareness* was concerned. Among the students who felt they had improved their ability to understand and adhere to audience expectations, and to tailor their texts to the characteristics of specific readerships, two were basic English speakers, three were lower-intermediate, and four were upper-intermediate English speakers. All of the proficient speakers (n=5) and one of the native speakers felt they had progressed from their initial competence level. In contrast, 16%, i.e., three of the students indicated in the post-semester survey that they had realized their abilities in understanding and adhering to audience expectations and tailoring their texts to the characteristics of specific readerships were not as well developed as they had supposed at the beginning of the semester.

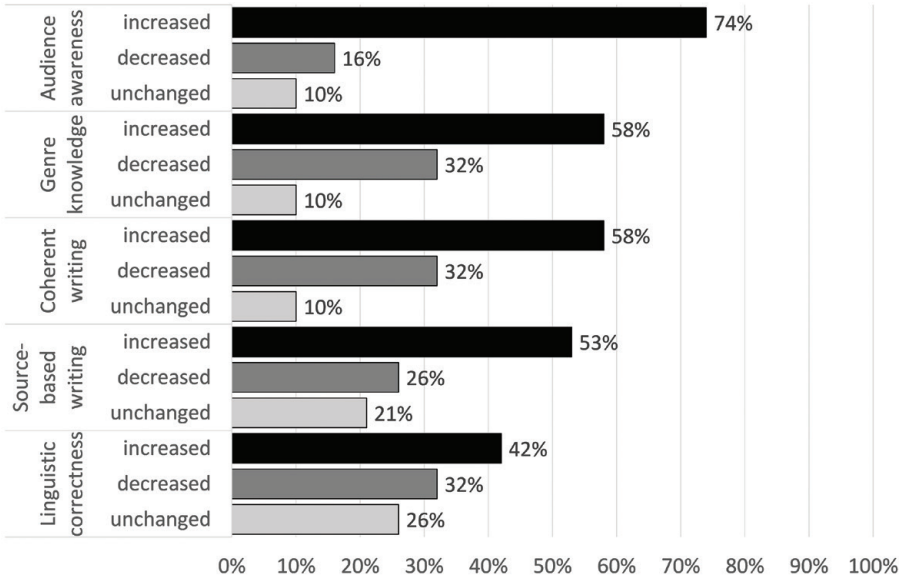

Figure 5.1. Percentage of students who indicated that their confidence in their own writing knowledge had either increased, decreased, or remained unchanged; ordered by the five themes in the self-assessment survey.

The difference between the average score prior to the semester and the average score after the semester for *audience awareness* proved to be statistically

significant in a planned comparison (pre mean =1.8; post mean = 2.2; exact Wilcoxon-test z = -2.835, p = .001, n= 19; r = .65). On average, students felt that their ability to understand their audience and cater to their audience's needs had progressed from a basic to an intermediate level during the semester. Additionally, more than half of the students indicated that their ability to identify and adhere to *genre* conventions had improved, as well as their ability to establish and signal argumentative coherence in their English writing.

The Beliefs-and-Attitudes Surveys

As can be seen in Figure 5.2, the majority of students in the course indicated a shift in opinion in what concerns the *Relevance of Writing for their Profession*, *Writing-to-learn*, and *Multilingual Writing Strategies*.

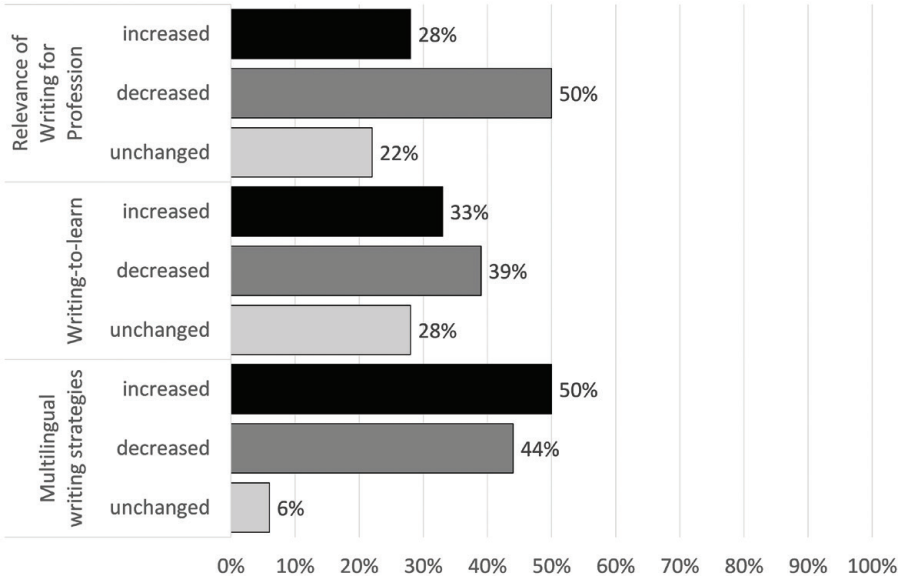

Figure 5.2. Percentage of students whose attitude did/did not change.

Interestingly, most of the writers who had come to regard writing at the university as *less* relevant for their future workplace than they had thought it to be at the beginning of the semester were at a lower-intermediate level of English proficiency. Conversely, the students indicating at the end of the course that they thought writing in academic contexts to be *more* relevant for their prospective workplaces than they had thought it to be prior to taking the writing-intensive course were at the upper-intermediate, proficient, or even native level. A differentiation between the closed items contributing to

the relevance score reveals that, while most students came to think that text production would constitute a substantial part of their professional lives and that formulations from their university writing would be helpful for them in their professional text production, most students agreed that the specific texts produced and read at university (summaries and scientific articles) were not what they expected to resurface in their professional text production later on.

Concerning the use of writing for *writing-to-learn* purposes, shifts in attitude were observed among the majority of students taking the course in that over 70 percent of students expressed a different attitude towards writing as a learning tool after than prior to the semester. Thirty-nine percent of the students were less inclined, while 33 percent were more inclined to use writing as a learning strategy after having taken the course.

With regard to the use of *multilingual writing strategies*, most students, i.e., 94 percent, changed their attitude and became either *more* or *less* inclined to make use of their full linguistic repertoire in their English writing processes. Importantly, 50 percent indicated that their interest in multilingual writing strategies had actually increased at the end of the semester.

Discussion

Overall, the results documented in the present study in terms of text quality development and shifts in self-assessments as well as in beliefs and attitudes need to be qualified as *mixed* for each instrument of data collection.

Developments in EFL text quality

It is interesting to note that a substantial percentage of students wrote higher-quality texts in terms of, e.g., *source use* at the end of the semester than at the beginning while the percentage of students who improved for the other parameters of text quality was less noteworthy. The students in the present project, eager to avoid plagiarism, started indicating and presenting their sources more carefully; at the same time, students' taking more risks when trying to make their own formulations as unlike the original texts as the students could possibly make them explains why improvements in other areas of text quality were less encouraging. Mixed results for university students' development of their ability to summarize foreign-language texts are documented in the literature, e.g., by Ko (2009), who also argues that students take more risks in their formulations once they understand how carefully they need to avoid accusations of plagiarism. In a similar vein, fewer students in the present project progressed in terms of *lexical precision*, *linguistic correct-*

ness, or *holistic* quality: the students might have taken too many and/or too substantial linguistic risks when trying to avoid plagiarism, thus not paying sufficient attention to other parameters of text quality. Also, while the course in the reported form may have laid some ground-work for students' writing knowledge concerning *macrostructure* and *source use*, it may not have been long or intensive enough for students to show significant gains in, e.g., *lexical precision* or *linguistic accuracy*. These findings align with findings reported by Crosthwaite (2017) who found that 14 weeks of instruction for international student EFL writers did not lead to gains in these particular areas, but that longer periods of instruction (two semesters and more) were necessary.

It is also interesting to note that a substantial percentage of students improved their understanding of the macrostructural requirements of the source-based *summary* genre, but that most students still struggled with determining which information from the original articles the interdisciplinary readership would need in the summary to make sense of the content from the original article. The written *client analyses* that students completed repeatedly during the course in preparation for their summaries might thus need to offer more balanced instructions, foregrounding the genre expectations of their readers less and focusing more on the clients' background knowledge and informational needs.

A further element that might have been added to the range of pre-writing assignments in the course could have been a section on reading strategies and comprehension checking. Du (2014) reports in a qualitative interview study that students struggled with their ESL summary writing task already during the reading stage and did not necessarily arrive at a good enough understanding of the source texts to produce satisfactory ESL summaries. Students in the present course might have shown more substantial improvements in summary text quality if reading strategies had been included in the course curriculum. This addition will be discussed in further installments of the course.

Self-assessment survey

As already indicated, *audience awareness* emerged as the focus of writing knowledge for which the most substantial percentage of students, i.e., 74 percent, reported an increase in confidence concerning their own abilities. It appears that the *client analyses* used in the course design helped students to analyze prospective readerships in more systematic ways, identifying their audiences' specific interests, prior content knowledge, and prior linguistic knowledge. Given that students completed the client profile activity multiple times during the course, the strategies used to identify their readership's

probable characteristics possibly were more present in students' minds than other pre-writing and writing activities they had completed in the course. Similarly positive results were reported in a study completed by Robles and Baker (2019) with 51 student writers in technical and professional communication courses: in their written reflections on the course, the students indicated that creating case profiles for prospective readers had helped them understand the demographic characteristics as well as the ensuing needs and values of their readerships, and to communicate their intentions with more credibility, persuasiveness, and appropriateness to their prospective readers. Positive developments in students' self-awareness associated with guided self-assessment have also been documented, e.g., by Wang (2017), where 80 student writers in higher education indicated in their reflective journals and during a range of interview sessions that they had developed their ability to set goals for writing, to self-monitor more effectively while writing, and to assess their own texts more carefully. Similar writing process advantages of guided self-assessment were also reported by sixty student writers in higher education by Covill (2012) where students felt the guided self-assessment had led them to a more reliable understanding of what constitutes a good paper. Additionally, it can be argued that, for more advanced students in the present project, their self-assessment may not have been be too far off from their actual development, as specifically guided self-assessment has been observed to mirror actual assessment in writing performance in higher education to a substantial degree (Hawthorne et al., 2017).

However, in the present project, students' self-perceived heightened awareness of their audiences' characteristics did not necessarily translate into students' ability to, e.g., select information appropriately from the source texts that students were working with, or to select vocabulary sufficiently comprehensible for interdisciplinary readerships. Thus, students might need more time and training to put their audience awareness into practice in their texts, even given the fact that the students in the present project had already completed their bachelor's degree and were thus not inexperienced or novice readers and writers of academic texts.

While the substantial variations in students' confidence in their own abilities concerning different parameters illustrated Figure 5.1 are certainly not an ideal outcome, they may be regarded as a positive outcome even given the substantial percentage of students whose confidence actually decreased: The less confident students may either have learned to scrutinize their own writing with a more critical eye or may have developed higher standards to hold their own writing to. Students in the present project may thus feel that while their ability to produce adequate texts for their prospective readers might not

be as substantial as they had believed, they have become more acute in monitoring their own writing processes.

Beliefs-and-attitudes survey

Interestingly, half of the students in the present study indicated that they perceived university writing to be less relevant for their prospective workplaces than they had thought it to be at the beginning of the course, while other students found academic writing to be more professionally relevant than they had thought it to be before. The different shifts observed in students' perception of the relevance of writing at university for writing in the professions may be associated with the different workplace profiles that students envision for their professional future. The perceived mismatch between the writing trained at university and the writing probably done at the prospective workplaces could thus be addressed by introducing students early on to workplace writing demands, such as documented by Knoch and colleagues (Knoch et al., 2016). For their report, Knoch et al. (2016) surveyed employers/supervisors for graduates with, e.g., economics degrees. The employers/supervisors in Knoch et al. (2016) stressed that workplace writing involved tailoring the lexical specificity of their writing to non-specialist clients (p. 14). Knoch et al. (2016) also documented that the qualities most valued in workplace writing were clarity, prioritization of key points, conciseness, brevity, relevance, and logical sequencing. Possibly, the approach to writing trained in the present project invited transfer to the workplace to a more substantial extent than some students in the course apparently perceived: The priorities identified in Knoch et al. (2016) are precisely the points that were targeted in the present project course with, e.g., the summary writing assignments, the readership profiles, and the joint writing projects. In a similar vein, Blythe et al. (2014), documented in a survey study with over 200 professionals in ten different fields (among them also management professionals) that presentations and grant proposals were among the ten most frequent workplace writing tasks they had to complete. Thus, the text types chosen for the course in the present project resemble prospective workplace writing for management degree graduates closely. Interestingly, while the discipline-specific course coordinator in the present project clearly indicated the proposal genre and its building blocks as relevant genres for the students' prospective careers, it was not clear to which extent students had already formed a clear idea of writing in the workplace for their specific careers. Thus, a more substantial access to work-integrated learning (WIL) (Dean et al., 2020) should be added to the course design to help students identify how academic writing can be transferred into actual workplace writing.

While the possibility of using writing as a learning tool was discussed with students in the course, this aspect was not foregrounded in the writing training; in the training, more emphasis was put onto readership analysis and interdisciplinary comprehensibility. Students were made aware of how they could use writing to consolidate their personal course learning, but the communicative goals of summary writing and proposal writing were trained with more emphasis and repetition. Thus, students were more autonomous in their choice of how much they wanted to experiment with writing-to-learn, and the percentage of students who came to appreciate writing as a tool for learning was similar to the percentage of students who were less interested in writing-to-learn at the end of the course. Interestingly, a range of studies and meta-analyses (e.g., Bangert-Drowns et al., 2004) report mixed and moderate effects for writing as an instrument for learning. Similarly, Klein et al. (2007, p. 595) concede that "a growing body of literature shows that writing can contribute to the recall, comprehension, and transfer of content area knowledge . . . . However, the effects of writing are inconsistent, and on average, small." Nückles et al. (2012) echo Klein et al. (2007) in acknowledging that "the available empirical evidence suggests that the effect of writing-to-learn interventions are typically rather small, though positive" (p. 180). Thus, even though writing activities have been demonstrated to support knowledge acquisition, this support has not been substantial in the studies reviewed by, e.g., Bangert-Drowns et al. (2004) and Nückles et al. (2012). Given the inconclusiveness of the findings reported in the literature as well as the fact that *writing-to-learn* was not prioritized over *writing-to-communicate* in the present project, it is not surprising that some students deepened their appreciation towards writing-to-learn, while other students became more skeptical.

Hardly any students in the course did not shift their view towards multilingual writing strategies: while half of the students increased their appreciation of multilingual writing, 44 percent actually became less interested in multilingual strategies for writing. These findings are in line with previously reported outcomes for students' attitudes towards multilingual writing strategies, since it still remains unclear which type of multilingual writing strategy is most useful for which language combination, for which learner, at which proficiency level, and for which purpose during their EFL writing processes (cf. Göpferich, 2017; Plata-Ramírez, 2016). The students in the present project who had developed a more positive attitude towards multilingual writing strategies may have experienced the translanguaging component of the course in a similar way as participants observed by Plata-Ramírez (2016), who reported in stimulated-recall interviews conducted after the students had completed recorded writing sessions involving think-

aloud, that the students benefited from having "another language to verify the language you are writing in" (p. 62). The perceived benefits concerned, e.g., assessing the macrostructural coherence of their texts as students would "go back to [their] native language and . . . see how the organization makes sense to me in my own language" (p. 62). In a similar vein, the students in Plata-Ramírez (2016) reported using their dominant language for cognitive relief, indicating that "if [they] feel stuck thinking in English [the FL] then [they] switch and think in Spanish [their] native language" (p. 65). In the present context, five of the students who had become more positive towards using multilingual writing strategies had scored above average in the English proficiency test, while the remaining four had scored below average. In the literature reporting process-oriented findings, resorting to the dominant language had been reported to be particularly attractive for lower-proficiency FL learners (cf. Göpferich, 2017). However, among the five writers who had scored above average in the English proficiency test in the course, three had achieved advanced scores for English language proficiency. They appear to have experienced advantages of translanguaging strategies even though their EFL proficiency was advanced.

The decline in motivation to use multilingual writing strategies among some students may have resulted from students' experiencing momentary cognitive fixedness when switching between languages during the translanguaging tasks. Göpferich (2019) argues that FL writers, upon using other languages during their FL writing processes, might experience not cognitive relief, but indeed increased cognitive load if the writers lack the translation skills necessary to prevent L1 fixedness and interference phenomena. Viewed from this angle, translanguaging strategies, supposedly the most authentic and cognitively economical strategies for multilingual writers, would have to be introduced to multilingual students in combination with at least rudimentary translation training. On the basis of such training, students could make the most of their multilingual writing knowledge without experiencing interference between their languages. The students in the present project who became more reluctant to make use of translanguaging during their EFL writing processes may have encountered difficulties in their writing processes due to interference between their languages.

Focus-group Discussion in the Post-semester Debriefing Workshop

In the focus group discussion with the content lecturers and two writing instructors at the end of the semester, the seven discipline-specific lecturers agreed that they experienced a lack of confidence in their own metalin-

guistic awareness and in their metalinguistic vocabulary. While all of them felt confident and flexible when using English as a medium of instruction and also as a language of publishing and presenting, they felt they would not necessarily be able to identify the exact nature and extent of students' English language struggles, specifically in written texts. This apprehension is in line with findings reported by Lasagabaster and Doiz (2018), i.e., that language teachers, unsurprisingly, outperform content teachers in identifying and specifying language problems in their students FL written work. The discipline-specific lecturers' position is also frequently reported in other studies detailing content lecturers' resistance to acting as English language support for their students in EMI contexts (cf. Airey, 2012; Block & Moncada-Colmas, 2019).

The discipline-specific lecturers in the present context also came to realize that, while learning outcomes and communicative standards had been agreed upon for the project course and specifically for students written work based on the writing training, there was no coherent framework across the master's degree program for assessing writing. The lecturers also discussed the possibility that the difference of feedback foci between content lecturers and writing instructors might have suggested to the students that the content lecturers valued professional communication less than the writing instructor did. Students might have perceived inconsistencies in the content lecturers' responses to their writing, similar to the inconsistencies reported in Block and Moncada-Colmas (2019), where a substantial paradox emerged in the interview data collected among STEM lecturers: When the interviews were no longer focused on English as a foreign language, but also encompassed language issues in connection with most students' shared dominant language, the lecturers' view on the importance of language instruction shifted. This is illustrated by the following excerpt from one of the interviews: "Yes I'm training them in engineering . . . but in the end I'm teaching people who will end up having to write reports . . . and here language is very important for EVERYTHING" (Block & Moncada-Colmas, 2019, p. 12, emphasis in the original). In both contexts, i.e., the present project and the STEM context in Block and Moncada-Colmas (2019), content lecturers did recognize the importance of writing in their discipline but did not necessarily feel confident enough in their metalinguistic knowledge to insist on this importance to a sufficient degree in front of students.

In subsequent installments of the present project, students might progress in their writing knowledge development more substantially if the content lecturers involved stress the importance of professional writing knowledge more adamantly; the content lecturers could take a more resolute stance even while

refraining from offering language training and assessment themselves and delegating these tasks to the writing instructors. Recommendations could thus be formulated on the basis of Gustafsson et al. (2011) who argue that between content specialists on the one hand and language specialists on the other "awareness of congruence helps form and design the collaboration" (p. 5), not only in individual course contexts for assessment and communication with students, but for entire curricular program frameworks.

Conclusion

The mixed observations demonstrated, e.g., that students on the whole improved their writing knowledge in terms of *source use*, and that a substantial percentage of students improved their writing knowledge in terms of *macrostructural coherence*. These positive results were obtained in spite of the fact that a substantial number of students in the superdiverse writing environment struggled with lower-level EFL concerns and in spite of the fact that EFL writers in higher education may need two semesters of instruction or more to show significant progress in EFL academic writing knowledge (Crosthwaite, 2017). However, no sizable gains were observed in other areas of text quality. The mixed results also show how most students changed their beliefs and attitudes about writing in terms of its *professional relevance*, its *relevance for learning*, and the potential benefits of *multilingual writing strategies*. However, these changes in beliefs and attitudes did not progress in similar directions but varied substantially.

On the basis of these heterogeneous observations, the study serves to highlight the complexity of the intersecting exigencies that need to be navigated in *superdiverse* student and faculty groups. Thus, as concluding remarks, three recommendations can be offered:

> *Establish a climate of language professionalization in superdiverse learning environments*. A range of students in the present project experienced substantial writing struggles due to their comparatively low levels of English language proficiency. However, to our knowledge, these students did not seek additional English language support. What might have encouraged these students to seek more language learning opportunities? The discipline-specific faculty as well as the writing instructors might have been more adamant in presenting additional language courses not as remedial courses for students with "language deficits," but as profession-

alization opportunities where students could enhance their perfectly valuable multilingual repertoires with more professional English language knowledge.

Systematize language professionalization across course contexts in superdiverse learning environments. In the evaluation workshop, the content lecturers related how the coordinated language standards in the course did not have coordinated equivalents on the program level. With a coordinated communication curriculum throughout the program, students might have had a more coherent basis of writing knowledge to build upon for the lecture-series course.

Systematize peer support in superdiverse learning environments. For many students enrolled in the course, it was a new and challenging experience to have to produce texts in collaboration. However, collaborative text production in highly diverse teams is likely to become a stable feature of these students' professional careers (cf. Schrijver & Leijten, 2019). Experiences with collaborative writing in superdiverse environments might prove to be an asset then, especially when appropriately fostered in higher education. Specifically, in superdiverse learning environments, students who themselves represent highly diverse backgrounds in terms of linguistic, cultural, and disciplinary knowledge may be more likely to take diversity among their readers into account than writers from less diverse backgrounds, as related by, e.g., Poe and Zhang-Wu (2020). Surveying over 2,000 domestic and international students, Poe and Zhang-Wu (2020) report that "on the learning goal related to awareness of diversity, international students out-performed . . . domestic students" (p. 13).

Thus, in designing writing training for superdiverse HE contexts in collaboration with content faculty and program administrators, the focus might have to be on *adaptive transfer* as called for by DePalma and Ringer (2012): Writing instructors and discipline-specific faculty need to constantly apply *and reshape* their writing knowledge to negotiate new and potentially unfamiliar situations of writing training. Efficient approaches to fostering professional writing knowledge within linguistically, disciplinarily, and culturally multifaceted environments in higher education might have to be as superdiverse as the student and faculty groups these approaches cater to.

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