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# Translanguaging for cognitive relief in FL academic writing\*

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## Abstract

*In the present study, two groups of German undergraduates taking a course in English Linguistics at a midwestern German university were compared in terms of their attitudes towards translanguaging, their translanguaging behaviour during foreign-language academic writing processes, and the quality of their foreign-language texts. One group was taught with a translanguaging teaching approach, the other group was taught monolingually in English. Students in the translanguaging group became aware of the benefits translanguaging can have during foreign-language academic writing processes. Students' translanguaging behaviour during foreign-language academic writing is discussed in two case studies. Importantly, more students in the translanguaging than in the English group improved their ability to distinguish between relevant and irrelevant information in academic texts, a finding that underscores the didactic importance of translanguaging in tertiary education.*

*Key words: translanguaging, tertiary education, academic writing, writing attitudes, FL text quality*

## Résumé

*Deux groupes d'étudiants allemands suivant un cours universitaire de linguistique anglophone dans une université en Allemagne ont été comparés en ce qui concerne leurs attitudes concernant le translanguaging, leur comportement translinguistique pendant leurs processus d'écriture universitaire en langue étrangère et la qualité de leurs textes en langue étrangère. L'un des groupes a suivi une version translinguistique du cours, pendant que l'autre a suivi une version monolingue. Les étudiants participant*

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*au cours translinguistique ont pris conscience des effets bénéfiques que le translanguaging peut avoir sur leurs processus d'écriture universitaire en langue étrangère. Le comportement translinguistique des étudiants pendant les processus d'écriture universitaire en langue étrangère sera illustré dans deux études de cas. Dans le cours translinguistique, davantage d'étudiants ont amélioré la précision de leurs textes en langue étrangère que dans le cours monolingue, ce qui peut démontrer l'importance du translanguaging dans l'éducation postsecondaire.*

*Mots-clés : translanguaging, éducation postsecondaire, écriture universitaire, convictions et attitudes, qualité des textes en langue étrangère*

### ***Introduction and literature review***

In order to create “a borderless European higher education space” (Doiz, Lasagabaster, & Sierra, 2011, p. 347), universities in Europe have substantially increased the number of bachelor's and master's programs in which English as a *lingua franca* is the dominant medium of instruction instead of the European states' national languages. In Germany, for example, the number of university degree programs offered mostly or even solely in English rose from 1,153 in 2017 to 1,389 in 2018 (DAAD, n.d.). In these degree programs, students with English as a foreign language (EFL) face the highly demanding task of acquiring discipline-specific knowledge, communication skills, and, importantly, academic writing skills predominantly or even exclusively in a foreign language. Göpferich (2017) cautions that

the requirement of writing academic texts in the L2 ... leads to such an increase in task complexity that it overburdens students, which could have consequences reaching beyond the poorer linguistic quality that L2 compositions inevitably display. Having students write term papers in their L2 may further result in a less profound analysis of the subject matter, ... a less profound treatment of the L2 literature associated with the subject matter. These potential consequences ... may, in turn, be detrimental ... to cognitive development. (p. 403)

A possible means of reducing the task complexity in English-medium instruction (EMI) writing environments might be instructing and encouraging students to resort to their entire linguistic repertoire during EFL writing processes. Thus, the fundamental question underlying the present project is whether students in tertiary education should be encouraged to translanguage for academic purposes, especially while composing academic texts in a foreign language (henceforth FL).

The term “translanguaging” emerged as a translation (Baker, 2003, p. 82) of *trawysieithu*, proposed by Williams (1994) in the Welch educational context: students and educators alternate between languages depending on whether the students engage in reception or production activities. This narrow definition

was expanded in later contributions, for example, by García (2009) who views “translanguaging” as the “*multiple discursive practices* in which bilinguals engage in order to *make sense of their bilingual worlds*” (p. 45; emphasis in original). The original understanding of *translanguaging* as proposed by Williams (1994) and Baker (2003) appears to preclude spontaneous, idiosyncratic multilingual practices in tune with the individual’s cognitive needs in any given moment. Consequently, a broader understanding of *translanguaging* in accordance with García (2009) would be the most promising foundation for helping students develop language practices suited to their particular cognitive needs during EFL academic writing processes. Educators might encourage students to translanguage during EFL academic writing processes, that is, to deploy the full arsenal of the linguistic means that they need in order to successfully navigate EFL academic writing processes. Thus, it is assumed in accordance with Gentil (2018) that

because composing can tax cognitive resources, it may be advantageous for multilingual writers to use their stronger language (usually their L1) as a resource to assist with idea generation, planning, and monitoring even when they compose in an additional language. Doing so allows them to better manage cognitive demands and access deeper levels of conceptual processing. (p. 3)

Such teaching approaches have already been suggested by Canagarajah (2011, p. 12). Importantly, however, Canagarajah (p. 9) does not view translanguaging as a natural capacity in multilinguals, but rather as a multilingual proficiency that can be fostered with suitable teaching strategies. This same view is adopted in the present project.

There are studies in which resorting specifically to the L1 in FL task environments appears to have been beneficial, both in terms of linguistic and non-linguistic tasks. In Wakebe, Hidaka, and Watamura (2015, p. 212), for example, two participant groups of Japanese native speakers read an example study in an FL, English. Subsequently, students were asked to solve a problem analogous to the example study. The problem was described to the participants either in the L1 (Japanese;  $n = 31$ ), or in the FL (English;  $n = 36$ ). Participants in the L1 condition were significantly more likely to solve the target problem than the participants in the FL condition. Here, the L1 seems to have been a cognitively more effective instrument than the FL. Positive effects of resorting to L1 competencies during FL tasks have also been observed in studies specifically focused on writing. In terms of text quality, Woodall (2002, p. 18) observed that the amount of time student writers spent in their L1 during FL writing processes correlated positively with the quality of their FL texts. Similarly, Kobayashi and Rinnert (1992, p. 196) reported that texts students had first written in their L1 and subsequently translated into their FL received higher ratings than the texts students had produced directly in their FL. On the

basis of their findings, Kobayashi and Rinnert (1992) suspect that

the use of the first language enables many students to explore ideas fully on their own intellectual and cognitive levels. Those whose second-language skills are so limited as to impede discovery of meaning through second-language writing can benefit from invention and exploration of ideas in their first language, especially in the prewriting and planning stages. (p. 204)

In a similar vein, Göpferich (2017) argues that resorting to the dominant language during FL academic writing processes can provide “a reduction in complexity, particularly at the macro-level ... allowing students to pay greater attention to subtleties at the micro-level they might have otherwise ignored” (p. 416).

However, as suggested by Canagarajah (2011), it might also be the case that, without suitable training of the skills necessary for purposeful translanguaging, switching between languages during FL academic writing processes might exacerbate cognitive overload since the act of switching itself appears to increase instead of decrease cognitive load in the moment of the switch. For instance, Storme et al. (2017, p. 4) observed two groups of multilingual speakers in a non-linguistic originality task in which participants had to spontaneously name as many functions as possible that a given artefact could fulfil: one of the multilingual groups comprised speakers who indicated that they switched between languages on a regular basis, while the other group comprised multilingual speakers who seldom switched between languages. In the second group, participants performed significantly better in the originality task when they were allowed to stay in one language than when they had to switch (p. 4). Correspondingly, standard psycholinguistic research, for example, based on lexical decision tasks or on reading performance tasks, offers ample documentation of switching costs in the form of increased reaction times and increased error rates right after switching from one language to another (see, e.g., Meuter & Allport, 1999, p. 33). Also, Ibáñez, Macizo, and Bajo (2010, p. 261) reported in their study that only multilingual participants with substantial experience in switching between languages were able to overcome switching costs, in contrast to multilingual participants with little experience in switching, who exhibited standard switching costs.

Multilingual writers have been cautioned against switching between languages during their FL writing processes on the grounds of interference phenomena such as cognitive fixedness observed in bi- or multilingual writing processes. For instance, in Göpferich and Nelezen (2014, p. 122f), six German (L1) undergraduates were asked to first produce an English popular science article and then, subsequently, a German (L1) version of that same English popular science article. In several of the error categories employed to assess the linguistic, stylistic, and argumentative quality of both popular science ar-

ticles, students committed a higher number of linguistic and content errors in their L1 than in their FL texts. Göpferich and Nelezen (p. 130) argue that this might have been caused by the participants' lack of translation competence, as the participants behaved like translation novices: the participants appeared to have experienced cognitive fixedness on their English texts and committed interference errors in their L1 texts. Such findings suggest that switching skills need to be developed before students can successfully use translanguaging in FL academic writing processes. Furthermore, such instruction in and opportunities for translanguaging could also diminish skeptical attitudes students might have about translanguaging during FL writing processes.

The aim of the present study was to provide initial findings that could serve to answer the following questions: Which attitudes towards translanguaging do German students of English linguistics have? Do these attitudes change in university courses taught with a translanguaging teaching approach? Can changes in attitude also be observed in courses taught with an EMI teaching approach? How do German students translanguage in EFL academic writing processes? And finally: Can translanguaging writing strategies have a positive influence on FL text quality?

### ***Study design***

In the present study, data was collected in a discipline-specific Linguistics course offered to undergraduate students at the English department of a mid-western German university. Prior to and after the course, students' attitudes were investigated with a survey in terms of:

- (a) how the writers feel about translanguaging during FL writing
- (b) the usefulness they ascribe to translanguaging
- (c) the confidence writers have in their own ability to successfully use translanguaging during FL writing processes.

These three factors—(a) affect, (b) perception of usefulness, and (c) self-efficacy—have already been identified in the literature on academic motivation as particularly important when it comes to whether individuals will make efforts to adopt certain behaviours in their learning trajectories (see Ajzen, 1991; Bandura, 2001). The survey comprised 13 closed items. For each item, participants had to indicate their agreement or disagreement on a five-step bipolar scale from strong disagreement to strong agreement.

In order to document students' writing skills and translanguaging behaviour prior to the course, students were asked to complete a 90-minute pre-semester in-class writing session in which they had to compose an FL summary of an FL academic article for a specific target audience. Participants were

asked to verbalize, spontaneously and in whatever language, what they were thinking of while working on the task. For the sessions, groups of two to four participants assembled in a lecture hall and were seated with their backs to one another in each corner of the hall. They could neither see nor hear each other while they were working. The participants' on-screen activities and their verbalizations were recorded.

The participants' utterances during the writing sessions were transcribed and then segmented into individual segments using six unit boundary indicators (Machura, forthcoming). For each of the segments, the sub-process of writing taking place in the segment was identified using the categorization scheme for source-based academic writing processes suggested by Machura.<sup>1</sup> Finally, for each of the segments the type of language use was classified as either "FL" (English), "L1" (German), "Mixed", or "U" (Unclear). The relationship between students' indications in the survey and their actual multilingual behaviour during the writing sessions will be discussed here in two case studies. One student for the case studies was selected randomly among the students whose opinions towards translanguaging as expressed in the survey had changed markedly from skepticism to appreciation during the course of the semester. The other student for the case studies was chosen randomly among the students whose skepticism towards translanguaging as expressed in the survey remained unchanged during the semester.

The course spanned a regular semester of 14 weeks in total with a 90-minute in-class session in most weeks and was taught to two groups of students separately; one group ( $n = 23$ ) was taught with a translanguaging teaching approach, while the other group ( $n = 34$ ) was taught with an EMI teaching approach. A range of academic reading and writing tasks was given to all participants during the semester. In the translanguaging group, students were instructed and encouraged to alternate between languages in their reading, note-taking, writing, communicating, and revising, while all these activities were kept strictly in English in the EMI group. Translanguaging was made mandatory instead of optional in a range of tasks for students in the translanguaging group so that all students in this group, regardless of whether they felt skeptical or insecure, would experiment with different translanguaging strategies. For instance, students in the translanguaging group completed FL reading assignments alternating between languages for reading (FL), note-taking (L1), and communicating (FL). The assignments were given to the EMI group with the explicit instruction to complete all sub-tasks exclusively in English. Also,

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<sup>1</sup>The comprehensibility and reliability of the coding scheme had been tested with two independent coders who reached agreement for 75% of all segments (see Machura, forthcoming).

students in the translanguaging group completed analytical tasks, for example, reviewing and improving written explanations, where they received material in either the FL or the L1 and then were told which language to use (either FL or L1) for working with the texts. Importantly, in other reading and writing assignments, students in the translanguaging group were allowed to translanguage freely, that is, to choose freely how to use their multilingual repertoire while working with the English source texts. Thus, the beginning of the course for the translanguaging group was dominated by translanguaging activities as defined by Williams (1994) and Baker (2003), while sessions later in the semester were held with a more flexible translanguaging approach in line with García's (2009) view on translanguaging.

Near the end of the course, in Week 11, participants in the translanguaging group had to complete an extensive at-home writing task that comprised mandatory as well as optional translanguaging components.<sup>2</sup> After completing the writing task, participants also had to produce a commentary in which they reflected on the differences and similarities between their monolingual and their translanguaging writing processes. The students in the EMI group completed the entire out-of-class writing assignment including a commentary concerning different writing strategies exclusively in English, with neither mandatory nor optional translanguaging components. In the commentaries produced by the students in the translanguaging group, it was assessed whether (a) students described translanguaging writing strategies as more cognitively effortful than monolingual EFL writing strategies, and (b) whether students mentioned benefits they derived from translanguaging writing strategies in spite of higher cognitive effort.

For assessing possible developments in text quality among all students in both, the translanguaging as well as the EMI group, two writing assignments are taken into account in the present contribution: the text that students produced in the writing session prior to the semester and the text that students produced in the out-of-class writing assignment in Week 11.<sup>3</sup>

Prior to using the academic articles that the students worked with as source texts in the data collection writing tasks, these articles were tested as course materials in previous semesters with other students in order to ascertain that the texts in question would match students' expected FL reading and writing skills and background knowledge in linguistics. Testing the articles in previ-

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<sup>2</sup>This out-of-class writing assignment did not constitute the post-semester writing assignment. The analysis of the comparison between the pre-semester writing assignment and the post-semester writing assignment remains for a later stage of the project.

<sup>3</sup>In-depth assessments of the entire range of texts that students produced with either translanguaging or EMI writing strategies remain for a later stage of the project.

ous semesters also allowed for the identification of what will henceforth be termed “areas of interest” (AoIs) in the texts, which seemed to be of particular difficulty for most students when addressing these sections for the writing tasks. In Week 11, for example, participants in the present study were asked to summarize Van Hell and Dijkstra’s (2002) study which used a range of studies conducted with bilingual participants to develop a hypothesis and a research design for trilingual speakers. In previous semesters, it had been observed that, when working with Van Hell and Dijkstra (2002), students struggled in particular with differentiating between the bilingual studies in the literature review in the academic article and the hypothesis and study design for trilingual speakers that was formulated based on the literature review. Example (1) from a student’s text illustrates how a range of students failed to differentiate between the bilingual literature review and the trilingual study design.

- (1) Van Hell and Dijkstra (2002) investigated whether bilingual’s word processing in their mother tongue (L1) is influenced by their second language knowledge, even if the second language (L2) is not targeted in a task; hence, is not consciously activated by the bilingual.

Concerning the accuracy of the texts that students in the translanguaging group and in the EMI group produced based on Van Hell and Dijkstra (2002) in the present study, it was assessed whether the students had made the same common errors as illustrated in (1) or whether they had accurately differentiated between the bilingual review and the trilingual research design and hypothesis.

Concerning the assessment of the completeness of the texts students produced in Week 11, one AoI proved to be the definition of the stimuli (that is, cognates and non-cognates) in the study students had to summarize. The task description explicitly stated that specialized terms needed to be defined for a lay readership unfamiliar with the specific terms.

In terms of relevance, the texts that students wrote in the first writing session in both groups at the beginning of the semester were compared to the texts produced in Week 11 in both groups. In both texts, one AoI for “relevance” was the section in the articles where students had to select, among several proposed hypotheses, the specific hypothesis that was tested with the research design in the article. Students were specifically asked to include only the relevant hypothesis and leave irrelevant details out of their summaries.

## **Participants**

In the translanguaging group, complete data sets were obtained from 23 participants. In the EMI group, complete data sets were obtained from 34 participants. All of the participants had to provide proof of a B1 proficiency in



English,<sup>4</sup> in accordance with the Common European Framework of Reference for Languages (Council of Europe, 2019) upon entering university. Importantly, all participants in both groups identified German as their L1, and all of them had completed their secondary education in Germany. No significant difference between the groups were found for any of the parameters listed in Table 1.

**Table 1**

No significant differences between the two groups prior to the semester

Parameter	Translanguaging ( <i>n</i> = 23)	EMI ( <i>n</i> = 34)	Significance ( <i>df</i> = 1, <i>n</i> = 57)
Age in years	$\bar{x}$ = 22.0 (SD = 2.5)	$\bar{x}$ = 21.5 (SD = 1.9)	Mann-Whitney-U <i>U</i> = 352.5, <i>p</i> > 0.05
English in years	$\bar{x}$ = 11.8 (SD = 3.5)	$\bar{x}$ = 12.3 (SD = 2.9)	Mann-Whitney-U <i>U</i> = 312.0, <i>p</i> > 0.05
No. of FLs	$\bar{x}$ = 3	$\bar{x}$ = 3	Mann-Whitney-U <i>U</i> = 295.5, <i>p</i> > 0.05
Gender	female: 87%	female: 74%	Pearson's $\chi^2$ 1.488, <i>p</i> = .233
Native language other than German	22%	26%	Pearson's $\chi^2$ 0.166, <i>p</i> = .684

### *Data analysis and discussion*

The following section discusses the survey data obtained from all 57 participants. Furthermore, findings concerning translanguaging behaviour during the pre- and post-semester writing sessions in two case studies from the translanguaging group will be presented. Finally, findings from the text quality assessment in both the EMI and translanguaging group will be discussed.

### **Survey data**

Using Mann-Whitney-U tests, it was ascertained that the participants in the two groups did not differ significantly in their opinion concerning any of the 13 items in the survey. The internal consistency of the 13 items was moderate

<sup>4</sup>The Common European Framework of Reference for Languages (CEFR) provides a classification of language skills into six levels recognized by the members of the European Union. A B1 classification corresponds to a 4.5 to 5.5 score in an IELTS test (IELTS, 2019) and to a CLB5 in Canada (North & Piccardo, 2018, p. 29).

with a Cronbach's alpha of 0.695. Usually, the threshold for acceptable internal consistency is said to be 0.7. However, it has been pointed out that levels of 0.5 or 0.6 have also been deemed sufficient for exploratory investigations (Cho & Kim 2015, p. 217).

Significant developments in the translingual but not in the EMI group were found for two of the 13 items (see Table 2). Participants were asked whether they thought that resorting to other languages during their EFL writing processes could ease their EFL writing processes. In the translanguaging group, the average opinion changed from being undecided to agreement over the course of the semester.

**Table 2**

Significant changes in average opinion in the translanguaging group

Item	PRIOR to the semester	AFTER the semester	Significance ( $n = 23$ )
Resorting to all my languages during my English writing processes can ease my writing processes.	$\tilde{x} = 3$ (undecided)	$\tilde{x} = 4$ (agree)	Wilcoxon $Z = -1.987$ ; $p < .05$
I feel insecure about my German academic writing skills.	$\tilde{x} = 2$ (disagree)	$\tilde{x} = 3$ (undecided)	Wilcoxon $Z = -1.977$ ; $p < .05$

The participants were also asked whether they were confident in their German academic writing skills: resorting to their L1 during their EFL writing processes might only seem a promising translanguaging writing strategy to the students if they are actually confident in their German writing skills. Here, the course participants were, on average, no longer confident in their German writing skills after the semester. In contrast, no significant changes for either of these items were observed in the EMI group.

Prior to the semester, 30% of the participants in the translanguaging group did not think that translanguaging could be of benefit during their EFL writing processes. Importantly, of these 30%, the majority, that is, 86%, changed their opinion after having attended the translanguaging course. After the semester, 86% of the skeptical students came to view translanguaging as a source of ease during their EFL writing processes. A similar shift towards recognizing translanguaging as potentially beneficial during EFL writing was observed among the 30% of the students who, prior to the semester, were not necessarily skeptical, but undecided about the benefits of translanguaging. Of these 30%, more than half (that is, 57%) came to regard translanguaging as beneficial dur-

ing EFL writing processes.

The significant changes in opinion in the translanguaging group and the absence of such changes in the EMI group might indicate that the use of the translanguaging teaching approach in one group but not in the other allowed students in the translanguaging group to realize what kind of benefits translanguaging can have for them during their EFL academic writing processes. Accordingly, it seems that using a translanguaging approach in discipline-specific courses could offer a way to, as García and Lin (2017) urge, “assist bilingual students to choose intelligently when to select or suppress certain features of their repertoire and when to liberate their tongues, their full language repertoire, along with their minds and imagination” (pp. 12–13). The findings can also be taken as an indication that students might need not only the encouragement to use translanguaging during FL academic writing, but also additional writing instruction in their other languages to make sure that they develop their writing skills not only in the language that is dominant in their academic context, but also in the other languages that the students might want to resort to.

Interestingly and in contrast to the opinion expressed in the survey at the very end of the semester, 98% of the students in the translanguaging group indicated in their reflective commentary in week 11, near the end of the course, that switching between languages during their FL writing processes seemed cognitively more effortful to them than just remaining in one language. However, a substantial percentage of students in the course (48%) conceded that the more effortful process of translanguaging during their FL writing processes helped them to better understand the texts that they were working with. In example (2), one participant conceded that

- (2) in terms of the content and of processing the text, it was definitely more effortful to understand the text in order to write a German summary, because the original text was in English and the summary was to be written in another language. I think that using the native language makes you try to understand everything better, even if you have to wreck [sic] your brain. When I reason in English, I tend to skip things and to neglect details.

The participant acknowledged that reasoning in English would lead to omissions of details and to more superficial comprehension processes, in contrast to resorting to her L1 German to reason about English texts. This translanguaging strategy helped her understand the text better than just staying in English would. As 48% of the participants in the translanguaging group made comments to the same effect in the commentary in Week 11, this could indicate that students would have to be encouraged to forgo a seemingly easier monolingual writing process in favor of translanguaging writing strategies that the students may associate with higher levels of cognitive effort at the beginning, but that might result in more sophisticated and deeper processing of the

FL source material. This is exactly the effect of translanguaging teaching and learning strategies that Baker (2003) has suggested:

Translanguaging . . . may promote a deeper and fuller understanding of the subject matter . . . . To read and discuss a topic in one language, and then to write about it in another language, means that the subject matter has to be processed, reprocessed and “mentally digested”. While full conceptual reprocessing need not occur, linguistic reprocessing is likely to help in deeper conceptualization and assimilation. (p. 83; emphasis in original)

The students’ indications also corroborate the view expressed by Canagarajah (2011, p. 9), that is, that translanguaging behaviour is not necessarily natural and effortless to multilingual language users and that multilinguals might benefit from targeted translanguaging instruction in order to draw benefits from translanguaging behaviour even when faced with momentarily increased cognitive load.

Thus, students still found translanguaging during FL academic writing processes to be more cognitively effortful than staying in only the FL. However, by Week 11, students had already conceded that such potential disadvantages of increased cognitive effort could be outweighed by the advantages for comprehension of FL academic material.

### **Case studies**

The research questions concerning the relationship between participants’ attitudes and their translanguaging behaviour during their EFL writing processes will be addressed in two case studies.

#### *Participant 1*

Table 3 illustrates the opinions Participant 1 expressed concerning translanguaging both prior to and after attending the course being taught with a translanguaging teaching approach. Prior to the semester, this participant expressed strong agreement with the idea that using other languages during her EFL writing processes could ease her writing processes and that she was already using all her languages for reasoning during her EFL writing processes. However, this participant also strongly agreed that, in order to write good English texts, she needed to think in English only during the entire FL writing process. At the beginning of the semester, thus, for this participant translanguaging did not seem to be a specific strategy chosen for its benefits, but more a coping mechanism adopted against the student’s better judgment, a coping mechanism that, in the participant’s opinion, would surely lower the quality of her English texts.

In the writing session at the beginning of the semester, the participant’s attitudes were reflected in her language usage identified in the think-aloud

**Table 3**

Participant 1's opinions prior to and after the semester

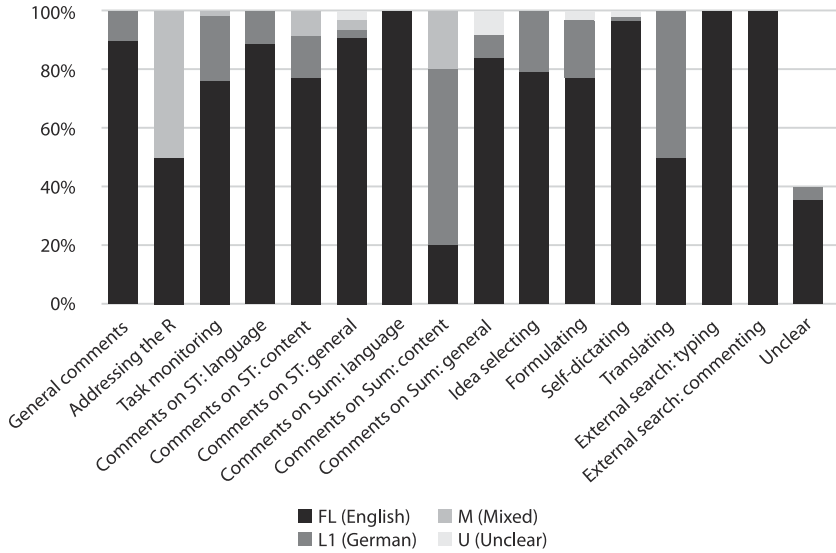
Item	PRIOR	AFTER
Resorting to all my languages during my English writing processes can ease my writing processes.	5 (strongly agree)	4 (agree)
During writing, I resort to all my languages for reasoning.	5 (strongly agree)	4 (agree)
In order to compose good English texts, I need to think in English during the entire writing process.	5 (strongly agree)	2 (disagree)

protocol (henceforth TAP) detailing the sub-processes of source-based writing defined in Machura (forthcoming). As can be seen in Figure 1, 12 of the 16 sub-processes were clearly dominated by English language use in the participant's utterances. There was only one sub-process — "Comments on Sum: content" — in which the participant used German more than English. As such, the participant judged her own behaviour accurately in that she used at least some German or mixed utterances in most of her sub-processes of writing. However, her skeptical attitude towards translanguaging was also reflected in her TAP, since most of the utterances were made in English.

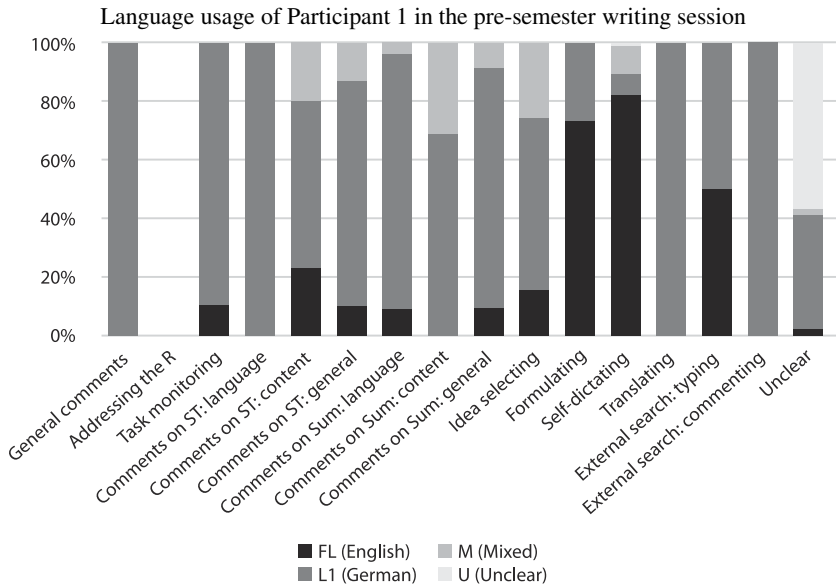
A meaningful change occurred in the participant's attitude towards translanguaging over the semester. While the student continued to agree, albeit less strongly, that translanguaging during EFL language writing could ease her English writing processes and indicated that she already used all her languages for reasoning, Table 3 also illustrates that the participant no longer believed that she would have to suppress other languages in order to produce high-quality English texts. After the semester, the participant appeared to no longer regard translanguaging as a coping mechanism detrimental to English text quality, but rather as a useful strategy. As Figure 2 shows, the participant no longer suppressed ideas that came to her mind in another language and resorted to German in nearly all of the sub-processes of EFL writing.

### *Participant 2*

In contrast to Participant 1, Participant 2 in the translanguaging group was skeptical of translanguaging writing strategies and retained her skepticism over the course of the semester, as can be inferred from Table 4. The participant did not think that using other languages during her EFL writing processes could ease these processes and also indicated that she used only English during her English writing processes. She agreed that, in order for her to write good English texts, she would have to suppress other languages during EFL writing



**Figure 1**



**Figure 2**

Language usage of Participant 1 in the post-semester writing session

**Table 4**  
Participant 2's opinions prior to and after the semester

Item	PRIOR	AFTER
Resorting to all my languages during my English writing processes can ease my writing processes.	2 (disagree)	2 (disagree)
During writing, I resort to all my languages for reasoning.	1 (strongly disagree)	1 (strongly disagree)
In order to compose good English texts, I need to think in English during the entire writing process.	4 (agree)	4 (agree)

processes.

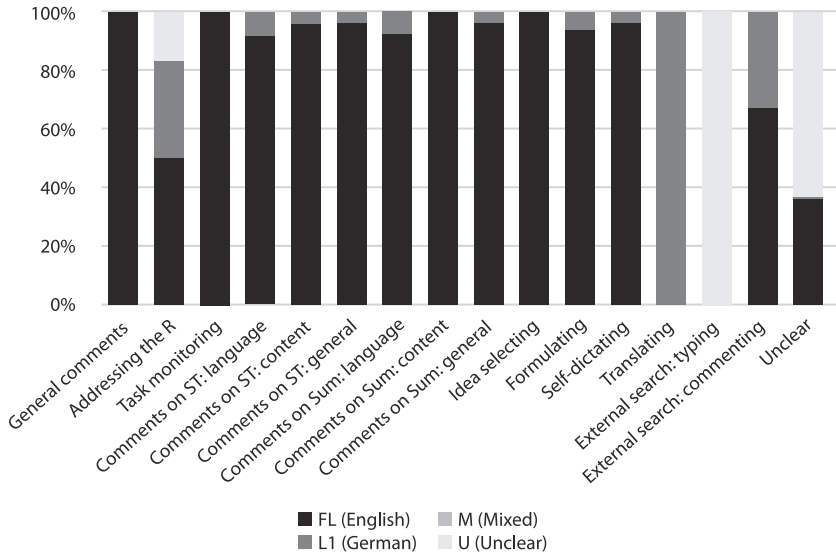
The participant was accurate in the self-description of her language use during EFL writing. She had indicated that translanguaging writing strategies were not relevant for her, and indeed both prior to the semester (Figure 3) and after (Figure 4), the utterances made for all of the sub-processes of source-based writing identified in the TAPs were dominated by English.

For this participant, the translanguaging teaching strategies adopted in the translanguaging group would have to be modified: it might be that other patterns of tapping into the potential of her multilingual resources would have to be developed, tested, and implemented.

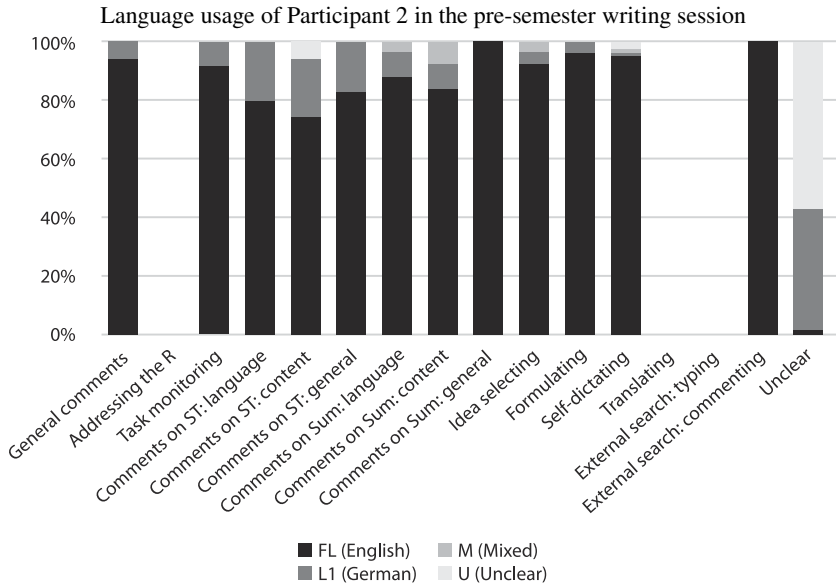
### Text quality

The first area of interest (AoI) was defined for the correctness of the students' final texts: it was assessed whether students had correctly differentiated between the literature review in the original article on the one hand and the hypothesis/design in the original article on the other. For this AoI, both courses appear to have performed equally well in Week 11. Even though only 38% of the EMI group, as opposed to 61% in the translanguaging group, correctly differentiated between the literature review and the hypothesis/design, this difference in % between groups did not reach significance ( $\chi^2 = 2.818$ ,  $df = 1$ ,  $n = 57$ ,  $p = .093$ ).

The next AoI was defined for the completeness of the texts, that is, whether students provided definitions of specialized terminology with which the readership specified in the task description might not be familiar. Most of the students in both courses included correct definitions of discipline-specific terms in their texts in Week 11: 74% of students in the monolingual course and 87% of students in the translanguaging group provided explanation for the intended read-



**Figure 3**



**Figure 4**

Language usage of Participant 2 in the post-semester writing session



ership, there was no significant difference between the courses ( $\chi^2 = 1.488$ ,  $df = 1$ ,  $n = 57$ ,  $p = .233$ ).

For the third AoI, it was assessed whether the students who, at the beginning of the semester, had been found to be struggling with differentiating between relevant and irrelevant details, improved their ability to identify the details strictly necessary in light of the specific task description. In the pre-semester writing session in the EMI group, 24% of the students included only the relevant hypothesis in their texts, as did 35% of the students in the translanguaging group. There was no significant difference between the courses at the beginning of the semester ( $\chi^2 = 0.860$ ,  $df = 1$ ,  $n = 57$ ,  $p = .354$ ). Among the 76% in the EMI group who had included irrelevant hypotheses in their texts, 23% improved and were able to identify the correct hypothesis in the writing assignment in Week 11. In the translanguaging group, of the 65% who had listed more hypotheses than needed in their texts at the beginning of the semester, 60% improved. This difference between groups in the percentage of students who succeeded in improving their ability to differentiate between relevant and irrelevant pieces of information was significant ( $\chi^2 = 5.590$ ,  $df = 1$ ,  $n = 41$ ,  $p = .018$ ).

### ***Summary and conclusion***

This article describes first results of a study that sought to identify whether the use of a translanguaging teaching approach in a discipline-specific linguistics course would influence students' attitudes towards and use of translanguaging during FL academic writing processes. Students in a translanguaging group were compared to students in an EMI group. Specifically, the paper provides first findings that may serve to answer the following research questions: Which attitudes towards translanguaging do German students of English linguistics have? Do these attitudes change in university courses taught with a translanguaging teaching approach? Can changes in attitude also be observed in courses taught with an EMI teaching approach? How do German students translanguage in EFL academic writing processes? And finally: Can translanguaging writing strategies have a positive influence on FL text quality?

In the translanguaging group, it was observed that the students, who had on average been undecided about whether translanguaging could make their FL writing processes easier, realized that translanguaging while working with FL academic texts could enhance and deepen their processing of the FL material, even if translanguaging might, at this point in their acquisition of switching skills, still be cognitively more demanding than remaining in one language. At the end of the semester, participants in the translanguaging group were on average confident that translanguaging could make their FL writing processes easier. No such changes in attitude were observed in the EMI group. It can thus be

supposed that students would need more training in and more opportunity for translanguaging in their academic work in order to be able to consistently use translanguaging as a strategy for cognitive relief.

In two case studies, the translanguaging patterns that two students used during EFL source-based writing sessions prior to and after the semester were compared to the attitudes the two students expressed before and after taking part in the translanguaging course. In one case study, it was observed that the student's initial skepticism at the beginning of the semester was reflected in the student's TAP: most of the sub-processes of source-based writing were dominated by English, and the student hardly made use of translanguaging. However, after the semester, the student expressed a positive attitude towards translanguaging and the majority of the student's utterances in the EFL writing session after the semester were dominated by utterances in German or utterances in which English and German were mixed. The other case study illustrated a case in which the student remained skeptical towards translanguaging: neither a change in attitude nor in behaviour was observed, since all sub-processes of source-based writing identified in the TAPs were dominated by English, both prior to and after the semester.

The final research question was addressed by comparing AoIs in texts all participants had produced prior to taking the course with AoIs in texts students had produced in an out-of-class writing assignment near the end of the course. The noteworthy finding here was that a higher percentage of struggling students in the translanguaging than in the EMI group managed to improve and perform better in terms of "relevance" near the end than at the beginning of the semester.

In a day and age when political institutions such as the European Union explicitly recommend that "multilingualism in the professional, cultural, political, scientific and social fields should be developed and promoted" (European Union, 2009), specific learning and teaching strategies for writing catering to individual students' multilingual development should be tested and made available and manageable for students. As this study indicates, translanguaging could be a beneficial strategy to foster improvements in students' ability to compose FL academic texts, and could also serve as a bridge between the knowledge students have already acquired in their L1 and the expectations of the EFL realities.

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