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Collaborative student writing in English-medium business studies

On the use of Cognitive Discourse Functions as an analytic tool

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Abstract

Dieser Beitrag analysiert studentisches Schreiben in der Fremdsprache Englisch im universitären Kontext unter der Verwendung des Konstrukts der Cognitive Discourse Functions (CDFs). In einer Korpusanalyse kollaborativ verfasster betriebswirtschaftlicher Bachelortexte wird die Verwendung dieser Diskursfunktionen quantitativ und qualitativ dargestellt. Anhand der Ergebnisse wird die Relevanz der CDFs als analytisches Instrument an der Schnittstelle wachsender Fachexpertise und sprachlicher Angemessenheit studentischen Schreibens aufgezeigt.

Schlagwörter: Angewandte Sprachwissenschaft, Diskursanalyse

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1 Introduction

Academic writing has been a part of our lives for decades; first, writing student papers and reading journal articles, then swapping sides and reading students papers and writing journal articles. Each of these viewpoints brings challenges, and some joys, to us and many academics. One of the aspects of academic writing we share with fewer colleagues, but notably with Helmut Gruber, in whose honour this special issue is created, is a researcher's interest in the products and processes of student academic writing.

Notably, it is mainly thanks to Helmut's pioneering projects in the early 2000s that the German-speaking applied linguistic world turned to student writing as an area of investigation, showing how in-depth linguistic analysis can benefit higher educational practice (Gruber 2006, 2013; Gruber et al. 2009; Gruber & Huemer 2016). Based on multilayered and ethnographically collected data sets, these important studies first analysed so-called seminar papers, i.e. academic student texts typically required in German-speaking universities, and how they were taught and learnt. The resulting in-depth analyses were then used for developing a learning programme to support students in their academic writing, turning this series of projects into a showpiece of applied linguistic research.

The significance of language in accessing and displaying knowledge in educational contexts has been highlighted in mainstream contexts, where the language of education is typically the same as the home language of many, if not most, students. Our focus in this contribution, however, lies on contexts where a foreign language is used in education and so the roles of language(s) in teaching and learning change (Hüttner 2008, Hüttner & Rieder-Bünemann 2020). Our specific context is English-medium programmes in Higher Education (HE), which are increasingly offered at universities in regions and to audiences which did not traditionally use English (e.g. Bolton et al. 2024). The reasons for adopting English as medium of education (EME) in these contexts relate to a desire for internationalization coupled with the hegemony of the English language as a (perceived) motor of such internationalisation and

a marker of symbolic capital (e.g. Bailey 2023; Studer & Smit 2021). In this context, diversity abounds; firstly, the academic disciplines in question vary in terms of their demands on written texts, educational traditions show regional differences and student populations are characterised by their diversity in terms of academic ability, language repertoires, study motivations and experiences of academic mobility. Thus, despite similarities across programmes, the characteristics of individual EMPs are mirrored in specific discourse patterns.

In this short contribution, we will present some of our ongoing work into the analysis of Bachelor student writing in the field of business studies. The precise student cohort consists of L1 speakers of Spanish in an EME programme at a major Spanish university. We aim to show the potential – and the limitations – of the construct of Cognitive Discourse Functions (CDF; Dalton-Puffer 2013, 2016; Dalton-Puffer et al. 2018), which has been suggested as a tool for analysing classroom interaction and learner productions, as well as an attempt of creating a shared language for researchers, language and content teachers, and curriculum planners alike.

2 Languages in EME

When focusing on student writing in EME in countries like Austria or Spain, it is important to note that the use of English has not only brought a change in medium but has also raised a wide-spread awareness of language as topic. In contrast to the traditional policy of having the national language as default medium, the introduction of English has resulted in educational bilingualism, thus topicalising which language to be used when. As additionally, many content teachers have experienced learning to use English for academic purposes themselves, there is widespread awareness of the linguistic challenges their own students might have to face. Particularly in countries with traditionally little interest in teaching academic writing in the national educational language, such as Austria (Gruber 2016) or Spain (Castelló et al. 2016), EME thus seems to be a fruitful scenario for zooming in on student writing;

the more so as writing is mainly used for assessment in Spanish higher education. In other words, it seems likely that the use of English as medium of teaching and learning makes student writing into a topic of interest or concern, not only for language teachers, but also for content experts.

Such a cross/multidisciplinary interest in student academic writing requires an equally inclusive research approach. Benefitting from the rich literature into CLIL, we suggest using Angel Lin's (2016: 39) 'Genre Egg' to describe the layers and elements of academic texts in a way that makes sense to both language and content experts. As visualised in Figure 1, the layers span the macro-level of the institutional context of the curriculum down to the micro linguistic level of lexicogrammar, while at the same time being nested within each other, thereby illustrating their interconnectedness.

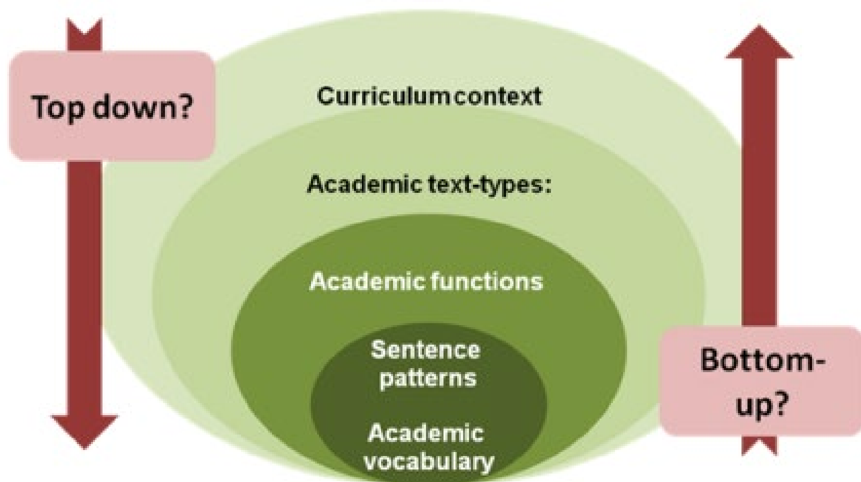

Fig. 1: The 'Genre Egg' (Lin 2016: 39, Fig. 4.3)

Additionally, these layers underline that research can zoom in on any of the layers as long as it keeps in mind the overall interdependence of these elements. In this contribution, we focus on the level of academic

functions, utilising a conceptualisation that specifically focuses on non-L1 medium teaching.

3 Cognitive Discourse Functions

Cognitive Discourse Functions (CDFs) are "verbal routines that have arisen in answer to recurring demands while dealing with curricular content, knowledge and abstract thought" (Dalton-Puffer 2016: 29) and so provide a framework for making accessible the cognitions involved in accessing, negotiating, refining, and presenting knowledge through a systematic analysis of their connected verbalizations (Dalton-Puffer 2013, 2016; et al. 2018). Language is viewed thus as the way in which new meanings are assimilated into learners' minds, as well as the primary mode for learners to "share their current or new construals of the world with others" (Dalton-Puffer et al. 2018: 8). In the context of English-Medium education, CDFs offer a structured approach to align subject-specific cognitive learning objectives with linguistic realisations.

To categorize the various functions, Dalton-Puffer (2013: 234; Dalton-Puffer et al. 2018: 9) suggests organizing them into seven distinct categories, as presented in Table 1.

Tab. 1: The Cognitive Discourse Function Construct (Dalton-Puffer et al. 2018: 9)

Underlying basic communicative intention	CDF TYPE	performative verbs
I tell you how we can cut up the world according to certain ideas	CATEGORIZE	Classify, compare, contrast, match, structure, categorize, subsume
I tell you about the extension of this object of specialist knowledge	DEFINE	Define, identify, characterize
I tell you details of what I can see (also metaphorically)	DESCRIBE	Describe, label, identify, name, specify
I tell you what my position is vis a vis X	EVALUATE	Evaluate, judge, argue, justify, take a stance, critique, comment, reflect
I tell you about the causes of motives of X	EXPLAIN	Explain, reason, express cause/effect, draw conclusions, deduce
I tell you something that is potential (i.e., non-factual)	EXPLORE	Explore, hypothesize, speculate, predict, guess, estimate, simulate
I tell you something external to our immediate context on which I have a legitimate knowledge claim	REPORT	Report, inform, recount, narrate, present, summarize, relate

Dalton-Puffer et al. (2018) draw together data from several smaller, classroom-based studies in secondary education and show that on average around 1.5 CDFs are produced per minute of classroom interaction, supporting the centrality of these verbalisations of cognitive processes in formal education. All seven types are represented across the

subjects studied (biology, economics, history and physics). Three of these CDFs, i.e., DESCRIBE, EXPLAIN and DEFINE, occur at generally higher frequencies with some variation depending on the specific subject. Further research into CDFs at school level includes work by Lorenzo (2017; Lorenzo et al. 2019) on historical narratives, Evnitskaya & Dalton-Puffer (2020) on categorizing and classifying in CLIL science and CLIL history and Llinares & Nashaat-Sobhy (2021) on the CDF DEFINE in Spanish primary schools. These studies show the potential of creating CDF profiles for each school-subject and so, ideally, to provide a basis for more informative language and content integrated curricula. Bauer-Marschallinger (2022) is a first in-depth proposal for such an integration of CDFs with subject curricular goals, in this case for history, with CDF requirements.

With the increased attention being given to foreign language development in English-Medium HE, a handful of studies have utilised CDFs as research tools in these contexts. Breeze & Dafouz (2017) studied L1 Spanish and L2 English exams and compared the realisations of CDFs following two question prompts in written exams. The targeted CDFs were DESCRIBE and CATEGORIZE for one exam question and DESCRIBE and EXPLAIN for the other. The authors conceptualise these as "complex CDFs" and highlight the differences between highly and poorly rated answers, showing that the clarity of identification and description of key aspects or relevant features, classificatory frameworks, including appropriate subject-specific terminology, and the explicit mentioning of cause-and-effect relationships are indicators of successful exam answers. Interestingly, the differences in terms of lacking explicit linguistic realisations of certain logical connections occurred regardless of the language used. Doiz & Lasagabster (2021), in another study of tertiary-level CDF use, investigated History lecturers in the Basque country and showed the need for certain adaptions to CDFs in order to be fully applicable to the tertiary level. One crucial point is that the CDF EVALUATE needs to be expanded to explicitly include the research perspectives of historians and not simply of the speaker. Additionally, and unsurprisingly, the temporal aspects in providing connections between past and present events become more prominent in the CDFs DESCRIBE

and REPORT, and the CDF DEFINE frequently includes a temporal marker to indicate that definitions can and do change over time.

This contribution aims at providing a further application of CDFs at tertiary level to continue probing its applicability as a tool homing in on the interface of content and language teaching, with potential for informing education at both in terms of planning, i.e., curricula, syllabi, lesson plans, and in understanding classroom practices, i.e., instruction giving, presenting and assessing content knowledge. Such a multi-user perspective justifies the mid-level granularity of the CDF framework, which is much less detailed in terms of language description than other linguistically oriented analytical tools, such as the ones based on Systemic Functional Linguistics. This lack of detail does, however, still allow a principled language focus while maintaining a clear link to educational frameworks, such as Bloom's well-established taxonomy of learning objectives (Bloom 1956; Anderson & Krathwohl 2001), and thus, ideally, contributing to a shared meta-language to be used by both teachers and researchers involved in English-Medium Education.

In order to focus on one specific educational environment, we aim to apply CDFs to student texts collaboratively produced in an EME business studies context. Our concrete research questions are:

1. How do second year business students use CDFs when collaboratively responding to case study questions?
2. How are the prompts reflected in the CDF use by students?

4 The Study

The data set we use to approach our research questions comes from a four-year bachelor's programme in business studies at a large Spanish university. Collected in the early 2020s, this set of written student texts is part of SHIFT, a binational and longitudinal research project focusing on students and their disciplinary literacies in an English-medium undergraduate programme.[1] Reflecting this comprehensive developmental research interest, this mixed-methods project combines a range

1 See https://*www.ucm.es/shift/description* (accessed: 24. July 2024).

of data sets: student surveys, teacher and student interviews, classroom observation, and, in focus here, written student texts. These were produced in a second-year course on "Organisation and Design", which introduced a group of roughly 60 students to basic design considerations of managing institutions and companies with the help of 'practical cases' that the students were required to study in small groups. Working in the same group constellations of two to four members for the whole course, they were asked to show their understanding of five different cases through a task sequence of first preparing an 'out of class document' to be submitted prior to a seminar, which started off with an 'in class questionnaire' that each group had to respond to within 20 minutes of class-time. This was immediately followed by a 30-minute debate. All tasks were assessed and counted towards the final course grades.

Reflecting our research interest in student collaborative writing, we focus on the untimed out-of-class documents. For this paper, we selected Case 1 and Case 5 for detailed analysis because they focused on comparable institutions, a university-based museum and a university faculty respectively. Additionally, they were completed by (almost) all student groups: 21 for Case 1 and 18 for Case 5 (see Table 2 below). In addition to the description of the specific case itself, the case materials included the same general information on aims and instructions (see Figure 2). Students are expected to 'consolidate the organizational concepts' introduced in the course and provide 'reasoned answers' to the case questions on the basis of the specific 'knowledge acquired during the course'.

Aims	Instructions
a) To develop in students the ability to work in groups b) To consolidate the organizational concepts explained so far. c) To introduce the student to real organizational situations	1. Read carefully the Case text and answer the proposed questions only after having completely understood their significance and range. 2. Answers must always be based on the knowledge acquired during the course 3. The solution to the case analysis will be given in writing on a pdf document. Include on it all the text needed to explain the reasoned answer, but only relevant text. It is not a question of re-explaining theory which has already been explained in class, but, rather, answering specifically the questions formulated. *4.-7.: Information on formatting of file and other practicalities*

Fig. 2: General information provided before each Case text (adapted from the teaching materials)

These case-independent instructions need to be taken in combination with the case-specific information, consisting of the case text and the proposed questions that the students need to answer. A quick glance through the bulleted summaries of the cases in Figure 2 reveals that both focus on the implications of changing organisational design of the respective institution. The proposed questions, however, are clearly different in length and explicitness, making the prompts students received noticeably dissimilar (see Case questions in Figure 3). Besides having two questions for Case 1 vs. de facto four for Case 5, the former (C1/Qu1 and C1/Qu2), ask for factual information exclusively, even including a yes/no question, while the latter C5/Qu1 and C5/Qu2)

combine factual with evaluative prompts, which additionally are linguistically more complex.

Case 1: "The University Art Museum"

Summary of case:

- Organizational development of an art museum across phases/directors:
  1. private collection donated to university in 1912
  2. late 1920s – late 1970s: first director who runs the collection as a university museum (for staff & students)
  3. 1981-1984: second director who opens the museum also to the public, leading to a decrease in use by students
  4. late 1984: search for new director, different opinions on mission and objectives

Questions (for Case Study):

C1/Qu1.
Are mission and official goals well defined for each phase?

C1/Qu2.
Which are the organization's values?

C1/Qu1: DESCRIBE, EVALUATE

C1/Qu2: DESCRIBE, EXPLAIN

Case 5: "Selecting a New Dean"

Summary of case:

- Faculty of Economics at Lakeside University, Finland
- With the dean of 10 years becoming vice-rector, two candidates stand for dean; a situation that brings division into the faculty and necessitates a real election.

Questions (for Case Study):

C5/Qu1.
How would you explain the emergence of division in the case organization? What were the background social and cultural structures accounting for the appearance of different interest groups within the faculty?

C5/Qu2.
What kinds of political tactics did the different interest groups pursue in order to influence faculty council decision-making? How would you describe the effectiveness of various tactics used?

C5/Qu1: EXPLAIN; DESCRIBE, REPORT

C5/Qu2: DESCRIBE; EXPLAIN, EVALUATE

opinions on mission and objectives

Questions (for Case Study):

C1/Qu1.
Are mission and official goals well defined for each phase?

C1/Qu2.
Which are the organization's values?

C1/Qu1: DESCRIBE, EVALUATE

C1/Qu2: DESCRIBE, EXPLAIN

case organization? What were the background social and cultural structures accounting for the appearance of different interest groups within the faculty?

C5/Qu2.
What kinds of political tactics did the different interest groups pursue in order to influence faculty council decision-making? How would you describe the effectiveness of various tactics used?

C5/Qu1: EXPLAIN; DESCRIBE, REPORT

C5/Qu2: DESCRIBE; EXPLAIN, EVALUATE

Fig. 3: Case instructions (screenshot of the teaching materials) and required CDFs (in grey boxes).

Considered from the angle of CDFs (see grey boxes in Figure 3), the prompts for Case 5 aim for EXPLAIN; DESCRIBE and REPORT (C5/Qu1) and DESCRIBE, EXPLAIN and EVALUATE (C5/Qu2), However, the questions for Case 1 seem to target DESCRIBE exclusively. When considered jointly with the general instructions (Figure 2), though, it is more likely that C1/Qu1 also requires students to EVALUATE the museum's mission and official goals and that C1/Qu2 asks students to EXPLAIN the organisation's values during the various phases, resulting in the combinations of CDFs included in Figure 3.

5 Quantitative findings

Although our study is fundamentally exploratory and qualitative, we first offer a quantitative description of our data set and the CDFs used by the students. As visible in Table 2, the data set consists of 21 texts for Case 1 and 18 for Case 5, reflecting a small reduction in student numbers during the course. The texts were on average longer for the respective first question than the second one (see 'mean'), but at the same time very variable in length (see column 'min-max'). What is noteworthy is that, despite having fewer texts, the data set Case 5 is larger than for Case 1 (see 'total') and that the shortest text consists of a single word (see 'min-max' for C1/Qu1).

Tab. 2: Data set

Length in words		**mean**	**min-max**	**Total**
Case 1 (21 texts)	C1/Qu1	305	1-490	6405
	C1/Qu2	185	22-349	3880
	Total	**490**		**10285**
Case 5 (18 texts)	C5/Qu1	346	103-657	6232
	C5/Qu2	322	60-674	5793
	Total	**668**		**12025**

Table 3 provides basic descriptive information on CDF use in the data set. The overall totals are relatively similar for both cases ('total'), especially when keeping in mind that the Case 5 data set is larger than the one for Case 1 (see Table 2). When turning to individual CDF frequencies (see Table 3, 'sum'), DESCRIBE is by far most widely used, followed by EXPLORE and EXPLAIN. DEFINE, EVALUATE and REPORT appeared in the single digits per proposed question, while CATEGORIZE is practically absent.

Tab. 3: Occurrences of CDFs in data set (absolute frequencies)

CDFs	Cat.	Rep.	Eval.	Explore	Desc.	Def.	Explain	Sum
C1:	**1**	**6**	**5**	**19**	**92**	**10**	**6**	**139**
Qu1	1	4	4	8	58	5	3	83
Qu2	0	2	1	11	34	5	3	56
C5:	**0**	**4**	**9**	**34**	**89**	**5**	**21**	**162**
Qu1	0	1	3	18	42	3	16	83
Qu2	0	3	6	16	45	2	5	77
Sum	**1**	**10**	**14**	**53**	**181**	**15**	**27**	**301**

While these numbers are much too coarse for any in-depth interpretation, they allow for a first comparison with the expected CDFs (see Figure 3). Describe is prominent in both, and the higher number of explain is reflected in its double mention for Case 5. Evaluate and report, though, appear more seldom than the prompts would imply, which contrasts with explore that is the second popular CDF despite not featuring in the prompts. These first indications of CDFs use and their relations to the case prompts provide some indication for our main analytical part that delves into the students' CDF use in a qualitative, discursive approach.

6 Qualitative Data

In the analysis of the CDF realisations in the student texts, we suggest the need for more detailed frameworks of alignment (or not) with disciplinary requirements. Two main areas are addressed here: firstly, the ways in which any discipline-specific knowledge is verbalised explicitly in these textual realisations (coded as 'theory'), which is contrasted by a mere reiteration or lay commentary on the business case presented in the prompt materials (coded as 'case'). The verbalisation of disciplinary knowledge involves (ideally) the explicit link to theoretical models and concepts from business studies and the correct use of relevant terminology and other discursive items. The second area involves the appropriacy and accuracy of the linguistic choices made to present this discipline-specific knowledge, coded for 'inaccuracy', i.e.

clearly non-target like usages of the L2 English, and 'register', i.e. aspects of language use considered inappropriate in terms of formality for the text-type produced. There are areas of overlap in these two categories, which are currently in the process of refinement.

In the following, we will discuss three examples in more detail. As the quantitative analysis has not revealed major differences between the four case questions, all examples refer to the same question, C5/Qu1.

Example 1: EXPLAIN

> The main argument was that selecting Virtanen would lead to a power imbalance in favour of a small clique that did not repressent the collective will of the faculty. (Group 4)

The logical relationship of cause and effect for the CDF EXPLAIN is presented here rather implicitly in the first few words, i.e., "the main argument was …", which might require a clearer and more explicit formulation of cause and effect along the lines of "The election of Virtanen was the reason for a power imbalance in favour of a small, non-representative group within the faculty". This lack of explicitness in formulation the core elements of EXPLAIN occurs frequently in the data set, leading to some verbalizations targeting the CDF EXPLAIN becoming more akin to the CDF DESCRIBE.

This example is characterized by very little clear reference to disciplinary knowledge (i.e., 'theory') with the only possible instances being terminological, i.e., "power imbalance" and possibly "collective will". Issues with linguistic appropriacy are notable in the spelling of "repressent" ('inaccuracies') and possibly the term *clique* ('register').

The following example shows the realisation of the CDF EVALUATE or the authors' position towards the action described in the case.

Example 2: EVALUATE

> The fact that Karhila won the election seemed quite shocking in the text, but it is not to us, since the possible threads were too high for

> Virtanen to win the elections, and we believe that the electors considered this. (Group 12)

We can see that the student writers here show their evaluation of the events described in the business case quite clearly, i.e., as an overall unsurprising win by the candidate Karhila, given the perceived threats to the organization in case of a victory by the candidate Virtanen. Disciplinary knowledge is applied in explaining the "possible threads [sic, targeted word: threats]" combined with the electors' motivations and, interestingly, there is a tentative positioning by the authors as having such specialized knowledge in the first sub-clause "but it is not [surprising] to us". Despite this, the verbalization of this knowledge suffers from language-related issues, as in the misspelling of threat ('inaccuracies') and also to some extent in the formulation of the actual evaluation in "quite shocking in the text" and "we believe" ('register').

As mentioned above, none of the prompts actively required the students to produce a CDF EXPLORE, but it nonetheless occurred frequently in the texts submitted. The extract below is an answer to a prompt requiring EXPLAIN, i.e., giving reasons for the division in the business described, and then possibly DESCRIBE by presenting the social and cultural structures responsible for such a division in more detail. What the students produced here is, however, an instance of EXPLORE, i.e., an attempt to show alternative solutions.

Example 3: EXPLORE

> We also think it could all have been avoided if they had come to an agreement using a Collaborating style of handling conflict (our way) that reflects a high degree of both assertiveness and cooperativeness to meet the needs of both parties, as we have seen in our workbook (Group 4)

This example shows the students clearly suggesting an alternative to the unfolding of the business case as described in suggesting and naming a different strategy of addressing institutional conflict. Disciplinary knowledge is displayed also in the use of the required terminology, i.e.,

"collaborating style", high degree of assertiveness and cooperativeness" ('theory'). Despite this show of increasing disciplinary literacy in terms of both knowledge and the means of expressing it, there are still some clearly non-expert linguistic realisations. Thus, the explicit reference to their suggested alternative is simply "our way" ('register') and the means of referring to theory, as required in the instructions given to the students, is only to "our workbook" ('register'), rather than the appropriate form of citing sources, both in terms of authorship and style sheet.

7 Discussion and Conclusion

This short contribution arguably shows the potential of using the construct of CDFs to analyse L2 student writing produced in response to questions on business cases. Overall, this framework of mid-level granularity according to the Genre Egg (see Figure 1), which straddles both linguistic and educational traditions and aims, is very well suited for the analysis of texts produced within Higher Education. Its versatility facilitates linking texts produced in very different contexts and those constituting clearly different genres according to CDFs. In our case, this enabled establishing a clear and easy link between the CDFs required in teacher prompts and those produced by students.

This versatility and comparative ease of applying CDFs are counterbalanced by the need to develop more detailed frameworks to capture fully the nexus of content and language knowledge verbalised in CDFs. In the context of university writing and hence of disciplinary literacy, this presents challenges in terms of fully understanding the disciplinary knowledge required to produce and comprehend the specific CDFs. As has been lamented on frequently, we too, felt the lack of expert insights into the content of these texts, i.e. business administration, which was exacerbated by the unavailability of the class lecturer for comments on these student texts.

In line with other studies on L2 student writing at school and university level, certain CDFs are produced in our data set with higher fre-

quencies than others and, interestingly, some CDFs are produced without being explicitly required in the prompts given. Most notable among these is the CDF EXPLORE (see also Example 3), which to us suggests that this particular verbalised cognitive process might be one that university teachers expect from their students by default, and so fail to explicitly require it. Arguably, the CDF EXPLORE is most clearly linked to university-level critical thinking (Barnett 1997), at least in its discipline-specific critical thinking skills. Thus, (successful) students might realise soon that they are expected, regardless of the specific prompt, to show their ability to evaluate, critique and offer alternatives to the information presented. More comprehensive studies are needed to show how the realisation of specific CDFs is or can be linked with criticality in Higher Education in a more systematic manner.

Finally, a point related to Higher Education pedagogy; it is not only students whose texts suffer at times from being overly implicit. The prompts provided by some lecturers are only understood correctly by students if they know the implicit requirements. Thus, question 1 for Case 1 can linguistically appropriately be answered by "yes" or "no", as indeed one student group did. More successful students realise, however, that the implicit request for a CDF EXPLAIN or CDF EVALUATE should also be answered in order to do well on this assignment. Teacher education for university lecturers could point out the difference made, especially to weaker students or those without background knowledge of the institution, by making the requirements in prompts explicitly linked to CDFs, possibly in the form of typical operator verbs.

Zooming out from the EME context pursued here, this study adds a jigsaw piece to increasing our understanding of the intricacies of expressing academic functions through applying CDFs. We hope that by showing the potential of CDFs for L2 student texts, some inspiration can be given to further work on academic student writing in L1 in line with Helmut Gruber's original ideas.

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