Focus on Language in CBI: How Teacher Trainees Work with Language Objectives and Language-Focused Activities in Content-Based Lessons

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Abstract

This paper investigates to what extent teacher trainees who had received instruction in pedagogical linguistics incorporate language learning in content-based (CBI) lessons. Data were collected from Likert-scale self-reports and written CBI lesson plans. The language objectives in the lesson plans were analysed using the language demand classification from Lindahl & Watkins (2014), which consists of the following categories: reading comprehension, vocabulary, word study, functional language, grammar, and writing and conventions, while language-focused activities were coded based on the degree to which they corresponded to the objectives. These results were then correlated with pre-service teachers' self-reports regarding their beliefs about the frequency with which they incorporate various facets of language knowledge in CBI instruction. No significant relationships were found. In line with previous research (Fortune, Tedick & Walker, 2008; Regalla, 2012), the findings suggest that the teacher trainees in this study prioritize language objectives that focus on vocabulary and may experience some challenges selecting language-focused activities that match learning objectives. Nevertheless, other components of language knowledge, in particular functional language and grammar, were also present in the lesson plans, suggesting that training teachers to "think linguistically" (Bailey, Burkett & Freeman, 2007) can help them identify language needs of learners that expand beyond vocabulary. The chapter concludes with implications for teacher training programs.

Key Words

Teacher trainees, content-based instruction, language objectives, LO menu

Introduction

Content-based instruction (CBI), also referred to as content-based language teaching (CBLT) or content and language integrated learning (CLIL) depending on the context in which it is implemented, comprises a range of pedagogical approaches in which "non-linguistic curricular content such as geography or science is taught to students through the medium of a language that they are concurrently learning as an additional language" (Lyster & Ballinger, 2011:279). CBI is associated with numerous benefits for learners, including increased learner motivation and cognitive development, heightened intercultural awareness, attainment of academic language proficiency, and improved educational and job opportunities (Lightbown, 2014).

Nevertheless, the implementation of CBI is not without challenges. In fact, the key premise of content content-based instruction (CBI), namely the dual focus on both content and language, is also one of the central difficulties CBI teachers face. As research findings attest, teachers often struggle to strike the right balance between the amount of attention devoted to content and language (Stoller & Grabe, 1997), and content specialists in particular find it challenging to fulfil their role as language experts in the CBI classroom (Lightbown, 2014). Additionally, existing studies suggest that language is not attended to systematically in CBI classrooms, and that focus on language tends to be limited to vocabulary and verbs (Fortune, Tedick & Walker, 2008; Regalla, 2012). Although existing textbooks and other resources for CBI teachers outline a plethora of language support types that teachers can incorporate, ranging from word to discourse level (e.g., Dale & Tanner, 2012; Lindahl & Watkins, 2014; Ball, Kelly, & Clegg, 2015), it has been argued that teachers who are not trained in pedagogical linguistics may not be able to understand the important role language plays in communicating academic content or recognize the language needs of learners (Bailey, Burkett & Freeman, 2007; Regalla, 2012). Aiming to contribute to the existing body of research, the present study investigates how teacher trainees who had received training in pedagogical grammar include language in CBI lesson plans.

Background

The role of language in CBI

In CBI classrooms, students learn non-linguistic, academic content through the medium of a new language they are acquiring. The language required to access academic content is decontextualized, abstract, and more dense than non-academic language. Cummins (1984) captured this distinction in his concepts of *basic interpersonal communication skills* (BICS), or casual, everyday language, and *cognitive academic language proficiency* (CALP), or academic language. For instance, the former utilizes a limited set of non-specialized words while the latter tends to use words that are morphologically complex and employs a high proportion of nouns and adjectives (Nagy & Townsend, 2012). However, academic language extends beyond the word level to sentence level (e.g., word order and sentence types) and discourse level (e.g., genres and cohesion). As Gottlieb and Ernst-Slavit (2014:5) postulate, "academic language necessitates more than knowledge of single words to describe complex concepts, thinking processes, and abstract ideas and relationships."

Although it is generally agreed that CBI programs should integrate both language and content (Lyster, 2007; Cammarata, 2010), different CBI models do not uniformly perceive the extent and ways in which language should be addressed in instruction. CBI programs can be situated along a continuum from content-driven (e.g., immersion) to language-driven (e.g., language classes with thematic units) (Met, 1999). Likewise, the concept of language in CBI varies widely, "from being represented as predominantly language functions […] or composed of functions, structures, and vocabulary…" (Bigelow, Ranney & Dahlman, 2006:45) to an extensive menu of academic language demands (Lindahl & Watkins, 2014).

Functional grammar (Halliday, 1985; Lock, 1996), which emphasizes the correspondence between forms and meanings, has been an influential framework in conceptualizations of language in CBI. Functional grammar postulates that speakers select specific language structures and vocabulary depending on their communicative goals. In CBI contexts, this implies that teachers have to be able to identify the various structures employed to perform particular language functions (e.g., describing, comparing, summarizing) and that learners need in order to work with specific academic content. Approaches such as the Cognitive Academic Language Learning Approach (CALLA) (Chamot & O'Malley, 1994; Chamot, 2005) and TESOL's (1997) *Standards for Pre-K-12 Students* centre academic language instruction on the concept of language functions.

Other models for integrating language in CBI have been proposed as well. For instance, Snow, Met and Genesee (1989) identified three sources of language objectives, namely the ESL curriculum, the content area curriculum, and learners' communicative and academic needs, and divided the language objectives into *content obligatory* (i.e., those necessary to access the content of the lesson) and *content compatible* (i.e., those that are used across a range of academic disciplines). Short (2002) understood language as consisting of forms, functions and language learning strategies, while in the Connections Model (Bigelow, Ranney, & Dahlman, 2006), language structures comprised grammar, vocabulary and text organization, including discourse patterns and paragraph organization.

A more expansive understanding of language is found in the Sheltered Instruction Observation Protocol (SIOP) (Echevarría, Vogt & Short, 2017), which places language objectives, along with content objectives, as one of its core sub-categories, referred to as features. In the SIOP, language objectives are related to the key topics of the lesson, promote academic language development, support the development of both receptive and productive language skills, and encompass four domains: listening, speaking, reading, and writing.

Echevarría, Vogt and Short (2017) suggest that language curricula, including government standards for English as a second language and content areas as well as instructional materials, can serve as sources of language objectives. Different types of language objectives should include key vocabulary, language functions, language skills, grammar, lesson tasks, and language learning strategies.

Finally, Lindahl and Watkins (2014) proposed a model for supporting academic language objective development, which they referred to as the language objective (LO) menu. The tool is intended to scaffold teachers through the process of identifying the language demands of the learners and selecting language objectives and strategies or activities that go in tandem with a lesson's content objectives. The menu consists of six areas of academic language demands and examples of possible learner needs: reading comprehension (e.g., contextual clues, identifying main idea), vocabulary (e.g., abstract words, idioms), word study (e.g., cognates, prefixes), functional language (e.g., interrupting, being humorous), grammar (e.g., capitalization, parts of speech), and writing and conventions (genre, sentence variation). Lindahl and Watkins (2014) underscored that academic language knowledge is complex, and they intended the tool to support teachers in recognizing and working with academic language suitable for the content-area of their lessons.

Teachers' challenges with CBI

Although CBI has been recognized as an effective approach to instruction in various contexts, its implementation is not without challenges. From the teacher perspective, these range from lack of preparation and therefore low confidence to teach specific content knowledge, as when language specialists are expected to teach content areas, to, conversely, insufficient expertise in language, as when content teachers are required to act as language experts (Cloud, 1998; Lightbown, 2014). Teachers also report challenges balancing content and language and struggle with issues pertaining to teacher identity in cases when CBI principles do not align with their vision or philosophy of teaching (Cammarata, 2010; Tedick & Cammarata, 2012).

As lack of language skills can inhibit learners' ability to access content in CBI, one of the major concerns in CBI teacher preparation is training teachers to support language development. Research suggests, however, that teachers often face difficulties in formulating language objectives, lack metalinguistic knowledge and understanding of language functions,

or are unable to identify students' language needs and feel pressured to act as language models for their students (Cammarata, 2009, 2010; Bigelow, 2010).

Research also revealed that teachers' understanding of academic language is often restricted to challenging content area vocabulary and phrases (Gottlieb & Ernst-Slavit, 2014), and that, consequently, CBI teachers tend to limit their language objectives to "difficult words" and ignore other language needs of learners (Fortune, Tedick & Walker, 2008; Regalla, 2012). It has been suggested (Regalla, 2012) that the underlying cause is teachers' inability to "understand the role that language plays in […] communication of the academic content" (213), or incapacity to *think linguistically,* i.e., recognize that second language (L2) learners have specific linguistic needs in order to be able to work with academic content (Bailey, Burkett & Freeman, 2007). Among other skills, teachers need the knowledge of language structures, discourse patterns, language and literacy development, language variation, and basic linguistic analysis to foster the language development of L2 learners (Fillmore & Snow, 2000).

As Regalla (2012) and Tedick and Cammarata (2012) point out, the issue may originate in teacher preparation programs, which fail to adequately address integrated content and language teaching. For instance, while "subject-specific or generic elementary programs reinforce teachers' views of themselves as content teachers alone […] language preparation programs reinforce teachers' view of themselves as language teachers alone" (Tedick & Cammarata, 2012:548). Similarly, Regalla (2012) concluded that because her subjects did not receive systematic instruction in pedagogical linguistics, they failed to demonstrate the linguistic skills necessary to construct language objectives that extend beyond the knowledge of vocabulary.

Language objectives: More than just vocabulary

Although teaching key vocabulary is important, academic language demands in CBI contexts extend beyond the knowledge of vocabulary to include word study, reading comprehension, functional language, grammar, and writing and conventions (Lindahl & Watkins, 2014). Several learner needs can be identified within language demands. For example, word study can include knowledge of prefixes and suffixes, grammar knowledge can comprise parts of speech, subject-verb agreement and word order, while reading comprehension entails the ability to identify context clues and identify text features. CBI teachers' potential inability to formulate language objectives that extend beyond vocabulary knowledge is worrisome

because, as Lindahl and Watkins (2014:202) note, "academic language has multiple layers beyond simply the vocabulary of any one content area" and therefore, teachers (2014:198) "must formulate objectives that address those demands." Previous research has identified inadequate training in pedagogical linguistics (Fillmore & Snow, 2000; Regalla, 2012) and teachers' lack of in-depth metalinguistic knowledge of the target language (Bigelow, 2010) as the underlying causes. Aiming to contribute to the existing body of research, the present study investigates how teacher trainees who had received extensive instruction in pedagogical grammar work with language objectives in CBI lesson plans. Specifically, the study raised the following research questions:

1) What are the teacher trainees' beliefs about their own ability to integrate various facets of language knowledge into CBI lesson plans?

2) What is the range of language demands and learner needs present in the language objectives written by the teacher trainees?

3) Do the activities in the lesson plans correspond to the language demands and learner needs listed in the lesson objectives?

4) Is there a relationship between the teacher trainees' self-reported language teaching practices and the types of language objectives selected for the lesson plans?

Methodology

Rationale

This chapter examines how pre-service teachers work with language objectives when developing CBI lesson plans. While previous research suggests that teachers may be unable to work with language objectives beyond vocabulary due to a lack of linguistic awareness resulting from insufficient training in educational linguistics (Fortune, Tedick & Walker, 2008; Regalla, 2012), teachers who have been trained to think linguistically can be expected to identify the language needs of learners and select objectives and activities that match those needs (Bailey, Burkett & Freeman, 2007). The present study investigates the extent to which pre-service teachers who had completed a BA-level course in pedagogical grammar are capable of working with language objectives in a CBI context. At the time the study was conducted, the course in pedagogical linguistics the teacher candidates had taken was a required, first-year, 30-hour course that covered types of grammar (descriptive, prescriptive, pedagogical), key topics in English grammar (e.g., parts of speech, articles, prepositions,

tenses, modals), and the place of grammar instruction in communicative language teaching. In the second year of their program, the teacher candidates took a 30-hour course (ten three-hour-long sessions) on CBI that examined the main premises, advantages and disadvantages of CBI, introduced examples of lesson plans and activities that integrate a range of academic subjects and EFL, and gave an overview of CBI lesson design principles including writing content and language objectives. One of the ten course sessions focused entirely on lesson planning, presenting a rationale for formulating specific lesson objectives, and supplying numerous examples of "good" and "bad" objectives followed by opportunities to practice. The final assessment consisted of two drafts of a grade-level-appropriate lesson plan that integrated a topic from a selected content area (e.g., science, social studies, mathematics, arts) into an EFL lesson. The students were required to list specific content and language objectives drawing on the language demands listed in the language objective menu (Lindahl & Watkins, 2014). The data collected from this project were used to examine the effectiveness of the instructional design and inform pedagogical decisions for the future renditions of the course.

Participants

Forty-six pre-service teachers, 34 females and 12 males, participated in the study. The participants were enrolled in a language teacher-training program at a major public university in Norway and were required to take a 30-hour course on CBI as a part of their training. All participants were in the second year of their program, majored in English, and had taken a 30-hour course in pedagogical linguistics. Additionally, they had had between six to nine weeks of school-based practicum experience prior to being enrolled in the CBI course and completed another three weeks of practicum while the research project was in progress. The participants were selected through convenience sampling. All participants signed an informed consent form and were able to withdraw at any point during the study. Each participant was assigned a number to anonymize the data.

Data and analysis

This study employed a mixed-methods design. At the beginning of the module, the participants filled out a written self-report consisting of 36 5-point Likert scale statements about various CBI pedagogical practices (Dale & Tanner, 2012, p. 15–17). Fourteen of the statements included in the analysis concerned the frequency with which the participants believed they would integrate language in their teaching. The statements were related to vocabulary building and other facets of language knowledge (concrete and abstract language,

activating prior language knowledge, context awareness, textual organization, genre awareness). The participants were instructed to select one of the following options for each of the statements: (4) always, (3) often, (2) sometimes, (1) occasionally, (0) never (see Appendix 1). Overall average scores and standard deviations were calculated, as well as average scores and standard deviations for items pertaining to (1) vocabulary building versus (2) other aspects of language knowledge.

In addition, qualitative data consisting of written CBI lesson plans were analysed for evidence of the pre-service teachers' ability to incorporate language objectives into their teaching. The summative assessment in the module entailed designing a grade-level appropriate, content-based lesson in English. The teacher trainees were instructed to select a grade level and a content area of their choice, specify the theme/topic of their lesson, include both language and content objectives, and describe a sequence of logically organized content-driven activities with clear step-by-step procedures and instructions given to learners and following the into-through-beyond model (Brinton & Holten, 1997) (see the assignment criteria in Appendix 2). The researcher identified language objectives and corresponding activities in each lesson plan. Language objectives were coded according to language demands and possible learner needs using the categories from the LO menu (Lindahl & Watkins, 2014) (see Table 1). Seven additional learner needs not found in the LO menu emerged from the data: arguing/expressing opinions, persuading, following instructions, making a hypothesis, passive voice, tenses, and imperatives.

Table 1

Language objectives: Coding categories (based on Lindahl & Watkins, 2014)

Language demand	Possible learner needs	Example
Reading comprehension	Building background knowledge Context clues Summarizing	*Identify main ideas in a text about the Vikings*
Vocabulary	Basic oral vocabulary	

	Content-compatible terms	*Describe a landscape using at least three key words*
	Content-obligatory terms	
Word study	Cognates	*Recognize and define cognates in English and first language*
	Compound words	
	Prefixes, roots, and suffixes	
Functional language	Describing things	*Provide arguments for and against the death penalty*
	Making suggestions	
	Expressing opinions	
Grammar	Question formation	
	Parts of speech	*Talk about past events using correct tenses*
	Tenses	
Writing and conventions	Genre awareness	
	Organization	*Use written notes to narrate a story*
	Topic knowledge	

Once the language objectives were coded and corresponding activities identified, each activity was then classified according to how well it would allow learners to attain the corresponding language objectives using the following codes: (1) corresponds, (2) partially corresponds, (3) doesn't correspond.

Findings

Self-reported ability to integrate language knowledge into CBI lessons

The mean self-report score for all participants was 2,64, indicating that, on average, the teacher trainees believed that they integrated various components of language knowledge in their teaching sometimes or often. The mean score for the items associated with vocabulary knowledge was 2,72, and for the items associated with other language demands 2,61. It can therefore be concluded that, on average, the participants believed that they focused on vocabulary learning to a similar extent as on other aspects of language knowledge. Table 2 provides an overview of these results.

Table 2

Self-report results

All items	Vocabulary	Other language demands
M = 2,64	M = 2,72	M = 2,61
SD = 0,64	SD = 0,76	SD = 0,65

Language objectives and language activities

As the lesson plan instructions did not specify the required number of language objectives, the lesson plans varied with respect to the number of language objectives included, ranging from one to three (M = 1,78). A total of 82 of language objectives were identified in the lesson plans and coded using the language demands and learner needs from Lindahl and Watkins (2014). The data show that the teacher trainees included various components of language knowledge in their CBI lessons (Figure 1).
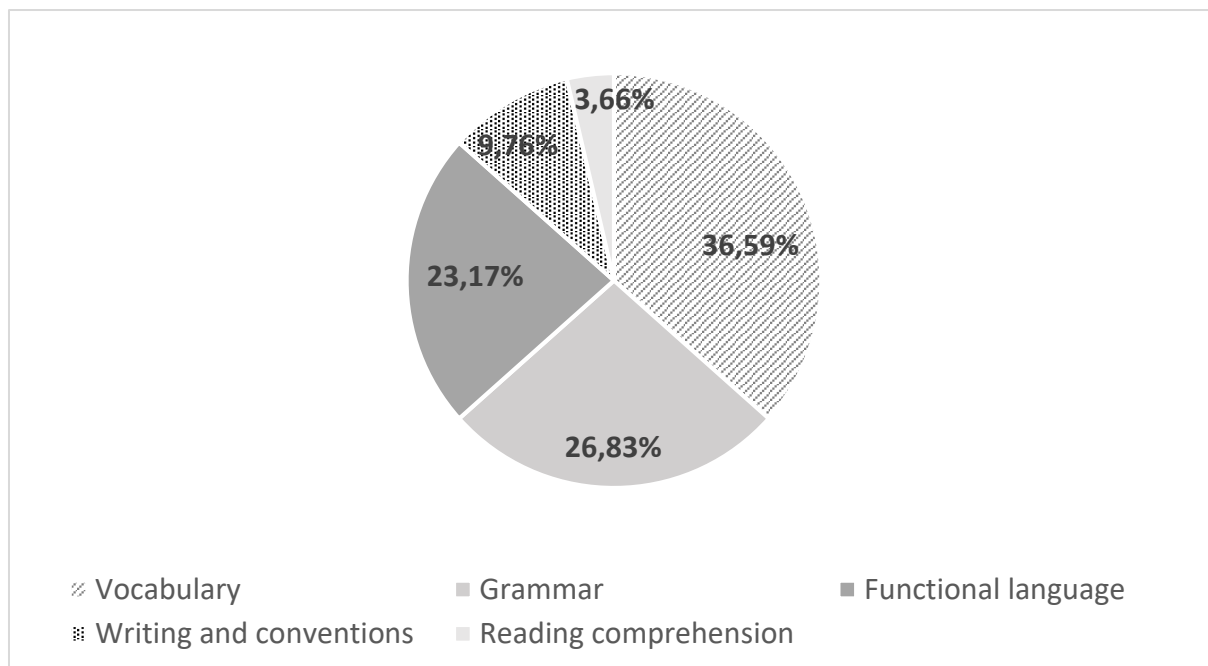
Figure 1. Types of language demands

As can be seen, about a third (36,59%) of language objectives focused on some aspects of vocabulary knowledge, followed by grammar (26,83%) and functional language (23,17%). Writing and conventions constituted 9,76% of the objectives, while reading comprehension was the least common language demand present in the lesson plans (3,66%). None of the objectives focused on word study.

The language objectives stated by the teacher trainees were characterized by a wide range of learner needs within each of the language demands (see Table 3). For instance, vocabulary objectives focused on context-compatible and context-obligatory words as well as basic oral vocabulary, while grammar objectives pertained to the sub-categories of grammar such as tenses, parts of speech, complete sentences, imperatives, passive voice, and question formation. Functional language objectives contained the biggest variety of language needs, including describing things, asking for information, making a hypothesis and expressing opinions. However, the scope of the language demands pertaining to writing and conventions and reading comprehension was less extensive, with writing and conventions comprising the sub-categories topic knowledge and organization, and reading comprehension comprising summarizing, identifying the main idea, and inferring. Overall, the most common learner needs identified in the language objectives were context-compatible words (21,95%), context-

obligatory words (13,41%), tenses (10,98%), parts of speech (9,76%), describing things (8,54%) and topic knowledge (7,32%).

Table 3

Types of learner needs found in the language objectives

Language demand	Learner needs	Percentage (%)
Vocabulary	Context-compatible words	21,95
	Context-obligatory words	13,41
	Basic oral vocabulary	1,22
Grammar	Tenses	10,98
	Parts of speech	9,76
	Complete sentences	2,44
	Imperatives	1,22
	Passive voice	1,22
	Question formation	1,22
Functional language	Describing things	8,54
	Asking for information	2,44
	Making a hypothesis	2,44
	Expressing opinions	2,44
	Comparing/contrasting	1,22
	Discussing	1,22
	Explaining	1,22
	Following instructions	1,22
	Persuading	1,22
	Talking about events	1,22
Writing and conventions	Topic knowledge	7,32
	Organization	1,22

Reading comprehension	Summarizing	2,44
	Identifying main idea	1,22
	Inferring	1,22
Word study	N/A	0

TOTAL		**100**

As the next step in the analysis, the language objectives were paired with corresponding activities, and the activities were assessed for the level of correspondence to the language objectives (Table 4). The majority of the activities (64,63%) corresponded well with the stated language objectives, while 20,73% corresponded partially, and 14,63% did not correspond.

Table 4

Correspondence between language objectives and lesson activities

Corresponds	**Partially corresponds**	**Doesn't correspond**
64,63%	20,73%	14,63%

In many cases where the objective and the activity corresponded to each other, language objectives were very specific, using almost identical wording as the activity in which learners were supposed to meet the objectives, as in Example 1.

Example 1

Language objective (Vocabulary/Content obligatory terms): Match these names to shapes: triangle, square, rectangle, pentagon, and hexagon.

Activity description: Students fill out a graphic organizer in which they match shapes and their names as the teacher introduces them orally and visually.

The category "partially corresponds" was assigned to lesson objectives that were very general and therefore difficult to identify in a specific language task, or in cases when a specific language demand was implied in an activity, but the main focus of the activity was on

content. For instance, some lesson plans contained language objectives that corresponded to the language-focused activities but were broad and general, as Example 2 illustrates.

Example 2

Language objective (Grammar/tenses): Use modals can, may, will.

Activity description: Students list ideas that can help reduce emissions, e.g., Drivers can drive fewer miles each week.

In other lesson plans, the activities tended to have an implicit focus on the identified language demand. This usually meant that the teacher assumed that learners would either enter the classroom equipped with specific language knowledge and apply it in a content-focused task or acquire the needed language knowledge inductively from the provided input. In such cases, the activities were often intended as an opportunity to apply language knowledge while communicating, yet the main goal of the activity was working with specific academic content, as illustrated in Example 3, where learners are expected to acquire past tense forms from written input and be able to produce them correctly in the second part of the activity.

Example 3

Language objective (Grammar/Tenses): Use simple past to describe a past event.

Activity description: Students read texts about World War II events and then produce and describe timelines of main events.

The category "doesn't correspond" was assigned to the cases when the language demand was not correctly identified, when there was a discrepancy between the objective and what learners were expected to do, or when there was no corresponding activity at all. In Example 4, the objective calls for students to use modal verbs, yet the language task requires students to use the present simple tense.

Example 4

Language objective (Grammar/Parts of speech): Use the correct modal verbs in short sentences.

Activity description: Students write short sentences in which they describe how a body organ works.

Likewise, Example 5 illustrates another case of a lack of correspondence between an objective and an activity. Here the language objective focuses on persuasive language, yet the task requires students to write a description.

Example 5

Language objective (Functional language/Persuading): Persuade someone to change their point of view about global warming using figures and data to support your argument.

Activity description: Write a short essay in which you present different views on global warming.

Finally, a few of the lesson plans contained additional language-focused activities that did not match any of the language objectives. For instance, one lesson plan listed the following language objective and a language-focused activity:

Example 6

Language objective (Vocabulary/Basic oral vocabulary): Use simple English vocabulary and phrases tied to family members.

Activity description: Students review key words (family, mum, dad, grandmother, grandfather, brother, sister, baby) and then describe their own family.

In addition, however, this lesson included an explicit, teacher-led review of the various forms of the verb "to be," yet corresponding language knowledge was not listed as a language objective. Similarly, another lesson plan listed an activity that required the use of comparative and superlative forms of adjectives. The use of comparatives and superlatives was scaffolded, but there was no corresponding language objective.

Relationship between self-reported beliefs and types of selected language objectives

Pearson's *r* correlations between the results of self-report and the types of language objectives were calculated. There was no significant effect of the relationship between self-reported score on vocabulary teaching practices and the selection of language objectives ($r = -0,033$, $n = 82$, $p = 0,770$). Similarly, the effect size of the correlation of self-reported teaching practices pertaining to other language domains and the selection of language objectives was negligible ($r = -0,080$, $n = 82$, $p = 0,477$). Therefore, it can be concluded that what the teacher trainees believed about the frequency with which they focus on various aspects of language

knowledge in CBI was not correlated with the types of language objectives they selected for their lesson plans.

Discussion

This paper set out to examine how CBI teacher trainees who had received instruction in pedagogical linguistics work with language objectives. Teacher trainees' self-reports about CBI teaching practices and written CBI lesson plans served as the sources of data. Average scores for self-report items pertaining to the teaching of vocabulary and other language skills were calculated for each participant, while the lesson objectives were analysed thematically using the LO menu categories from Lindahl and Watkins (2014). Based on the self-reports, it can be concluded that the participants believed that they focused on vocabulary learning and other aspects of language knowledge to a similar degree. Contrary to previous research (Fortune, Tedick & Walker, 2008; Regalla, 2012), the findings of this study suggest that the participants possess some linguistic skills necessary to identify language objectives that do not focus exclusively on vocabulary. Although lesson objectives pertaining to vocabulary knowledge were the most frequent type of language objectives, other language demands represented in the lesson plans included grammar, functional language, writing and conventions, and reading comprehension.

Nevertheless, the participants did show a stronger inclination for selecting language objectives of certain types, most prominently context-compatible words, context-obligatory words, tenses, parts of speech, describing things, and topic knowledge, while other learner needs such as basic oral vocabulary, imperatives, passive voice, comparing/contrasting, persuading, and identifying the main idea were sparsely represented. Other possible language needs listed in the LO menu (Lindahl & Watkins, 2014), for instance, being humorous, singular vs. plural, punctuation, figurative language, and contextual clues, were not found in the lesson plans at all. Likewise, no objectives were focused on language study (e.g., prefixes and suffixes, compound words). This could be due to the fact that the participants believed that the content area and topics that they selected for their lesson plans did not require other types of language objectives. However, it is also possible that the teacher trainees lacked the necessary linguistic knowledge to identify other types of language needs.

To further determine the teacher trainees' ability to focus on language in CBI settings, the language objectives were matched with specific language-focused activities in each lesson

plan to determine the degree of correspondence. The majority of the activities matched the objectives well, suggesting that most of the teacher trainees were able to not only identify the language skills necessary for a given lesson but also design specific activities that support the development of those language skills. Nevertheless, there were also instances of partial or no matches, and it can thus be concluded that the teacher trainees could benefit from additional opportunities to practice and receive feedback on selecting appropriate language-focused activities that promote specific language objectives.

There was no statistically significant correlation between teacher trainees' beliefs about the frequency of implementation of teaching practices that support the development of vocabulary and other language domains and the actual language objectives they selected for their lessons. In other words, whether a teacher trainee had a high or low self-report score related to the importance of teaching practices that support vocabulary development or practices that support the development of other language domains was not correlated with the type of language objectives they selected for their lesson plan, suggesting that the teacher trainees may have low levels of awareness of their own language teaching practices.

The participants in this study had taken 30 credits in pedagogical grammar before enrolling in the CBI course. They were able to formulate language objectives that expanded beyond the level of vocabulary and phrases – the lesson plans they submitted also contained language objectives that aimed to support the development of other language domains such as grammar, functional language, reading comprehension, and writing and conventions. Nevertheless, very few of the lesson plans focused on the last two categories, and there was no single instance of a language objective that addressed word study (e.g., prefixes and suffixes, cognates, or sound patterns). Similar to Regalla (2012:222), who concluded that the teacher interns in her study would benefit from "more explicit instruction in the writing of language objectives," the teacher trainees in the present study would doubtless benefit from more extensive opportunities to engage with the LO menu (Lindahl & Watkins, 2014) when designing learning objectives and activities to support language development. Although an entire three-hour CBI course session was devoted to lesson planning, and the teacher trainees participated in activities that focused on writing content and language objectives, there is some evidence in the lesson plans that the participants were not able to draw on the full range of language demands and learner needs from the LO menu, that they had some challenges identifying language-focused activities that allow learners to meet the stated language objectives, and that they lacked some basic awareness about their own language teaching

practice. Future renditions of the course should therefore devote more time to the role of language in CBI, including extensive opportunities for in-depth work with the LO menu, instructor and peer feedback, and reflection.

It is important to acknowledge that this study had some limitations. Most importantly, as the study was not experimental in nature and there was no control group, no causality between training in pedagogical linguistics and the teacher trainees' ability to formulate language objectives and select matching activities can be established. Future studies should aim to compare groups of teacher trainees with different educational backgrounds to identify the most successful teacher education curricula and practices. In addition, as the study was exploratory in nature and served mostly to inform instructional decisions for a teacher preparation course, the generalizability of its findings is questionable. The study utilized a relatively small convenient sample consisting of 46 teacher trainees enrolled in one teacher preparation course taught by one instructor. It is possible that the same curriculum delivered in a different instructional context (different teacher trainees, a different university teacher) would render different results. The results presented here should therefore be interpreted with caution, and future studies with teachers and teacher trainees are needed to determine the impact of training in pedagogical linguistics on their ability to integrate language objectives into CBI.

Conclusion

Although CBI programs are spread along a continuum from language-driven to content-driven (Met, 1999), language development remains a central premise and defining feature of CBI (Tedick & Cammarata, 2012). It has been postulated that CBI teachers should "plan systematically for language growth while ensuring that students develop skills in using language for meaningful purposes and for cognitive growth" (Met, 1991:294). Findings from research (e.g., Dalton-Puffer, 2007; Llinares & Morton, 2010), however, suggest that CBI's potential for language learning is not being fully reached. Teachers' ability to support language learning is often limited to key vocabulary and phrases while other language demands are overlooked (Fortune, Tedick & Walker, 2008; Regalla, 2012; Gottlieb & Ernst-Slavit, 2014). Therefore, it is crucial that CBI teachers are trained to deliver CBI instruction that focuses on language to a greater extent. As Regalla (2012:210) argued, "[t]eachers who are not trained to think linguistically may not be able to design language objectives beyond

vocabulary." In order to identify and support the language needs of their students, teacher trainees may need instruction on educational linguistics as well as "more explicit instruction in the writing of language objectives" (222).

To "[help] teachers become more aware of the academic language present in their content-area lessons" (Lindahl & Watkins, 2014:202), Lindahl and Watkins (2014) designed an extensive LO menu consisting of six language domains and possible learner needs. The menu enables teachers to identify academic language demands of learners and supports teachers in selecting appropriate language objectives that address those demands. While previous training in pedagogical linguistics may serve as a stepping-stone to utilizing the LO menu, it is not sufficient. As with every instructional design tool, teachers and teacher trainees need opportunities to practice using the LO menu when designing CBI lessons. As the results of this study suggest, teacher trainees who had taken a course in pedagogical linguistics are unable to take a full advantage of the LO menu and tend to cluster their objectives and activities around a few common-sense categories such as key vocabulary, tenses, parts of speech, describing things, and topic knowledge. In addition, teacher trainees need support in selecting language-focused activities that match the learning objectives they have identified, and they need opportunities to reflect on and increase awareness of their own thinking about language teaching in CBI. Arguably, CBI teachers need a range of skills and competencies to be successful in their jobs, including proficiency in the target language, content knowledge, pedagogical knowledge and skills, and content-language interface skills (Horn, 2011). CBI's potential for developing language competence can only be fulfilled if CBI teachers have expertise in the language issues related to teaching and learning as well as instructional design tools such as LO menu that can inform the process of consciously selecting appropriate language objectives and matching activities. Teacher education programs need to provide teacher trainees with opportunities to practice effectively using such tools and increase their awareness of the academic language needs of learners.

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Appendix 1

CBI pedagogical practices: Self-report (based on Dale & Tanner, 2012).

Vocabulary learning

1. In my classes, learners use a personal vocabulary file actively.
2. I help my learners learn and use subject-specific terminology.
3. I discuss ways of learning words in my class.
4. I use a variety of activities to help my learners to recycle vocabulary related to my subject.

Other language domains

5. At the start of a lesson or topic, I find out what language related to the topic learners already know.
6. I use a number of strategies or activities to help learners improve their reading and listening skills.
7. I help learners notice how language is used in my subject; for example, we look together at the grammar or we work on the vocabulary for the subject.
8. I help learners notice the similarities and differences between English and their first language.
9. I use speaking frames and graphic organizers to support learners' speaking.
10. My learners learn to speak about my subject for different audiences, informally and formally.
11. My learners learn to write different types of texts in my subject.
12. I use writing frames or graphic organizers (e.g., diagrams, tables, model texts) to help my learners organize their writing.

13. When learners write for me, they know what the aim is, who their audience is, and the text-type they are writing.

14. I help learners move from concrete to abstract language in their writing.

Appendix 2

Content based lesson: Grading criteria

Criterion	Points (1-3)	Comments
The lesson is centred around one theme in a content area (e.g., social studies) and it has a title that clearly reflects it		
The grade level is specified and the topic, objectives, and all activities are grade level appropriate		
Content objectives are stated and are measurable. There are explicit references to the Norwegian curriculum.		
Language objectives are stated and are measurable. There are explicit references to Part II in Dale & Tanner (2012).		
All needed materials are listed. There is a reasonable amount of creativity involved (i.e., no reliance on a textbook)		
There is a sequence of logically organized content-driven activities focused around a single theme/topic that add up to 1.5 hours of instruction		
The lesson plan follows the into-through-beyond design: - Into activates students' background knowledge and prepares them to learn new language and content. All activities are creative and engaging (i.e., not just a teacher-centred mind map) - Through introduces new content and language. Students are engaged and work collaboratively. - Beyond is not just a homework assignment. Students apply what they have learned in new, creative ways.		
The lesson plan contains sufficient amount of detail (i.e., if it was given to a substitute teacher, he or she would be able to teach the lesson without further assistance)		
The lesson plan is written in grammatically correct academic English, including correct punctuation and capitalization		
The lesson plan follows the required format / template		
TOTAL (out of 30 points; 15 points required to pass)		