Content-Based Instruction: A Novel Second/Foreign Language Curricular Approach

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Abstract

Behaviorism has not only been challenged in the theory of education but also in the theory of language learning and teaching. Content-based instruction (CBI) is one of the language education approaches that counters the approaches that are rooted in behavioral precepts and bases itself into the principles of communicative language teaching (CLT). This paper discusses the content-based instruction and its underlying theoretical principles. CBI is a curricular approach in second and/or foreign language (L2/FL) education that advocates for negotiation of meaning through a target language (TL) communication and dialogue in class (Brinton, Snow, & Wesche, 2003; Larsen-Freeman, 2000; Lyster, 2007). First, it is attempted to understand how content-based instruction is conceptualized. Second, major program models used in the CBI approach in various L2 and FL educational contexts are reviewed through the Met's (1999) continuum of CBI. In fact, Met (1999) presented a continuum as an effort to rationalize the complexity of the CBI approach. By putting language-driven program models on one side and content-driven on the other, she showed the powerful diversity in which CBI has been adopted all over the world. Finally, a critical comparison between CBI approach and a traditional L2/FL learning one is made by discussing benefits and drawbacks and/or challenges of each of the approaches. The CBI and traditional L2/FL approaches are analyzed with an aim to present a balanced view of their applications and implications. It is concluded that although there may be challenges, CBI does have potential to be adopted in various educational settings.

Keywords: content-based instruction, immersion, Adjunct Model

Introduction

What Freire (1983) meant by writing "Education is suffering from narration sickness" was a call for changing the behaviorist conceptualization of learning. His call echoed the concerns Dewey (1922) once raised against such conceptualizations while underscoring the social functions and aspects of education. Freire (1983) argued that the realization of the behaviorist theory of learning through the modalities of

the banking model of education reified students as dehumanized beings, as "containers" or "receptacles" to be "filled" by a teacher (p. 284). "'Four times four is sixteen; the capital of Para is Belem.' Student records, memorizes, and repeats these phrases without perceiving what four times four really means, or realizing the true significance of 'capital' in the affirmation 'the capital of Para is Belem,' that is, what Belem means for Para and what Para means for Brazil" (Freire, 1983, p. 283). Such teaching by a "well-intentioned bank-clerk teacher," he (1983) maintained, developed in students a "passive" consciousness about the phenomena of this world, thus, made them "passive" in the world (p. 284). Freire advocated for a progressive view of education built upon the "problem posing method," where students could develop an active consciousness by actively making meaning through dialogue and communication.

Such theoretical debates and their transformational influence, in effect, could not remain confined to only the theory of education. Firth and Wagner's seminal paper (1997), for instance, echoed such resisting and challenging voices against the behaviorist theories of second language (L2) or foreign language (FL) learning in the field of applied linguistics. The race to find the best method of teaching L2/FL in every context led to the proclamation of the death of method (Allwright & Bailey, 1991). Later, the emergence of postmethod condition/pedagogy (Kumaravadivelu, 2006) also testified against the behaviorist assumptions in the field of L2/FL education. All these efforts, in fact, attempted to reconceptualize language, curricular approaches, learner, teacher, and the learning and teaching processes in the field of L2/FL education. These theoretical efforts also highlighted the experiential, local, social, socio-cultural, and discursive dimensions of human behavior, consciousness, cognition, and learning.

This paper is about one such novel effort, namely, content-based instruction (CBI), in the field of L2/FL education. Hailed as "liberating," "empowering," "refreshing," etc. (Stryker & Leaver, 1997, p. 1), CBI, essentially, advocates for the negotiation of meaning through a target language (TL) communication and dialogue in a L2/FL class (Brinton, Snow, & Wesche, 2003; Larsen-Freeman, 2000; Lyster, 2007). Further, it discourages a linear reception of L2/FL knowledge as discussed above in the banking view of learning (Cammarata, 2006, 2009, 2010). The paper will, first, define what content-based instruction is. Second, it will discuss the major program models used in the approach to various L2 and FL educational contexts. Finally, it will discuss the benefits and drawbacks or challenges of this approach in comparison with a traditional L2/FL learning class.

Cracking Content-Based Instruction (CBI)

It may be helpful to first understand what "content" means in content-based instruction (CBI) before cracking the whole term. In fact, the word "content" has been unpacked in different ways. For example, Met (1999) reviewed how the word "content" has been defined. She stated that for some it is purely academic subject matter; for others, content does not need to be purely academic in its orientation—it could be any issue, topic or theme which is germane to students' interests— yet for others, she held, content may either be academic or non-academic, but it should contribute in students' learning. Above all, Met (1999) suggested that "'content' in content-based programs represents material that is cognitively engaging and demanding for the learner, and is material that extends beyond the TL or target culture" (paras. 3–4).

In fact, the issues of what "material that extends beyond the TL or target culture" means and how it is realized in CBI is what Snow (1991) elucidated earlier. Snow (1991) wrote, "In content-based instruction, 'content' is defined as the integration of content learning with language teaching aims. More specifically, it refers to the concurrent study of language and subject matter, with the form and sequence of language presentation dictated by or, at least, influenced by the content material" (p. 462). She held that this perspective of "language learning removes the arbitrary distinction between language and content by assuming that language and content should not be separated" (1991, p. 462). Indeed, the premise that language may never be divorced from content or vice versa, thus their integration is essential and should be indispensable in L2/FL education, was a radical step. It challenged the FL teaching model which realized itself in teaching only language rules isolated from the ways the language was used in content (Lyster & Ballinger, 2011; Mohan, 1986).

The fact that, whether content is subject matter or non-subject matter, it should be integrated with TL learning goals in varying degrees is, thus, the crux of CBI. As it combines content with language learning aims, CBI has, in effect, been named in diverse ways according to diverse contexts and foci: Content and Language Integrated Learning (CLIL), Teaching English Through Content (TETC), Content-Based Language Instruction (CBLI), Language for Specific Purposes (LSP), etc. (Brinton, Snow, & Wesche, 2003; Snow & Brinton, 1997). In order to unify the diversity of nomenclature for certain academic reasons, CBI has, therefore, been called a "curricular approach" (Cammarata, 2009, p. 561) or "a dual-focused educational approach" (Coyle, Hood, & Marsh, 2010, p. 1) realized in diverse ways based upon an assortment of curricular aims and TL objectives in both L2 and FL educational settings. Cammarata (2009) wrote that at the center of organizing the L2/FL curriculum in this way "is the

belief that language instruction is most effective when it focuses on ensuring that students learn the language for communication in meaningful and significant social and academic contexts" (p. 561). Below, we discuss how CBI has been realized by talking about the major program models used under its banner.

Major Program Models

The issue of what extent or degree to which content may be integrated with TL learning aims or vice versa points to the various realizations, thus quite diverse programs and models, of CBI (Dupuy, 2000; Lyster, 2007). Met (1999), for example, presented the following continuum, shown in table 1, to account for the complexity of the integration of subject matter with TL objectives and the diversity of curricular programs or models found under the umbrella of CBI.

Table1: A Continuum of Content and Language Integration

Content-Driven ←				→	Language-Driven
Total Immersion	Partial Immersion	Sheltered Courses	Adjunct Model	Theme-Based Courses	Language classes with frequent use of content for language practice

Met (1999) tried to explain the integration of subject matter with TL objects and the multiplicity of program models by putting "content-driven" programs on one side of the continuum and "language-driven" ones on the other. She presented the following characteristics, shown in table 2, of each side.

Table 2: Characteristics of CBI Program Models

Content-Driven	Language-Driven
Content is taught in L2/FL	Content is used to learn L2/FL
Content learning is priority.	Language learning is priority.
Language learning is secondary.	Content learning is incidental.
Content objectives determined by course goals or curriculum.	Language objectives determined by L2/FL course goals or curriculum.
Teachers must select language objectives.	Students evaluated on content to be integrated.
Students evaluated on content mastery.	Students evaluated on language skills/proficiency.

She held that the continuum might help to understand the position of various program models in the context of "the relative role of content and language" (para, 4). Thus, it may have certain implications pertaining to specific program model(s) in the context of learning outcomes, assessment, and evaluation for teachers and program planners. In order to see for what purposes and how CBI programs are realized in L2/FL educational settings, we briefly discuss the major program models below. By following Met's continuum, we start with the left side of the continuum—immersion education—that has grown and is growing all over the world in general and the United States in particular (Tedick & Wesely, 2015). Later, we discuss the right end followed by three program models in the middle of the continuum. The rationale for following Met's continuum while describing various program models is that the continuum not only helps to understand the macro picture of CBI—that is, whether the program model is content-driven or language-driven and how content and language are integrated—but it also helps to unpack the specificities of specific program models.

The Left End

Immersion education is one of the most widely used program models of content-driven CBI all over the world (Fortune & Tedick, 2008). Fortune and Tedick (2008) wrote that immersion is generally the "process of completely surrounding oneself with something in an effort to quickly bring about a powerful personal transformation" (p. 11). Immersion education, thus, creates a TL environment that surrounds L2/FL learners and provides them authentic and meaningful opportunities to help them immerse themselves in and bring about personal transformation in TL learning and in its proficiency. Johnson and Swain (1997) took immersion education as a "category within bilingual education" (p. 1). And, within bilingual education, Baker (2006) categorized it as a "strong form of bilingual education for bilingualism and biliteracy" as opposed to "the weak forms of bilingual education" where TL is generally taught as a subject (pp. 215-216).

Because immersion education is solely content-driven, the use of L2/FL as the medium of instruction of content subjects such as mathematics, science, geography, etc. is the hallmark of the model. The premise lying underneath the use of TL as the medium of instruction is that it develops a TL socialization environment which leads to better TL learning as compared to a traditional L2/FL class, in which TL is divorced from genuine and consequential content and taught independently (Lyster, 2007; Snow & Brinton, 1997; Stryker & Leaver, 1997).

Due mainly to the use of TL as the medium of instruction as the vehicle of immersion in a certain subject matter, various programs have been developed all over the world. The programs not only help immerse students in an FL and in a language of power but also assist majority language students to learn a minority language and facilitate the revival of certain languages (Swain & Johnson, 1997).

Swain and Johnson (1997) theorized thoroughly for the first time what constitutes immersion education and how one program of immersion differs from another. They not only presented the "core features of a prototypical immersion program" but also discussed those characteristics that led to the emergence of various types of immersion programs (p. 6). They held that each of the core as well as the variable features should be taken as a continuum. We present below the core and variable features that decide and differentiate immersion programs (Swain & Johnson, 1997, pp. 6-12).

Table 3: Core and Variable Features of Immersion Education

Core Feature of a Prototypical Immersion Program	Variable Features which Decide and Differentiate Immersion Programs
The L2 is a medium of instruction.	Level within the educational system at which immersion is introduced.
The immersion curriculum parallels the local L1 curriculum.	Extent of immersion (Full = 100% instruction in TL language, Partial = 50% instruction in TL).
Overt support exists for the L1.	The ratio of L1 to L2 at different stages within the immersion program.
The program aims for additive bilingualism.	Continuity across levels within educational systems.
Exposure to the L2 is largely confined to the classroom.	Bridging Support.
Students enter with similar (and limited) levels of L2 proficiency.	Resources (Teacher Trainings, Staff Development Programs)
The teachers are bilingual.	Commitment (From policymakers to students with the program)
The classroom culture is that of the local L1 community.	Attitudes towards the culture of the TL.
	Status of the L2
	What counts as success in an immersion programs? (This varies depending upon the purposes and contexts in which the programs function)

They further stated, "By matching programs against these features, bilingual educators can determine, trivially, the extent to which their program is an immersion program as defined here, and less trivially the kinds of opportunities, constraints, and problems a program that matches these criteria might face as a consequence" (pp. 6-9). Taking into account the core and changeable characteristics, immersion education has been adopted into multiple bilingual programs (Fortune & Tedick, 2008; Tedick, Christian, & Fortune, 2011). Because their detailed discussion is beyond the scope of this paper, we discuss briefly those programs that are most often used: one-way, two-way, and indigenous language immersion.

One-way FL immersion education, for instance, teaches content in an FL. The teaching of content through an FL may continue for a certain percentage of daily school-time, for certain course-subjects, and at certain grade level, thus, determining the program either as total or partial immersion, and early, mid, or late immersion. Importantly, this type of education is imparted to "linguistically homogenous students who are typically dominant in the majority language" (Tedick, Christian, & Fortune, 2011, p. 2). They are immersed to learn an FL, which may be a language of power of a certain area, along with developing additive bilingualism. Secondly, two-way immersion education enrolls students of two languages, i.e., English and Chinese. One of the languages can be a minority language and the other a majority. Two-way immersion encourages the participants to work together and learn from each other. It provides an immersion opportunity to learn both the languages, thus, supports additive bilingualism. Finally, indigenous language immersion education affords immersion in an endangered minority language. This type of education can be either one-way or two-way as discussed above. The major purpose of such type of programs is to revitalize a culture that is at the risk of extinction (Fortune & Tedick, 2008; Tedick, Christian, & Fortune, 2011). In what follows, we discuss the right end of the continuum that, unlike immersion education, is a language-driven stream.

The Right End

As shown in the Met's continuum, this right side is language-driven CBI. That is, "language has primacy, and content facilitates language growth" (Met, 1999, para. 10). Curtain and Dahlberg (2010) drew a distinction by naming those program models driven solely by certain subject matter as "content-based" and those driven exclusively by language aims as "content-related." They wrote, "content-related programs use the regular curriculum as a vehicle for making language activities more cognitively engaging" (Curtain & Dahlberg, 2010, p. 282). We use the content-related term here for all the programs that use certain content for developing L2/FL proficiency. Content-related programs, thus,

seem to be a substitute for those programs where L2/FL is taught as a subject. Such language-based programs focus on only TL form and/or grammar. The content-related programs, in contrast, advocate for the integration of content while teaching the TL as a subject.

Mohan (1986) presented a "broad perspective" (p. 18) of why content should be integrated while teaching an L2 or an FL. While revealing the significant connection of language with subject matter, she argued that

> Regarding language as a medium of learning naturally leads to a cross-curriculum perspective. We have seen that reading specialists contrast learning to read with reading to learn. Writing specialists contrast learning to write with writing to learn. Similarly, language education specialists should distinguish between language learning and using language to learn. Helping students use language to learn requires us to look beyond the language domain to all subjects and to look beyond language learning to education in general. Outside the isolated language classroom students learn language and content at the same time. Therefore, we need a broad perspective which integrates language and content learning. (Mohan, 1986, p. 18)

Relating Mohan's cross-curriculum broad perspective to the *Standards for Foreign Language Learning in the 21st Century*, Curtain and Dahlberg (2010) stated that this view of using a language to learn a language shows the substance of "connection" standard. Explaining why such connection should be developed in the content-related programs, Blaz (2002) opined that it develops a relevance factor. She held that by connecting language-learning activities with certain content of the curriculum, content-related programs facilitate L2/FL learners' learning of the TL as they see "the relevance" in their TL learning activities (p. 73). In sum, unlike content-based programs that explicitly focus upon content learning and presume TL learning as the byproduct, content-related programs overtly aim at developing TL proficiency and assume content learning as the byproduct.

To illustrate how such form of CBI may, in effect, be realized at various levels, we draw upon Blaz (2002, p. 75) briefly to show the areas and activities where curricula can facilitate TL learning processes when connected to TL teaching.

Table 4: Connections of Curricula and TL Teaching

Mathematics	Beginning level: Numbers, adding, subtraction, multiplication and division. Telling time (24-hour method). Days of week and months. Metric measurement: prepare food using metric, convert temperature into Celsius, convert height and weight to meters and kilos. Intermediate level: Currency conversion for shopping, converting prices on menus or salaries for various jobs, and so on.
Science	Target language (TL) contributions to science: Famous scientists, centers for science study, products used in science from TL countries. Weather terms. Study of flora and fauna of TL regions. Discussions on ecological issues. Health unit: Illnesses, vaccinations, and medications.
Social Studies	Geography: Study of countries that speak the TL. Learning geographical terms in the TL. History: Study history of TL countries. Influence of TL countries on our own history. Famous TL historical figures. Economics: Economic bases of TL countries. The European Economic Community: What is it, how does it work? The United Nations. Government: Government systems and leaders of TL nations.

L2/FL teachers can draw upon the curricula of these types of regular academic subjects and their topics to connect TL teaching as a subject with authentic and relevant material. Above all, content-related programs, taught at various grade levels, help both L2/FL teachers and learners to undergo a meaningful and authentic process of learning and teaching by working with concrete, practical, and useful tasks of their curricula (Bigelow, Ranney, & Dahlmann, 2006; Duenas, 2004).

The Middle

Unlike content-based programs where content mastery occupies direct primacy and content-related programs in which language proficiency and skills are the explicit agenda, the middle of the Met's continuum includes programs that vary in their target on content and language learning.

Because the sheltered model of CBI is inclined towards the content-driven end, it has content-mastery at its focus. However, this characteristic of content mastery may seem to link the sheltered model of CBI with that of immersion education, it differs. Unlike the immersion model where all students—whatever their L1s' be—are immersed in TL content, the L2/FL students are separated from the mainstream class in the sheltered model and taught TL content independently. And, since this sheltered model of education is not purely immersion and is inclined to a

certain extent towards the language-driven end too (if one notices the sheltered model in the Met's complete continuum mentioned above) the segregated students receive content input in a simplified and comprehensible TL. The rationale behind such segregation of students and content instruction in a simplified TL is the assumption that these measures would facilitate decreasing anxiety among the L2/FL students. In addition, it would also help them to communicate in the TL with each other and learn the content in the TL together. In sum, all the L2/FL students are separated from the mainstream class and taught content courses in a comprehensible TL by a teacher who is relatively expert in both content area and TL. Such type of education is frequently imparted in elementary or high schools particularly to immigrant children in a host country (Brinton, Snow, & Wesche, 2003; Met, 1999; Wesche, 2010).

The adjunct model of CBI, in contrast, lies in the middle of the continuum. It, thus, focuses upon both TL language and content mastery. In this model, L2/FL students are immersed with native speakers of a certain TL when they are taught their content courses. However, they are segregated from the mainstream students when they are taught the TL. In this program model, Brinton, Snow, & Wesche (2003) wrote that "every effort is made to dovetail the curricula of the language and content courses so that they maximally complement each other" (p. 60). Since the successful implementation of such a model requires modifications, compatibility, and consonance between TL language objectives and content learning outcomes, it demands strong and committed coordination not only between language and content teachers but also between the teachers and administrators. Therefore, such coordination requires prior training of the staff and curriculum planning between teachers in order to attain the objectives successfully. This type of CBI is mainly prevalent at the post-secondary level such as college or university education (Brinton et al., 2003; Met, 1999; Wesche, 2010).

Finally, the theme-based model of CBI is language focused. That is, L2/FL learning is the main concern of the program model. Like the content-related courses on the right end of the continuum, which attempt to connect L2/FL teaching to the content of certain academic subjects, this model also employs academic subject matter to teach the TL. Thus, Curtain and Dahlberg (2010) also took theme-based program models as content-related CBI. However, what makes this program model inclined to a certain extent towards content-based and different from the other right end content-related programs is the systematicity and organization of the curriculum of this model, which consists of themes, topics, or issues pertinent to the students' interests and needs. These themes or issues are drawn from the curricula of certain grade levels. Thus, L2/FL teachers

themselves organize the curriculum (Brinton, Snow, & Wesche, 2003; Curtain & Dahlberg, 2010; Met, 1999). In order to see precisely what features distinguish these three programs lying at the middle of the Met's (1999) continuum from each other and what implications there may be for their implementation, we drawn upon Brinton et al. (2003, pp. 19-22) to present the table 6, which may further help clarify the specifics of these three program models.

Table 5: Characteristics and Implications

Characteristics or Implications	Sheltered CBI	Adjunct CBI	Theme-Based CBI
Primary Purpose	Help students master content material	Help students master content material; introduce students to L2 academic discourse and develop transferable skills	Help students develop L2 competence within specific topic areas
Instructional Responsibilities	Content instructor responsible for content instruction, incidental language learning	Content instructor responsible for content instruction, language instructor responsible for language instruction	Language instructor responsible for language and content instruction
Focus of Evaluation	Content mastery	Content mastery (in content classes). Language functions and skills (in language class)	Language skills and functions
Setting	Secondary schools, colleges, and universities	Secondary schools, colleges, and universities	Adult schools, language institutes, all other language programs
Curriculum	Content course syllabus; study skills may be	Curriculum objectives coordinated	Theme-based (topic-based) curricular units integrate all

	integrated into content syllabus	between content and language staffs	four skills
Teacher Training	Content teachers need awareness of L2/FL development	Language and content teachers need training in curriculum, syllabus design, and team teaching	Language teachers need training in curriculum/syllabus design and material development

How can CBI Help?

From the above description of the realization of CBI in quite diverse program models, it appears that CBI "has stimulated interest globally among language professionals and some content specialists" (Stoller, 2004, p. 263). We briefly discuss the benefits and drawbacks/challenges of this growing L2/FL approach by comparing it with a traditional L2/FL class. It may be important to mention here that comparing every CBI program model with a traditional L2/FL class is beyond the scope of this paper. We, therefore, make a comparative discussion by bringing into focus some general characteristics and implications of both the approaches. We discuss below, first, the benefits of this approach.

Affordances

When CBI has earned such popularity and is hailed as an innovative and empowering L2/FL curricular approach having the potential to cultivate active and democratic behavior rooted in critical thinking along with TL proficiency (Cammarata, 2006, 2010; Stryker & Leaver, 1997), it becomes important to know how, after all, this curricular approach is ground-breaking and powerful vis-à-vis, what Baker (2006) called, a "drip-feed language program" (p. 223), in which L2/FL is drip-fed as a subject daily to students through language-based curricula for half an hour or forty five minutes.

We think this comparison of CBI with drip-feeding L2/FL class leads, in effect, to discovering and understanding the theoretical foundations upon which the edifices of both the traditions are built. Due to the fact that the phenomena of *language* and *learning* have been conceptualized in dissimilar ways in both traditions, their actualizations have appeared in drastically different forms. For example, the idea that language is a neutral system in that it is "a well-organized and well-crafted" human entity consisting of various sub-systems such as

"phonological system," "semantic system," and "syntactic system" differs diametrically from the idea that language is a discourse which is sociocultural, situated, and sociolinguistic in its orientation (Kumaravadivelu, 2006, pp. 4-11). Likewise, the idea that learning is a habit-formation in that one learns systems of knowledge such as that of language by imitating, repeating, memorizing, and drilling as certain knowledge habits contrasts completely with the idea that learning is a sociocultural, situated and contextualized activity wherein learning emanates dialectically from doing or solving a problem (Lantolf & Thorne, 2006; Lightbown & Spada, 1999; Vygotsky, 1934/1987, 1978; Wertsch, 1985).

Since the traditional L2/FL class largely took language as a neutral coherent system and realized itself in habit formation curricula and teaching methods in which decontextualized language forms and focuses dominated, CBI disfavored the predominant theory of language learning divorced from the actual ways and functions a language breathed. Rather, CBI posited that language, as a human phenomenon, is not only an organized system of forms and rules but it is also beyond that which is, what Halliday (1973) called, "meaning potential" (as cited in Kumaravadivelu, 2006, p. 8). According to the theory of meaning potential, language is not only structures, forms, and rules, but language is functions through which "sets of options in meaning" appear. The interlocutors negotiate these sets of options in meaning contextually. CBI held that because language is invariably and inherently functional from the theoretical perspective of meaning potential, language is learned by *immersing*, *participating*, and *doing* rather than imitating, repeating, and/or memorizing out-of-context rules and forms.

CBI, therefore, argued that the integration of TL with certain authentic, relevant, and cognitively demanding curricula actualized the meaning potential of the TL. It provided a rich and meaningful contextualization/environment where TL students could immerse, participate, and do their activities in the TL. Indeed, such a way of TL learning changed not only the roles of both students and teachers but also the very processes of TL learning and teaching. Students were not now passive "containers" or "receptacles" to be filled with the information of systems of knowledge, i.e. language. They were active participants immersed in the activity of doing in the TL. And, teachers were not now "well-intentioned bank-clerks"; they were experts of both content and TL knowledge and ever-ready facilitators to scaffold the active participant of the TL activity (Friere, 1983, pp. 283-284; Gibbons, 2002). Thus, one could see that the processes of TL teaching and learning were not linear transmission and reception of knowledge respectively; but, TL teaching

was a dialogical and task-mediated activity based upon local requirements and curricula or mediational means (Vygotsky, 1934/1987, 1978). Therefore, it is widely held that by providing rich, authentic, relevant, and contextualized milieu or mediational means for immersing and doing TL activity, CBI motivates students to learn TL. Due to these theoretical factors, Grabe and Stoller (1997) noted, "the research which supports CBI spans the range from studies in second language acquisition, to controlled training studies, to various strands of research in educational and cognitive psychology" (p. 5).

To sum the benefits of CBI in comparison to a traditional L2/FL class, unlike the drip-feeding L2/FL class that focuses more upon decontextualized TL form, CBI targets more at authentic curricula-contextualized TL meaning. Due to this factor of relevant and rich contextualization, second, students are motivated to not only learn their content but also their TL by doing their curricular activities through negotiating in TL. Third, it is held that CBI, where content and language objectives are married, develops in students cognitive academic language proficiency (CALP), cross-curricular perspective, and abstract thinking as opposed to a traditional language-based L2/FL class which nourishes only basic interpersonal communication skills (BICS) (see discussion on Cummins, 1984a, 1984b, 2000b in Baker, 2006, pp. 173-185). Fourth, unlike a traditional L2/FL class which lasts only for half an hour or for forty-five minutes a day, CBI, which lasts throughout the day in some programs, develops a L2/FL milieu which surrounds students and provides them contextual opportunities to participate in TL. Fifth, the roles of students and teachers are also changed from passive receivers and depositors to active participants and conscientious scaffolders respectively. Thus, sixth, the resultant process of L2/FL teaching becomes a dialogical and task-mediated pedagogy contextualized within local curricula and requirements than a neutral and linear transmission of knowledge-systems founded upon disinterested receptive imitation and memorization. Seventh, CBI not only helps to face the challenges of globalization in world where bi/multilingualism is becoming a growing trend in curricular reforms (wherein certain language(s) is/are largely recommended to be used as a medium of instruction in addition to certain local languages), but also helps to develop in L2/FL students active and democratic behavior embedded in negotiation of meaning and critical thinking. Last but not least, going beyond the debates and dichotomies of language versus content and focus on form versus focus on meaning, CBI also has the potential to save and revive languages destined to die under the impact of globalization by promoting additive bilingualism and biculturalism (Baker, 2006; Cammarata, 2006; Dalton-Puffer, 2011; Snow, Met, & Genesee,

1989; Stryker & Leaver, 1997; Wesche, 2010). The benefits, however, show only one side of the coin. Below, we discuss the other side.

Constraints

> Learning the theory of CBI or learning to apply it is very, very difficult. The difficulty is that the curriculum [I use] is basically organized around grammar and function. And the content feels pasted on . . . How on earth can we [introduce content] so that there is really some connection with language, so that content goes to the next level and becomes more meaningful while still allowing [students] to apply that grammar? (Cammarta, 2010, p. 100)

These are the words of one of the participants in Cammarata's (2010) phenomenological study exploring the training experiences of teachers using CBI in a mainstream FL educational setting. While the above discussion of the benefits affords an attractive picture of CBI, *Theory is grey and Life is green* seems to be as true for CBI as for other academic debates. In other words, there may be a yawning gap between what is generally theorized and what happens in actual life. Actualizing CBI theory in any program model and attaining theoretically desired outcomes, particularly in FL mainstream educational settings, has been one of the grave challenges for CBI. Thus, Cammarata (2010) lamented, "research has shown content-based instruction (CBI) to be effective in various language settings, yet this promising curricular approach remains rarely implemented in mainstream foreign language educational contexts" (p. 1).

The actualization of CBI in any program model reveals ambiguous areas such as the issue of how content may, in effect, be connected to language aims in certain mainstream settings, as Cammarata's participant mentioned. Moreover, the theoretical issue of solely focusing on meaning or comprehensible content input and foregoing a focus upon the production of grammatically-correct TL output also appears to be an "issue" with CBI (Wesche, 2010, p. 287). By contrast, the traditional L2/FL class may not have these concerns. In the case of early Canadian L2 immersion educational context, for example, research "revealed the limitations of instruction which only promotes comprehensible input" (Grabe & Stoller, 1997, p. 6). That is, immersion education is more focused upon the provision of TL comprehensible content input and less upon students' production of grammatically-correct TL output in their production skills, i.e. writing and speaking. Although Swain's output hypothesis (see Ortega, 2009, p. 62) in L2/FL acquisition theory, which assumes that comprehensible input is not enough for L2/FL learning, attempted to resolve the TL content versus form dichotomy by balancing

form-content integration, recent CBI scholarship shows that this imbalance between the explicit instruction of TL form and comprehensible content input is still a concern in CBI (Coyle, 2007; Wesche, 2010).

The theoretical emphasis and preference of CBI to use always and only L2/FL in immersion educational contexts is also problematized these days (Lin, 2015). Unlike L2/FL immersion education that discourages use of the first language (L1) for the sake of developing TL immersion environment, providing comprehensible content input, and affording opportunities to use TL in task mediated/functional pedagogy, the recent research from the Vygotskian socio-cultural perspective supports the use of the first language (L1). It underscores that the use of the L1 as a mediational tool more helps than detracts while learning "scientific concepts," i.e., abstract thinking, of content subjects such as mathematics or science. Thus, the notion that teachers or students should not use L1 at all in an L2/FL immersion setting has been debated, questioned, and revisited in L2/FL acquisition theory (Lantolf & Thorne, 2006, 2007).

Apart from the theoretical issues of CBI, there are also other practical factors that seem to count as CBI's drawbacks/challenges. In order to develop the desired balance between the integration of explicit focus on TL grammatical form and the provision of comprehensible content input, CBI demands a high level of cooperation between content teachers and language teachers in some program models. In addition, it generally requires teachers who are expert in both content and language domains. And, its implementation implies that robust teacher-training models, training material, and professional development opportunities be functionally present as they could facilitate practicing teachers' successful instruction. Since such is usually not the case on a practical level, particularly in mainstream FL educational contexts where L2/FL is taught through traditional language-based curricula, it is assumed that CBI is too theoretically-driven and resource-demanding to be implemented anywhere successfully. Thus, due to the paucity of applications of CBI in FL mainstream settings, Cammarata (2006) wrote,

> Many important questions still remain to be explored: Can this particular model, which is most commonly associated with immersion settings, be applied to mainstream foreign language educational environment as well? Can professional development programs assist all foreign language teachers in their attempt to learn and possibly implement the approach? And if so, how do they best introduce the CBI approach to a non-immersion audience? (p. 4)

The problematic issues regarding the use of CBI are not only confined to the theoretical requirement of the robust professional resources, proficient and expert teachers of language and content domains, and strong cooperation between language and content teachers; another issue to consider is how such instruction—in which the basic roles of students and teachers and the very processes of learning and teaching diametrically change—fits into other cultural settings. The advent of the post-method condition or pedagogy, for instance, in L2/FL teaching methodology, which advocates for taking local factors of L2/FL learners into account, is indicative of the relative failure of communicative language teaching (CLT) – claimed as the best L2/FL teaching approach for every context and region (Coyle, 2007; Kumaravadivelu, 2006). Shamim's (1996) effort to change the teacher-centered FL teaching in a Pakistani tertiary class to a methodology based upon the precepts of CLT where a teacher is assumed to be a facilitator faced acute resistance from the students, who not only started being absent from her class but also used indirect ways "to show frustration and unhappiness with the methodology being used" (p. 108). Hu (2002) also presented a similar argument by showing that cultural incongruity existed between CLT and the Chinese culture of learning. She argued, "It is counterproductive to attempt to sweep away traditional practices and implant CLT in their place" (p. 101). Such cultural issues do seem to threaten the efficient implementation of CBI, particularly in non-European and non-American contexts.

To sum up the drawbacks/challenges, first, CBI may not be as easily adoptable in mainstream FL settings as it may seem to be in L2 settings. Second, CBI's greater focus upon TL meaning and lesser focus upon explicit instruction of TL form and rules for the production of grammatically-correct TL raises both theoretical and practical concerns about how language aims should be connected with content objectives. Third, the overemphasis of the use TL and under-emphasis of the use of L1 on the part of both students and teachers in CBI class has been problematized. Fourth, since it is essential for successful implementation of CBI that there should be adept teachers and appropriate resources, it appears that CBI is impracticable to be implemented in certain educational contexts. Last but not least, the various cultural ways of being and learning in various non-European or non-American contexts, which train students to expect obedient listening, repetition, memorization, and non-questioning behavior, etc. may seem to be potential threats to the adoption of CBI. CBI may not, therefore, be a "liberating," "empowering," or "refreshing" (Stryker & Leaver, 1997, p. 1) approach for them.

Conclusion

When it comes to the context of Pakistan, research shows that Grammar Translation Method (GMT) is most commonly practised language teaching method (Mansoor, 2002). This method, in an environment of drip-feeding and drilling practice, results into rote learning that encourages memorization (see, e.g., Rahman, 2002) rather that the negotiation of meaning in target language to encourage situated and natural learning of content and language simultaneously. A survey by the Society of Pakistan English Language Teachers (SPELT) in 1985 concluded that "the school textbooks were subject-cantered rather than being pupil-centered and tested memory, not understanding" (Rahman, 2002, p. 317). This is still relevant today as not much has changed over the past few decades. Given this situation of language teaching and learning in Pakistan, despite the drawbacks or challenges as discussed above, since CBI has appeared in diverse program models at various grade levels for various purposes, it does have the potential of adaptability in Pakistani context too.

In Pakistan, CBI may be preferred over GMT and drip-feeding methods because, unlike the traditional L2/FL class that is driven by a language-based curriculum wherein decontextualized grammatical rules and principles dominate, CBI advocates for the learning of a language by integrating language aims with content objectives. Due to the relative integration of language and content, CBI is translated in diverse program models all over the world. Met's (1999) continuum, having the content-driven end on the one side and language-driven end on the other, showcases many program models of CBI. Immersion education and sheltered education, for example, are content-driven CBI program models. They assume language learning as the byproduct. Language classes with content use and theme-based are language-driven CBI program models. They, in contrast, presume content learning as the byproduct. Adjunct education is, however, a balanced CBI program model where language aims and content objectives have equal place. CBI holds that amalgamation of content objectives with language aims provides more exposure to meaningful and motivating input. Such input lasts longer compared to the traditional L2/FL class. At the heart of this curriculum approach is the premise that one does not learn a language well by imitating and memorizing its decontextualized grammatical rules; rather, one learns a language by using it. The integration of content objectives with language aims provides such authentic contextualization for the use of language.

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