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Two case studies of content-based language education

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This article describes and discusses two case studies of content-based instruction for second language education — foreign/second language immersion for majority language students in Canada and dual language education for minority language students in the U.S. After discussing the rationale for CBI in general, we examine 45 years of research on each program model and provide empirical evidence on a number of important issues, including: students' proficiency in the two languages used for instruction; non-language academic outcomes; whether age is an important factor in students' language outcomes; and the relationship between age of first exposure to the second language and outcomes in that language. Two outstanding major issues are discussed at some length; namely, the suitability of these programs for at-risk learners and the need for a coherent model of how best to integrate language and content instruction to maximize second language proficiency without detracting from academic achievement. Suggestions for future directions are provided.

Additional abstract(s) at end.

Keywords: Content-based instruction, second/foreign language immersion, dual language education, language proficiency outcomes, academic outcomes, at-risk learners, content and language integration

1. Introduction

Content-based language instruction (CBI) holds that people do not learn language and then use it; rather, they learn language by using it. The origins of this approach to second language (L2) instruction, arguably, date from the mid-1960s with the inauguration of the Canadian immersion programs — the quintessential model of content-based L2 instruction (Lambert & Tucker, 1972); however, it could be argued that its roots go back even earlier. Alternative forms of content-based L2

instruction can be found at all levels of education, including preschool, elementary, secondary and post-secondary, and they vary considerably with how CBI is organized — as part of an entire program, specific classes or courses, an adjunct to general education, or entire educational programs, the focus of this article. CBI also varies with respect to how content is selected and presented along with language instruction and how much emphasis is placed on content versus language instruction (Snow & Brinton, 1997). In this respect, Met (1998) has provided a very useful characterization of these alternatives as a continuum that extends from *content-driven* to *language-driven* approaches. CBI is not restricted to L2 classrooms. Indeed, general pedagogical thinking has highlighted the importance of links between language and content learning even for students being educated through their first language (L1) (e.g., Fillmore & Snow, 2000; Zwiers, 2008).

In this article, we describe and discuss two case studies of CBI — foreign/second language immersion for majority language students in Canada and dual language education for minority language students in the U.S. We have chosen these two “case studies” because they are both large scale programmatic examples of CBI that aim for full competence in oral and written aspects of two or more languages along with high levels of achievement in academic content prescribed by the regular school curriculum. Thus, they can be seen as an extreme version of CBI. We have also chosen these two cases because they serve two important sectors of the school-age population — students who speak the majority language of the larger community in which they live and students who have no or limited proficiency in the majority language. Thus, together, these two CBI program models provide important educational tools for promoting bilingualism among the two largest sectors of the school-age population in many communities around the world. Contemporary students face post-graduate lives in an increasingly global, multilingual, and multicultural world. The CBI programs we discuss offer a broad sector of the school-age population opportunities to face the challenges and realize the benefits of a multilingual global world by becoming competent in two or more languages. We have also chosen these two case studies of CBI because each has been subject to extensive empirical investigation and has given rise to a wealth of empirical and pedagogically-relevant information. By examining these programs, we hope to explore the limits of CBI and to point to future possibilities and directions for theory, research, and practice.

Before proceeding, it is important to provide a note about the link between the forms of CBI discussed in this article and CLIL (content and language integrated learning) because CLIL is a prominent concept among L2 educators, researchers, and policy makers in Europe and increasingly around the world (e.g., Coyle, Hood, & Marsh, 2010). The term CLIL was launched in Europe in the 1990s by a group of experts from different backgrounds including administrators, researchers, and

practitioners (Marsh, 2002). It refers to a wide range of educational alternatives in which content is used as a vehicle to promote L2 development. For example, according to Mehisto, Marsh and Frigols (2008), CLIL includes short-term options, such as CLIL camps outside school contexts, to more extended options in school, such as immersion. There has been some debate in the education community in Europe concerning the relationship between CLIL and immersion and other forms of bilingual education in North America (Cenoz, Genesee, & Gorter, 2012). It has been argued by some that CLIL is distinct from immersion, in particular, because of differences in their respective goals, participating students, target languages, and their relative emphasis on content versus language, among others (e.g., Lasagabaster & Sierra, 2010). However, in our opinion, while there may be distinctions among CLIL, immersion and other prominent forms of dual language education in North America, they are often not pedagogically significant. Moreover, they ignore important common characteristics that these forms of education share and, most importantly, the fact that all three use non-language content as a vehicle for promoting L2 proficiency. Thus, we adopt Eurydice's position that, like CBI, CLIL is "... a generic term to describe all types of provision in which a second language (a foreign, regional or minority language and/or another official state language) is used to teach certain subjects in the curriculum other than language lessons themselves" (Eurydice, 2006, p.8; see also Coyle, 2007, p.545). Under this view, we regard the immersion and dual language education programs we discuss in this article as variants of CLIL (and CBI).

2. Rationale for content-based language education

There are many good reasons for using content-based approaches for L2 instruction (Brinton, Snow & Wesche, 1989; Met, 1998; Snow, Met & Genesee, 1989). First, for first language (L1) learners, cognitive and social development proceed naturally along with language development — language is a tool children use to understand the world around them and to become full-fledged members of their social-cultural communities. For children learning an L2 in school, however, traditional methods of language instruction have often dissociated language learning from cognitive, academic, and social development because they have taught language in isolation or in conjunction with themes and topics that are trivial or have no serious consequences outside the L2 classroom. CBI approaches to L2 instruction seek to bring these aspects of development together in the classroom by using the L2, along with the L1, as a vehicle for teaching academic subjects that comprise the core curriculum.

In life outside school, language is learned because it is a useful vehicle for communication — children acquire their L1 to talk about themselves, about others, and about the world around them. In school, language learning is often devoid of meaningful or truly purposeful communication and, thus, lacks inherent incentive value. L2 instruction that integrates interesting, meaningful and relevant academic content motivates L2 learning in school by providing rewards that lie outside language learning itself.

CBI also provides substantive cognitive and social bases for learning language. Important and interesting content, academic or otherwise, provides learners with cognitive bootstraps that help them break into a new and complex linguistic system. Content also provides the stuff that learners need to map the new language onto meaning and thought. Similarly, authentic communication in the classroom about matters of academic importance provides critical context for learning the communicative functions of the new language. In the absence of important content and authentic, meaningful communication, the new language can be learned only as an abstraction devoid of conceptual and communicative substance.

Moreover, CBI is compatible with the very nature of language itself. Researchers who study language in context emphasize the functional and structural variation that characterizes language in different contexts of use (e.g., Watson-Gegeo & Nielsen, 2003). Variation can be found in both the formal/grammatical aspects of language and in its functional/pragmatic aspects. It is now generally thought that language that is used in school for instructional purposes has context-specific characteristics and, moreover, that success in school depends on mastery of these forms of language (e.g., Dutro & Kinsella, 2010; Schleppegrell, 2004). Current thinking also suggests that the way language is used in particular academic domains, such as science, mathematics or social studies, also varies. Integrating L2 instruction with content that is linked to specific academic domains in school respects this variation and ensures that language learners acquire forms of the language that are authentic and actually useful.

Finally, it can be argued that learning, especially in young learners, is most effective when learners construct their own understandings by giving meaning to new information and experiences and by linking what is new to what is already known or familiar (e.g., Moll, Amanti, Neff, & González, 1992; Vygotsky, 1962). Learning that proceeds in these ways is deeper, more lasting, and better integrated with a learner's existing knowledge and skills. Research in the neurosciences indicates that the products of learning are represented neuro-physiologically as neural networks that not only link parts to wholes but also link different parts of the brain and, thus, different sensory and cognitive domains — sound to sight, sight to motor activity, etc. (e.g., Shams & Seitz, 2008). Integrating content and L2 instruction

creates learning environments where learners can construct these connections — experientially and neuro-cognitively.

3. The case of immersion for majority language students in Canada

In French immersion (IMM) programs in Canada, at least 50% of academic instruction is delivered through French during one or more grades in elementary and/or secondary school for majority language English-speaking students (see Johnson & Swain, 1997, for a broader definition). IMM programs in other languages are available, such as Hebrew (Genesee & Lambert, 1983) and Mohawk (Jacobs & Cross, 2001), but we focus on French IMM since it has received the most research attention. Students are expected to inductively learn French from teacher talk and the written texts they read as part of their academic instruction. Although IMM teachers use French at virtually all times, IMM students use their L1 during the early months of the program with one another and with their teacher. Slowly teachers begin to insist that students use only French on the assumption that using French facilitates its acquisition. Teachers make instruction of new academic content through French comprehensible to students through extensive use of non-verbal/gestural communication, visual demonstrations, social interaction, and hands-on learning experiences. They also use, at least initially, a modified speech register, which is slower, more context-embedded, and grammatically-simplified in comparison to language that would be used with native speakers of French. Teachers assist language learning by modeling correct and appropriate language and by paraphrasing, expanding, and repeating students' incorrect, incomplete, or inappropriate utterances with correct or appropriate forms, and they use the L2 to communicate about routines that occur regularly during the school day (e.g., putting coats away, preparing for lunch and recess, and so on). Teachers are discouraged from translating information that has been presented in the L2 into the L1 so that students can understand it more easily, on the assumption that students will pay attention only when the L1 is used. Recently, educators have begun to explore instructional strategies that use both languages judiciously at the same time (Lyster, Collins & Ballinger, 2009). Formal, direct instruction in the L2 is provided during daily language arts periods. As well, teachers often provide language instruction during the course of teaching academic subjects when they observe that students are struggling with the L2 or making errors. Questions have been raised about whether the current focus on content is the optimal approach for fostering L2 competence, a point we return to later. The primary goals of immersion programs in Canada include:

- advanced levels of functional proficiency in French — L2 reading, writing, speaking and listening comprehension,
- age-appropriate levels of English-L1 language competence,
- grade-appropriate levels of academic achievement in non-language subjects, and
- intercultural understanding.

Alternative forms of IMM exist that vary with respect to the grade in which use of the L2 for academic instruction begins and how much academic instruction through the L2 is provided. In early total IMM all subject matter instruction in Kindergarten to Grade 2 is in French and gradually decreases in each subsequent grade until about 50% of instruction is provided in each of French and English by the end of elementary school. In early partial IMM, about 50% of instruction in each year of elementary school is provided in each language. In middle or delayed immersion, use of the L2 for academic instruction is delayed until grade 3 and in late IMM the L2 is not used for academic instruction until grade 7 or later, the first grade of secondary school in Canada (more detailed descriptions of Canadian IMM programs are provided in Genesee, 2004, and in Paradis, Genesee, & Crago, 2011). Students in delayed and late IMM receive traditional French-as-a-second language instruction in the grades preceding use of the L2 for academic instruction.

Discussion of the extensive findings that have resulted from numerous evaluations of IMM programs in Canada is necessarily limited here (see Genesee, 2004; Lambert & Tucker, 1972; and Swain & Lapkin, 1982, for more details). We highlight general patterns of results from early total and late immersion along with comparisons with other models where relevant.

3.1 First language (English) outcomes

3.1.1 *Do immersion students acquire the same competence in English as students in all-English programs?*

Evaluations of IMM students' L1 skills have consistently shown that, in the long run, there is no significant difference between their English language skills and those of students in all-English programs, even when the groups are comparable with respect to intelligence and socio-economic status, two factors that can influence language outcomes (Genesee, 2004; Lambert & Tucker, 1972; Swain & Lapkin, 1982). In the case of evaluations of early total immersion, it has been found that immersion students often score significantly lower than English control students during the primary grades, when all instruction is in French, on tests of reading and writing in English; they demonstrate no such lags in speaking and listening comprehension. These lags disappear within one year of receiving English

language arts instruction. The rapid catch-up in reading and writing in English that early total IMM students experience is often attributed to the transfer of reading and writing skills in French to English and the fact that they have extensive exposure to English outside school. Whether typological and orthographic similarity between the two languages affect transfer is discussed in another section.

3.1.2 *Is more and early instruction in English advantageous?*

Evaluations of alternative forms of IMM indicate that the English language outcomes of IMM students are on par with those of control students regardless of when instruction in English begins (early vs. delayed or late) and how much instruction they receive in English (50% in the beginning or none) (Genesee, 1981). In other words, the reduced and in some cases delayed English exposure that students in some IMM programs get does not jeopardize the development of their English language competence. There is even evidence that, in some cases, the English language skills of IMM students are superior to those of students in all-English programs despite reduced exposure (Lambert, Genesee, Holobow, & Chartrand, 1993). The advantage in English demonstrated by these IMM students has been attributed to their extended exposure to French, which, in turn, is thought to have additive effects on their English language development.

3.1.3 *Does linguistic similarity matter?*

Immersion has come to encompass a variety of languages in communities around the world, including languages that are typologically different; for example, Mohawk-English (Jacobs & Cross, 2001), Hawaiian-English (Slaughter, 1997) Japanese-English (Bostwick, 2001); Hebrew-French-English (Genesee & Lambert, 1983), Chinese-English (Johnson, 1997), Estonian-Russian (Mehisto & Asser, 2007), and Swedish-Finnish (Björklund, 1998); some of these language combinations also entail different orthographies (e.g., Japanese-English and Chinese-English). There is no evidence from evaluations of these programs that typological differences, with or without orthographic differences, influence student outcomes significantly. Notwithstanding these results, there are pedagogical issues in such cases, especially when the language with the more complex orthography is not the ambient language in the school and community, as is the case in Japanese immersion for English-speaking students in Oregon in the U.S. (Kanagy, 2001) and Australia (Chapman & Hartley, 1999), for example. The issue is whether English-speaking students in such programs can attain sufficient functional proficiency in written Japanese or Chinese to cope with academic content in the higher grades when written language becomes increasingly important as a vehicle for academic development.

3.2 Academic outcomes

3.2.1 *Do IMM students achieve the same levels of competence in academic subjects as students in all-English programs?*

Evaluations of the academic achievement of majority language students in IMM indicate that they generally achieve the same levels of competence as comparable students in L1 programs in academic subjects such as mathematics and science. This has been found even in the case of secondary school students who were studying advanced level mathematics, science, and other school subjects in their L2 (Genesee, 2004). Parity with L1 controls is often exhibited even in early total IMM programs when students receive all academic instruction through the L2, provided the assessment is conducted in the L2 and modifications are made to take into account that full competence in the L2 has not been acquired.

3.2.2 *Is the academic achievement of IMM students with low academic ability jeopardized?*

Genesee (1976) systematically examined the performance of both elementary and secondary level English-speaking students in French IMM programs in Canada in relation to their intellectual ability, as classified by their performance on an IQ test. These studies revealed that below average students in IMM scored at the same level as below average students in the English-L1 program on a variety of academic achievement measures, including standardized and government-mandated, such as mathematics and science. While the below average students in both programs scored significantly lower than average and above average peers in their respective programs, the below average IMM students were not further disadvantaged in academic achievement as a result of participation in IMM.

In a related vein, Bruck (1985a, 1985b) found that students who switched out of IMM scored lower on a number of achievement measures than most students who remained in IMM. However, the academic difficulties of the students who switched were no worse than those of a sub-group of students who remained in IMM despite low academic performance. Moreover, the IMM students who switched expressed significantly more negative attitudes toward schooling (and IMM in particular) and exhibited more behavioral problems than students who remained in IMM despite academic difficulties. Bruck suggested that the ability to cope with poor academic performance may be a more serious problem for some IMM students than poor academic performance alone.

3.3 Second language (French) outcomes

3.3.1 *What level of second language competence do immersion students acquire?*

The French proficiency of IMM students has been found to be significantly superior to that of English control students in all-English programs who have had conventional French-as-a-second language instruction; this has been found to be true for speaking, listening, reading, and writing. In comparison with French-L1 control students, IMM students often score at the same level on tests that assess comprehension skills — that is, listening and reading. Their performance on tests of language production, such as speaking and writing, are generally very impressive — they are able to understand and make themselves understood in all academic contexts, and they demonstrate an uninhibited and creative use of French for communication that is seldom achieved by students in conventional French-L2 programs. These conclusions pertain to the use of French-L2 in school settings and do not necessarily generalize to non-academic settings. At the same time, IMM students' use of French is less than native-like: (a) there is often transfer from English lexicon and syntax, (b) they often have restricted vocabulary and simplified grammar, and (c) their usage is non-idiomatic (see Lyster, 2007). Moreover, detailed analyses of IMM students' grammatical accuracy indicate that they do not acquire native-level syntactic competence. These gaps in IMM students' L2 proficiency have led to discussions of how best to integrate language and content instruction to maximize L2 development, a point we return to later (e.g., Lyster, 2007; Swain, 1996).

3.3.2 *Does competence in the second language depend on students' level of academic ability?*

Comparisons of the performance of elementary and secondary school IMM students have revealed interesting and differential effects of academic ability on L2 achievement. Specifically, Genesee (1976) found that below average students in both early and late IMM scored lower on tests of French reading and writing than average and above average students in the same programs; similarly, the average students in both program types scored lower than the above average students. In contrast, whereas late IMM students exhibited the same stratification on measures of speaking and listening as on measures of L2 literacy, there were no differences among the ability sub-groups in the early IMM program on measures of L2 speaking and listening. Arguably, acquisition of an L2 when it is integrated with academic instruction is more cognitively demanding at the secondary than elementary school level and, as a result, calls on the kinds of cognitive skills that underlie differences in academic ability and, in particular, intelligence. In contrast, acquisition

of L2 skills that are integrated with academic instruction at the elementary level calls on the natural language learning ability that young learners possess during their formative years. Overall, these results indicate that low performing students can experience a net benefit from early IMM in the form of bilingual proficiency.

3.3.3 *Does more L2 exposure in immersion result in higher levels of L2 proficiency?*

The relationship between exposure and L2 outcomes in IMM programs is complex. On the one hand, students in *total* IMM programs generally acquire higher levels of L2 proficiency than students in *partial* IMM programs (Genesee, 2004; see also Cenoz, 1998). On the other hand, students in two-year late IMM (grades 7 and 8) sometimes perform as well as early total IMM students despite the fact that the former have significantly less L2 exposure (Genesee, 1981). That time alone cannot account for L2 outcomes in IMM comes from research that compared two types of late IMM (Stevens, 1983). In one program, English-speaking students spent 80% of their school day immersed in French, while in the other students spent only 40% of their school day in the L2. Despite the time advantage of the first group, the second group scored as well on a variety of L2 measures. Stevens (1983) attributed the impressive performance of the half-day IMM students to pedagogical factors and, in particular, the fact that their program was activity-based, permitted individualization, and gave students the opportunity to choose what they would study and how they would meet curricular objectives.

3.3.4 *Is age an important factor in L2 learning in immersion?*

It is widely believed that ‘younger is better’ when it comes to L2 learning. However, evidence in support of this expectation most often comes from non-school settings. Evidence from research in schools is more complex. On the one hand, students in early total IMM generally achieve significantly higher levels of L2 proficiency than students in programs with a delayed (middle elementary grades) or late (beginning of secondary school) starting grade (Genesee, 1981; see also Wesche, Toews-Janzen & MacFarlane, 1996, for a review). On the other hand, as mentioned previously, students in two-year late IMM can sometimes achieve the same or almost the same levels of L2 proficiency as students in early total IMM in some domains of language, even though early IMM students may have had 2 to 3 times more exposure to French than late IMM students (Genesee, 1981). Students in one-year late IMM did not exhibit parity with early total IMM students indicating that time, even among older learners, is important. Similar findings in favor of older learners have also been reported in evaluations of less intensive forms of L2 instruction (e.g., Burstall, 1974; Krashen, Long & Scarcella, 1979). That late CBI can be as effective as early CBI gives educators and parents choices with respect

to when they begin L2 instruction using CBI without necessarily compromising outcomes.

4. The case of dual language education for minority language students in the U.S.

While there are also IMM programs for majority English-speaking students in the U.S., the focus of this section is dual language education (DLE) for minority language students who speak primarily or only another language than English at home and upon entry to school; we refer to these students as English language learners (ELLs). Although there are a number of alternative forms of DLE for ELLs in the U.S., we focus on two of the most common: developmental bilingual education (DBE) and two-way immersion (TWI). ELLs comprise a large and growing proportion of the school-age population in the U.S., as well as in other English-dominant countries around the world — such as Canada, Australia, Britain, and New Zealand. According to the U.S. National Center for Education Statistics (2006), about 10.8 million, or 20%, of school-aged children speak a language other than English at home and 5% (2.7 million) speak English with difficulty. Moreover, ELLs are currently the fastest growing population in U.S. schools (Clewell, Cosentino de Cohen & Murray, 2007), with the number of ELLs expected to increase by 50% by 2025 (Passel, 2007). Over the last 40 years, extensive scientific studies and government reports on the academic achievement of ELLs, many of whom are from impoverished socioeconomic backgrounds, has raised concerns about their underachievement, evidenced by their significantly low school achievement, high drop out rates, and low college and university graduation rates (Lindholm-Leary & Genesee, 2010). These findings, in part at least, underlie the rationale for DBE and TWI.

In DBE programs, which are intended for ELLs only, students' home language along with English are used for literacy and academic instruction beginning in kindergarten and continuing until the end of elementary school and, ideally, until the end of secondary school. TWI, like DBE programs, provides integrated language and content instruction in English and another language usually beginning in kindergarten and continuing until the end of elementary school and, in some cases, into middle and secondary school. TWI programs differ from DBE in that they include both native speakers of English and ELLs. There are ideally usually approximately 50% English-only (native) speakers and 50% ELLs in each classroom. Because there are native speakers of each language in TWI, native-language models are available for both groups of L2 learners. In effect, TWI programs combine features of DBE and IMM. Both DBE and TWI programs aim for proficiency

in all domains of both languages for both ELLs and native speakers of English, high levels of academic achievement, and cross-cultural understanding.

There are two common variations of DBE and TWI. In the 50/50 model, each language is used for approximately 50% of instruction in each elementary school grade, and in 90/10 models the non-English language is used for 90% of instruction in kindergarten and Grade 1, after which more English is added in each grade until grade 4 or 5, when the proportion is about 50/50. Spanish is the most common non-English language in TWI and DBE programs, but both programs are available in a variety of minority languages, such as Chinese, Vietnamese, Russian, Japanese, French, German and Italian.¹ ELLs in these programs have the same L1; programs do not generally include ELLs with different L1s.

The rationale for DBE and TWI is based, in part, on the rationale for CBI programs, as discussed in the introduction and, in part, on the research, cited earlier, indicating that ELLs are generally at risk for academic underachievement owing to their minority language and especially low socio-economic status. More specifically, it is argued that the poor achievement levels of ELLs in English-only classrooms attest to the need to go beyond conventional English-only instruction if ELLs' chances of success in school are to be enhanced (Genesee, Lindholm-Leary, Saunders & Christian, 2005; Lindholm-Leary & Genesee, 2010). Moreover, if ELLs are to catch up academically to majority English-speaking students, they must make more academic progress per grade than majority language students who are advancing in achievement every year. Providing early academic instruction to ELLs in part, or whole, through their L1 permits them to advance academically and keep up with their English-speaking peers as they learn English as a second language because they are learning through a language they already know. At the same time, literacy and academic language skills acquired in the L1 during the primary grades of school provide a solid foundation for the acquisition of literacy and academic language skills in English-as-a-second-language because of strong crosslinguistic links between these skill domains. Indeed, extensive research has demonstrated significant and positive crosslinguistic correlations between literacy and oral academic language skills in L2 students (August & Shanahan, 2006; Genesee, Geva, Dressler & Kamil, 2006). In sum, it is argued that use of ELLs' native language for academic and literacy instruction in DBE and TWI programs facilitates their academic progress and their acquisition of language skills for academic purposes which, in turn, facilitate their acquisition of English-as-a-second-language, their integration into English language classrooms and, ultimately, their academic success.

In the following sections, we focus on findings on ELLs in DBE and TWI programs; findings with respect to majority language (English-speaking) students in TWI are essentially the same as those reported for native English-speaking students

in Canadian IMM programs and, therefore, are not repeated here. Because TWI programs are the more popular form of DLE for ELLs, there is a preponderance of data on their outcomes.

4.1 Second language (English) development

4.1.1 *How well do ELLs in TWI and DBE programs do in English?*

Generally speaking, studies on ELLs in both DBE and TWI programs indicate that they acquire proficiency in English, including speaking, listening, reading and writing skills, as fast or faster than ELLs in all-English programs (MacSwan & Pray, 2005). A number of studies, including a review of research on students in TWI by Lindholm-Leary and Howard (2008), have also reported that, on average, ELLs in TWI are rated orally proficient in English by the upper elementary grades (Howard & Sugarman, 2007; Lindholm-Leary, 2012); these results have been found for students in both 90/10 and 50/50 TWI programs. Studies that have used standardized reading tests in English have consistently found that ELLs, and in particular those in TWI, achieve at or above grade level norms in English (de Jong, 2002; Howard & Sugarman, 2007; Lindholm-Leary, 2001; Lindholm-Leary & Howard, 2008; Thomas & Collier, 2002). ELLs in these programs also perform on par with English-only students in English-only classrooms by grade 6 or 7. Of further interest, four studies included samples of ELLs who were in secondary school and had previously or were currently participating in TWI, both 50/50 and 90/10 (Kirk Senesac, 2002; Lindholm-Leary, 2001; Lindholm-Leary & Borsato, 2006; Thomas & Collier, 2002). These studies all found that while ELLs in TWI scored below average in English reading in the early grades, they progressed toward grade-level performance by later elementary or secondary school. ELLs in these programs also typically met district or state proficiency standards (de Jong, 2002; Gómez, Freeman & Freeman, 2005; Kirk Senesac, 2002) and scored at or above school district and state averages for their peers (de Jong, 2002; Lindholm-Leary, 2001).

Taken together, these studies indicate that, given effective programs, ELLs in TWI and DBE acquire high levels of oral and written language proficiency in English that are comparable to those of English mainstream students despite the fact that they have significantly less exposure to English. In fact, they often perform better than ELLs in English-only programs and even sometimes better than test norms based on native speakers of English. Moreover, as we see later, they also attain comparable or higher levels of achievement in academic domains.

4.1.2 *Does more English result in higher levels of competence in English?*

The results of extensive research on the English language development of ELLs in a variety of programs do *not* provide evidence that the reduced exposure to English that ELLs experience in DBE and TWI compromises their English language development; in other words, spending more time in English in school does not result in higher achievement or proficiency in English among ELLs (Goldenberg, 2008; Lindholm-Leary & Borsato, 2006; Lindholm-Leary & Genesee, 2010). More specifically, and contrary to the time-on-task argument, ELLs who receive instruction through their L1 in DBE or TWI programs score as well as and in some cases higher on standardized tests in English than ELLs who receive instruction only through English. Moreover, comparative evaluations of the English outcomes of ELLs in 50/50 versus 90/10 TWI programs have found that students in 90/10 programs demonstrate the same or higher levels of competence in English as students in 50/50 programs, even though the former were exposed to only half as much English in the early years of the program as the latter students (Lindholm-Leary & Howard, 2008). At the same time, spending more time in their L1 benefits ELLs' L1 development, as discussed in more detail later.

4.1.3 *What about languages other than Spanish?*

Research on TWI programs that include languages other than Spanish consistently demonstrate that students in these programs achieve at or above the level of same-language peers in English-only programs. For example, Lindholm-Leary (2001) found that native Korean-speaking students in grades 3 and 4 in three Korean TWI programs achieved at or above grade level on government-mandated achievement tests in English. Similarly, in an evaluation of the English reading and writing achievement of grade 1 and 2 native Korean-speaking students in Korean TWI programs, Bae (2007) and Chiappe, Glasser, and Ferko (2007) reported that their reading and writing results in English were comparable or superior to those of their English-speaking peers in English mainstream programs. These findings provide valuable information for minority language parents who might be concerned that the differences between English and languages like Chinese, Japanese and Korean are so great that it will make it difficult for their children to keep up in English with their English-speaking monolingual peers.

4.2 Academic achievement

4.2.1 *Do TWI or DBE hinder or enhance ELLs' academic achievement?*

In this section, we provide a brief overview of relatively recent syntheses of research on the academic achievement of ELLs in DLE programs because space limitations do not allow comprehensive coverage. In a review of research on this

issue, Lindholm-Leary and Borsato (2006) found strong convergent evidence that the academic achievement of ELLs is positively related to sustained instruction that includes their L1. They also reported that student achievement was related to length of participation in the program and the time of the assessment. More specifically, evaluations conducted in the early years of a program (kindergarten through grade 3) typically revealed that students in TWI or DBE programs scored below grade level or either lower than or equivalent to ELL students in other types of programs. In contrast, almost all evaluations conducted at the end of elementary school or in middle and secondary school found that TWI and DBE students scored as well as and usually higher than ELLs in English-only programs (e.g., Lindholm-Leary, 2001; Lindholm-Leary & Block, 2010). All studies of middle and secondary school students found that ELLs who had been in TWI or DBE in elementary school were as or more successful than comparison group students. Most long-term studies report that the longer ELLs are in TWI or DBE, the more positive their academic outcomes. These results have been found for performance on standardized tests of mathematics and reading achievement, Grade Point Average, attendance rates, high school completion rates, and attitudes toward school and self (e.g., Lindholm-Leary & Borsato, 2006; Lindholm-Leary & Genesee, 2010).

4.2.2 *Does bilingualism have an additive effect on literacy?*

Given the extensive and growing body of research showing that bilingualism has a significant and positive impact on students' meta-cognitive and literacy development (e.g., Bialystok, 2007), in this section, we review research that has examined the extent to which bilingual proficiency among ELLs in DLE programs, and especially TWI, is associated with enhanced academic, linguistic and other outcomes. In a series of studies, Lindholm-Leary and her colleagues have looked at the impact of bilingualism on students' academic achievement, their self-ratings of language proficiency, and their attitudes (Lindholm & Aclan, 1991; Lindholm-Leary, 2012; Lindholm-Leary & Hernández, 2011). These studies have consistently shown that Spanish-speaking ELLs in TWI programs with relatively high levels of bilingualism scored higher than their less bilingual peers on tests of academic achievement and reading in English and Spanish (Lindholm-Leary, 2001; Lindholm-Leary & Hernandez, 2011). ELLs with relatively high levels of proficiency in both languages were also more successful at closing the achievement gap in English reading with the norming group than students with lower levels of bilingual proficiency (Kirk Senesac, 2002; Lindholm-Leary, 2001; Lindholm & Aclan, 1991; Lindholm-Leary & Howard, 2008).

4.3 First language development

4.3.1 *What level of proficiency do DBE and TWI ELLs attain in the first language?*

There is scant research on ELLs' L1 proficiency, and most research is based on teacher ratings and results on standardized language tests. There is very little research on ELLs' competence with respect to specific aspects of their L1, such as use of verbs, complex sentence grammar, etc. (Gathercole, 2002; Potowski, 2007) and, thus, we have little detailed information about the linguistic competence of ELLs in alternative DLE or English-only programs. Nonetheless, the available research shows that Spanish-speaking ELLs in TWI and DBE attain relatively high levels of proficiency in Spanish (Escamilla & Medina, 1993; Gathercole, 2002; Howard, Christian, & Genesee, 2004; Howard & Sugarman, 2007; Lindholm-Leary, 2001). Adolescent Spanish speakers who had participated in TWI programs for six to eight years reported that their Spanish skills were highly functional and that they had the skills they needed to participate in a variety of classroom and social exchanges (Lindholm-Leary, 2003; Lindholm-Leary & Hernandez, 2011). However, Potowski's (2007) observations of grade 5 and 8 students in a Spanish-English TWI program indicated that they often reported more proficiency and/or greater facility in English than Spanish even when Spanish was their native language. These findings highlight the challenge of achieving balanced bilingualism in learners living in communities dominated by another language.

4.3.2 *What about language development in languages other than Spanish?*

Results show that in Chinese (Mandarin and Cantonese), Korean, and Russian TWI programs and in French and Japanese IMM programs, native speakers of those languages acquire functional proficiency in listening, speaking, reading and writing in those languages (Ha, 2001; Lindholm-Leary, 2011; Thomas, Collier & Abbott, 1993). In self-ratings of L1 proficiency, many Chinese native speakers rated their Chinese proficiency higher than did native English speakers in Chinese TWI programs, as one might expect. At the same time, about 10% of Chinese native speakers rated their Chinese skills at a fairly low level, arguably owing to the strong influence of living in an English-dominant country. Overall, in terms of L1 proficiency, results in Chinese TWI programs are consistent with those in Spanish TWI programs, showing that both 90/10 and 50/50 TWI program alternatives are able to help students develop bilingual skills at intermediate to high levels and to feel comfortable using their L1 skills in a variety of contexts.

5. Outstanding issues and future directions

In this section, we discuss two issues that merit further investigation because of their overall importance for the development of IMM and DLE programs. We address the suitability of IMM, DBE, and TWI for at-risk learners and pedagogical practices to enhance the effectiveness of integrated language and content instruction.

5.1 The suitability of CBI Programs for at-risk learners

The evidence discussed so far indicates that IMM and DLE are generally effective at promoting competence in a second language along with high levels of L1 competence and academic achievement for majority and minority language students. However, educators, parents and policy makers often believe that students who are at risk for academic difficulties should not participate in IMM or DLE programs. Because such students are likely to struggle in monolingual programs, it is feared that they will struggle even more in programs where they are taught through two languages, one of which they do not know. Indeed, in Canada, students who might struggle in school are often discouraged from enrolling in IMM programs or they may be encouraged to switch to a monolingual English program if they demonstrate academic difficulties once they are in IMM. There is some, although limited, research on some of these types of learners.

Research in Canada has examined the suitability of IMM for students with the following learner and background characteristics, which often put them at a disadvantage in school (Genesee, 2007): (a) low academic ability (or intelligence) (Genesee, 1976), (b) low socio-economic status (Bruck, Tucker, & Jakimik, 1975; Genesee, 2004), (c) poor first language abilities (Bruck, 1978, 1982), and (d) minority ethnic group status (Genesee, 1992; Jacobs & Cross, 2001). It has been found consistently that majority English-speaking students who are at risk for the above reasons can attain the same levels of L1 competence and academic achievement in IMM as comparable at-risk students in programs that use only the native language. At-risk IMM students generally perform less well than students who are not at-risk, but their progress is not differentially impeded in comparison to comparable at-risk students in native language programs. At the same time, at-risk students can benefit from IMM by acquiring advanced levels of functional proficiency in an L2.

In the U.S., there is evidence to suggest that minority language students from different ethno-linguistic and socioeconomic groups, and even those with special education needs, can succeed in DBE and TWI programs (Haj-Broussard, 2005; Lindholm-Leary & Block, 2010; Lindholm-Leary & Hernández, 2011;

Lindholm-Leary & Howard, 2008). More specifically, it has been found that students from these groups can develop proficiency in two languages, including reading, and achieve in content areas (e.g., mathematics) to the same level as similar students in English-only programs at least by the end of elementary school (Genesee, Lindholm-Leary, Saunders & Christian, 2006; Haj-Broussard, 2005; Howard, 2003; Lindholm-Leary, 2001, 2005, 2011; Lindholm-Leary & Block, 2010; Lindholm-Leary & Borsato, 2006; Lindholm-Leary & Hernández, 2011; Lindholm-Leary & Howard, 2008). These results have been obtained in studies with students from Euro-American, Hispanic, African-American, and Asian-American backgrounds (Christian, Genesee, Lindholm-Leary, & Howard, 2004; Haj-Broussard, 2005; Howard, 2003; Lindholm-Leary, 2001, 2005, 2011; Lindholm-Leary & Block, 2010; Lindholm-Leary & Hernández, 2011; Lindholm-Leary & Howard, 2008) and regardless of students' social class backgrounds. In fact, many minority language students in DBE and TWI programs are from lower socioeconomic families and communities.

With respect to students with special education needs, Lindholm-Leary (2005) found that there was no difference in the English reading scores of TWI students in special education in comparison to English-speaking students with special education needs or the California state average for students with disabilities in grades 4–8, even though the state norms were based on the performance of students with much more in-school exposure to English. Howard (2003) found that although the achievement gap between special education students in TWI programs relative to students who did not need special education persisted over grade levels, the difference in performance between the two groups was not as large at the end of fifth grade as it was at the end of third grade.

Taken together, the available evidence does not justify arbitrary exclusion of students from IMM, DBE or TWI programs who are at-risk owing to special education needs, low levels of academic ability, disadvantaged socio-economic background or ethnic group membership on the assumption that they are incapable of benefiting from academic instruction through two languages or that they will be held back academically or in their acquisition of the mainstream language (English in the case of our case studies). To the contrary, it could be argued that students with learning challenges and disadvantaged backgrounds are better served in these programs than in monolingual programs because they acquire oral and written competence in two languages, skills that could well increase and enhance their future job prospects. It is our opinion that decisions to exclude students from these programs can only be made: (a) on a case-by-case basis, (b) once their academic difficulties have been objectively and well-documented, and (c) if a sound rationale can be provided for why and how their academic difficulties are likely to be remedied or avoided in a monolingual program. This is not to say

that these forms of CBI will remedy or offset these children's learning challenges or that these programs are necessarily suitable for all students who might be at-risk for academic difficulty. Rather, we would argue that the available evidence does not justify arbitrary and across the board exclusion of these kinds of learners from CBI programs and, furthermore, that prescreening to determine eligibility for these programs should be avoided.

However, many studies on at-risk IMM students are now dated and, with the exception of studies by Bruck, there is a serious lack of research on students with clinically diagnosed disabilities and, in particular, reading and language impairment, two of the most common reasons for children being excluded from CBI programs (for exceptions, see Erdos, Genesee, Savage & Haigh, in press, 2011, and the review in Fortune with Menke, 2010). Even Bruck's research on English-speaking students with first language disabilities warrants replication using contemporary definitions and criteria for identifying children with language impairment. Nor is there research on the effectiveness of these programs for students with severe sensory-perceptual, cognitive, or socio-affective problems, such as Down Syndrome, autism spectrum disorder, or attention deficit hyperactivity disorder. Research on children with language impairment and Down Syndrome who acquire two languages simultaneously from birth indicates that these children are able to acquire full proficiency in two languages within the limits of their learning challenges (Kay-Raining Bird, Cleave, Trudeau, et al., 2005; Paradis, et al., 2003). However, the extent to which children with learning impairments, Down Syndrome, or other developmental disorders that makes schooling difficult are able to cope with and flourish in educational programs that use two languages for academic instruction is an open question at this time.

There is a clear and serious need for research on the suitability of CBI for children who are at-risk for academic difficulty based on clinical identification procedures. There is an especially important need for additional research on students at-risk for reading and/or language impairment, two of the most common reasons for children being excluded or withdrawn from these programs. The following specific questions require research attention: (a) How can we determine if students who are struggling to learn to read or to acquire an L2 in CBI programs have an underlying impairment or are simply lagging in development? (see Genesee, Savage, Erdos & Haigh, in press, for an extended discussion of these issues); (b) Are IMM, DBE and TWI suitable for students with autism spectrum disorders, ADHD, or other cognitive and sensori-motor impairments?; (c) What kinds of instructional practices are best suited to meet the needs of such learners in IMM, DBE or TWI?; and (d) What kinds of professional development are required to prepare teachers to work with such learners in CBI programs?

Establishing the suitability of CBI for at-risk students, especially those with a clinical diagnosis, is more than an administrative and an educational issue. It is also an ethical issue, because it could be considered unethical to admit such children to these programs if they are not likely to benefit from participation or if participation is likely to worsen their educational outcomes. Conversely, it could also be considered unethical to exclude at-risk students from such programs since to do so would, arguably, deprive them of the opportunity to acquire valuable language and cultural skills that would benefit them in their future personal and professional lives. The latter issue is particularly important when competence in an additional language is important from a real world perspective; as in the case of French in Canada or English in Spain, where competence in these languages could be considered important for future economic success.

5.2 Integrating language and content instruction

Notwithstanding the overall effectiveness of IMM, DBE and TWI for majority and minority language students, respectively, none of these program models can be said to include a systematic pedagogy with respect to how to integrate language with content instruction so as to maximize language learning while maintaining high levels of academic achievement. That there is a need for such a pedagogy is perhaps best illustrated by results from IMM programs — IMM students do not attain native-like expressive language skills, even after 10 to 11 years in the program. There are several possible explanations for IMM students' L2 shortcomings. It may be that the strong focus on content that characterizes IMM and other CBI classes draws learners' attention away from language per se. As long as students understand what is being said about content and as long as they can communicate about content in meaningful ways, the accuracy with which they use language to communicate may go unnoticed, unchecked, and, thus, underdeveloped. Moreover, teachers and students are not held accountable for L2 outcomes to the same extent as they are for L1 and academic achievement. It may also be that teachers who are teaching content through an L2 tend to rely on linguistic forms, including vocabulary, grammar-, and discourse-related, that students have already acquired in order to ensure that input is comprehensible and that new content is mastered. Thus, the complexity and accuracy of students' L2 competence may be limited by the input they receive. In a related vein, errors in language made by students during content classes may receive little or unsystematic attention from teachers for the sake of keeping communication going, but with the unfortunate side effect of stunting students' accurate use of the L2. A number of researchers working in IMM and DLE have highlighted the need to address this issue (e.g., Echevarría & Short, 2010; Lyster, 2007; Genesee, 1991; Snow, Met & Genesee, 1989; Swain,

1996) and have proposed alternative strategies for teaching language more systematically and effectively in the context of CBI. While different in important respects, they all argue that language instruction in CBI programs should be: systematic, planned, explicit, and carefully linked to the communicative needs of students.

In Canada, Swain (1998) has advocated the use of communicative tasks (such as jigsaw tasks and dictoglosses) that engage students in meaningful communication while also focusing their attention on the linguistic forms needed to communicate effectively and accurately. Swain's recommendations are based on the hypotheses that activities that focus student attention on the accuracy and appropriateness of linguistic forms while giving them opportunities to practice these forms will enhance L2 learning. Lyster (2007), likewise, calls for pedagogical practices in CBI that systematically focus on the formal properties of vocabulary, grammar and discourse in the context of a broad framework for teaching content and language. More specifically, Lyster's "counterbalanced approach" advocates that CBI teachers draw on diverse instructional techniques to differentially and selectively focus on form and function during instruction. He advocates further that students be given plentiful opportunities for using language, including content-based tasks designed to promote the use of the target language for academic purposes to activities designed to promote practicing and proceduralization of target language forms that might otherwise be avoided, misused, or unnoticed. Teachers are also encouraged to use a range of instructional techniques for corrective feedback that vary from the use of implicit feedback, such as recasts that scaffold interaction and facilitate student participation, to feedback in the form of prompts that explicitly push learners to try using difficult linguistic forms. In the U.S., Echevarría and Short (2010) propose an even broader framework based on principles of "sheltered instruction" (referred to as the SIOP® Model) that seeks to make content comprehensible to ELLs while concurrently fostering development of the L2. The SIOP® Model (Echevarría, Vogt & Short, 2008) describes 30 features of instruction, grouped into eight general components, that comprise effective integrated content and language teaching. While their model was formulated for ELLs in mainstream, English-only classrooms, it can be applied in diverse educational programs where students are learning through an L2.

While all these proposals enjoy some empirical support, there is a need for more extensive research on these proposals in order to better understand the effectiveness of their recommendations and the conditions under which they are effective since, at present, each model has been formulated and examined in specific sociocultural and educational contexts. Because CBI programs vary considerably with respect to student background characteristics, the languages being taught, sociocultural context, program structure, as well as other features, more research

is needed on these and new pedagogical models for integrating language with content instruction to examine their effectiveness in different contexts.

6. Conclusions

We have learned a great deal during the past 45 years of research on IMM and DLE programs that elucidates the effectiveness of these forms of CBI and provides guidance to educators planning new programs. The conclusions we offer apply to these specific forms of CBI, which have some distinct features. To repeat, IMM for majority language students and DLE for minority language students are full-fledged programmatic models of CBI in that an L2 is used to teach a substantial portion of the standard academic curriculum (at least 50%) for several years. Thus, the content the students are being taught through the L2 is part of the prescribed school curriculum that all students are expected to master. This may differ from other forms of CBI where the content being taught may be unrelated or ancillary to prescribed curriculum content. Also of note, and different from some other forms of CBI, students in these CBI programs have sustained content instruction through the L2 over several grades, up to 6 or more years for students who participate in the full program. In short, these programs are comprehensive, extended models that are fully incorporated into a standard school curriculum and, thus, they offer opportunities for high levels of bilingualism to large numbers of students. We have argued that this is not only a realistic goal but, we believe, also a desirable goal given the global realities facing students when they leave school. The major conclusions to be drawn from the research we have reviewed are:

1. Extended CBI is effective in promoting high levels of functional proficiency in the L2, comparable in some cases to that of native speakers.
2. Research from IMM programs indicates that CBI can be as effective for students who begin the program in the later years of their schooling as for students who begin in elementary school, in some cases, especially with respect to L2 achievement.
3. The level of L2 accuracy and the range of L2 competencies achieved by students in CBI programs that focus primarily on mastery of content have certain limitations and are less than native-like for majority language students in IMM and TWI.
4. Students in extended CBI programs are able to acquire native-like competence in the L1 in the case of IMM students and highly functional levels of competence in the L1 in the case of ELL (minority language) students.

5. Both majority and minority language students can achieve at least at grade-appropriate levels of achievement in academic subjects and, in some cases, higher than that of comparable students in monolingual programs.
6. With respect to proficiency in the majority language (the L1 of IMM students and the L2 of ELLs), there is not a simple correlation between amount of exposure to that language in school and student achievement; that is, more exposure to the majority language does not necessarily result in higher levels of proficiency in that language.
7. In contrast, more exposure to the minority language (the L2 of IMM students and the L1 of ELLs) is usually associated with higher levels of proficiency in the language; this is true for both students learning it as an L1 and those learning it as an L2.
8. IMM and DLE programs are effective for students with a wide range of learner and background characteristics, including non-clinical characteristics that may put them at risk for academic difficulties.

Notwithstanding these findings, there are areas that warrant further investigation if CBI programs are to be made more accessible to all students and if they are to optimize students' L2 outcomes. More research on students who are at-risk for academic difficulty is called for if we are to avoid these programs becoming elitist. There is a particularly important need to examine the performance of students in these programs who have or are at-risk for reading and/or language impairment since these are the two most widely cited reasons for students dropping out of these programs.

Equally important and even more fundamental is the issue of how best to integrate language with content instruction in CBI (and CLIL) programs. While CBI approaches have been a boon to L2 education, most programs and options that we are aware of have very largely been instituted without the formulation of a coherent pedagogy of integrated second language instruction. It is somewhat ironic that traditional methods of second and foreign language instruction, which had well developed, albeit at times questionable, pedagogies, are slowly being supplanted by content-based approaches to L2 instruction that, for the most part, lack instructional pedagogy to back them up. Moving forward on this issue requires consideration of a number of inter-related questions:

1. What language skills need to be taught in content-based programs?
2. How do we identify and differentiate language skills associated with different academic domains?
3. How can these language skills best be taught in conjunction with content-instruction?

4. What do teachers need to know or learn to be more effective at integrating language and content?
5. How can students' acquisition of L1 and target L2 skills in CBI classrooms be assessed?

The challenges associated with these questions are formidable since, as pointed out earlier, they call for a theory or conceptualization of academic language skills that aptly describes what students in CBI classrooms need to know to master academic content. The answers to these questions also must be practical if teachers are to integrate language and content instruction systematically and effectively. Thus, we need a pedagogy of implementation that can guide teachers as they integrate language and content instruction.

A further challenge arises from the rich array of alternative forms of CBI. As CBI programs proliferate, more and more variations are likely to arise. Variation is desirable so that educators can respond to the diverse needs of educators and students in different social settings and take into account language learning opportunities and attitudes in the community at large. At the same time variation poses challenges in formulating a pedagogy of integrated language and content instruction since, in fact, it might require the formulation of multiple approaches. It also means that educators and researchers may need to devise a taxonomy of alternative CBI models in order to facilitate the development of pedagogies that are appropriate for each; this seems especially likely in the case of CLIL where, as Mehisto and colleagues (2008) point out, there are almost limitless alternatives. There is a clear need for research that examines alternative forms of CBI in their broad socio-cultural contexts so that educators and policy-makers are better able to build programs that are responsive to, reflect, and in some cases even compensate for broader socio-cultural factors, such as attitudes, intergroup tensions, and so on. While the challenges may be formidable, achieving this goal and its resulting benefits are enormous. We would hope that the rich variety of research that has provided evidence for the effectiveness of the CBI models discussed here will continue to contribute to the development of program models as CBI/CLIL expands. This is a critical next step in the evolution of CBI/CLIL approaches to L2 teaching and learning.

Note

1. The Center for Applied Linguistics maintains directory of TWI programs. For a listing see <http://www.cal.org/twi/directory/index.html>.

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Résumé

Le présent article décrit et discute de deux études de cas portant sur l'enseignement d'une langue seconde centré sur le contenu (CBI en anglais)– le cas des étudiants canadiens parlant la langue de la majorité et prenant part à un programme d'immersion dans une langue seconde (française) ainsi que le cas des étudiants américains parlant une langue minoritaire tout en étant éduqués dans deux langues. Après avoir discuté de manière générale du raisonnement derrière l'instruction basée sur le contenu, nous examinons 45 ans de recherche portant sur les modèles de programmes en plus de fournir des réponses empiriques à un certain nombre de questions importantes telles que: la compétence des étudiants dans chacune des langues utilisées pour l'enseignement; les conséquences académiques non-langagières; l'importance et le rôle que joue l'âge dans les résultats langagiers des étudiants; ainsi que la relation qui existe entre l'âge d'un individu lorsqu'il débute son exposition à une langue seconde et le niveau de compétence qu'il atteindra dans cette langue. Deux questions particulièrement importantes sont traitées en détails, à savoir la pertinence de ces programmes pour les élèves à risque, mais également la nécessité d'créer un modèle cohérent détaillant la meilleure façon d'intégrer l'enseignement des langues secondes et l'instruction centrée sur le contenu dans le but de maximiser les compétences en langue seconde des étudiants sans nuire à la réussite scolaire. Des suggestions pour les orientations futures sont également fournies.

Resumen

En este artículo describimos dos estudios de casos de instrucción basada en contenidos (CBI Content-Based Instruction) para la enseñanza de una segunda lengua — 1) inmersión en idioma segunda lengua / lengua extranjera para alumnos pertenecientes a la mayoría lingüística en Canadá, y 2) educación bilingüe (dual language, educación de lenguaje dual) para alumnos de la minoría lingüística en los EE.UU. Primero presentamos la fundamentación para CBI en general y, luego, se examinan las investigaciones realizadas en los últimos 45 años sobre los dos tipos de programas. Ofrecemos pruebas empíricas sobre las siguientes cuestiones importantes: la habilidad de los estudiantes en los dos idiomas empleados en la enseñanza; resultados

académicos que no están relacionados con el idioma o la lengua; si la edad del estudiante es una condición importante para los resultados lingüísticos; y la relación entre el primer contacto con la lengua y los resultados en esa lengua. Además, tratamos en detalle dos cuestiones principales pendientes: 1) la conveniencia de programas bilingües para estudiantes con dificultades académicas, y 2) cómo integrar la enseñanza de la lengua con la enseñanza del contenido académico para potenciar el aprendizaje de lengua sin ir en detrimento del rendimiento académico. Por último, ofrecemos sugerencias para rumbos futuros.

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