

**Teaching for Cross-Language Transfer in Dual Language Education:  
Possibilities and Pitfalls**

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## **Abstract**

Bilingual education and second language immersion programs have operated on the premise that the bilingual student's two languages should be kept rigidly separate. Although it is appropriate to maintain a separate space for each language, it is also important to teach for transfer across languages. In other words, it is useful to explore bilingual instructional strategies for teaching bilingual students rather than assuming that monolingual instructional strategies are inherently superior. The paper explores the interplay between bilingual and monolingual instructional strategies within dual language programs and suggests concrete strategies for optimizing students' bilingual development.

## Introduction

Although bilingual education programs of various kinds have been in existence since ancient times, evaluative research on their consequences for children's literacy and academic development is relatively recent. Malherbe's (1946) study of Afrikaans-English bilingual education in South Africa pioneered research in this area and it was followed 20 years later by Macnamara's (1966) study of Irish-English bilingual programs in Ireland. Since that time, however, research on bilingual and trilingual education has increased dramatically with major evaluations of programs conducted in Canada (e.g. Lambert & Tucker, 1972), the United States (e.g. Oller & Eilers, 2002; Thomas & Collier, 2002), the Basque Country, Catalonia, and other parts of Spain (Cenoz & Valencia, 1994; Huguete, Vila, & Llurda, 2000; Lasagabaster, 2003; Sierra & Olaziregi, 1991), Africa (Williams, 1996) and elsewhere around the world.

Initially parents and policy-makers were concerned that spending instructional time through a minority or foreign language would result in lower achievement in the majority language. The majority or dominant language is usually the language associated with power and status in the society and thus it is not surprising that children's achievement in that language should be of concern to parents and policy-makers. Although politically-motivated opposition to bilingual education still persists in some contexts (such as the United States), the initial concerns that less time through the majority language would result in lower achievement in that language have been largely resolved by the consistently positive findings of bilingual programs.

The present paper focuses on two questions:

- How can we explain the fact that in well-implemented bilingual programs the foreign or minority language (e.g. English in Turkey) can be used as a medium of instruction at minimal or no cost to students' proficiency in the majority language (e.g. Turkish)?
- What forms of program organization and instructional strategies are most effective in promoting students' proficiency in both languages (L1 and L2)?

The answer to the first question draws on research data showing consistently strong relationships across languages in bilingual and foreign language learning contexts. Thus, students' proficiency in the societal majority language does not suffer because concepts, academic content, and learning strategies transfer across languages. Conceptual knowledge in L1 and L2 is interdependent.

The answer to the second question is less definitive. The research data suggest that many forms of bilingual program can operate successfully in a variety of sociolinguistic contexts. However, the *context* will determine which type of program (e.g. with respect to amount of L1 and L2 instruction) is most appropriate. For example, in a context where students are required to take high stakes examinations through the majority language, parents and students may be less willing to commit to an instructional program that significantly reduces the amount of time through that language.

While context variables are the primary determinants of what forms of bilingual program may be implemented, we can address the issue of instructional strategies somewhat independently of

context. Certainly, pronouncements about appropriate “methods” or instructional strategies are commonplace both within foreign or second language teaching in general and bilingual programs in particular. Prominent among the assumptions underlying these pronouncements are the *direct method* assumption that promotes instruction exclusively through the target language, and the *two solitudes* assumption that argues for a rigid separation of languages within bilingual or immersion programs. These assumptions represent part of a broader *monolingual instructional orientation* that is promoted within the fields of foreign/second language teaching and bilingual/immersion education. I argue that this monolingual instructional orientation is counter-productive and inconsistent with the reality of interdependence across languages. If cross-lingual transfer is occurring anyway, and in fact is a necessary condition for successful bilingual development, surely we should attempt to encourage and facilitate this transfer rather than impede it? In short, the paper argues that while monolingual instructional strategies (e.g. use of the target language for large blocks of time) play an important role within both foreign/second language teaching and bilingual/immersion education, they should be complemented by *bilingual instructional strategies* that focus on teaching directly for two-way transfer across languages.

The paper initially outlines the interdependence hypothesis (Cummins, 1979, 1981, 1991) and then examines some of the instructional implications of this hypothesis.

### **The Interdependence Hypothesis**

The interdependence hypothesis was formally expressed as follows (Cummins, 1981):

To the extent that instruction in L<sub>x</sub> is effective in promoting proficiency in L<sub>x</sub>, transfer of this proficiency to L<sub>y</sub> will occur provided there is adequate exposure to L<sub>y</sub> (either in school or environment) and adequate motivation to learn L<sub>y</sub>.

In concrete terms, what this principle means is that in, for example, a Turkish-English bilingual program intended for native speakers of Turkish, English instruction that develops English reading and writing skills is not just developing *English* skills, it is also developing a deeper conceptual and linguistic proficiency that is strongly related to the development of literacy in the majority language (Turkish). In other words, although the surface aspects (e.g. pronunciation, fluency, etc.) of different languages are clearly separate, there is an underlying cognitive/academic proficiency that is common across languages. This common underlying proficiency makes possible the transfer of cognitive/academic or literacy-related proficiency from one language to another.

In addition to its applications to bilingual education programs, the interdependence hypothesis also attempted to account for related phenomena such as the consistently significant correlations between L1 and L2 reading abilities. These correlations exist even across quite dissimilar languages (e.g. Japanese and English) (Cummins, Swain, Nakajima, Handscombe, Green & Tran, 1984; Genesee, 1979) suggesting that the common underlying proficiency should be conceived not just as linguistic proficiency but also in conceptual terms. Thus, in the case of cognate languages that are derived from similar source languages (e.g. Greek and Latin in the case of Romance languages), transfer will consist of both linguistic and conceptual elements.

However, in the case of dissimilar languages, transfer will consist primarily of conceptual and cognitive elements (e.g. learning strategies). To illustrate, consider the scientific concept of *photosynthesis*. In languages such as Spanish, French, and English, the term is derived from Greek roots and a student who knows the term in L<sub>x</sub> and understands the concept will be able to transfer both linguistic and conceptual elements from L<sub>x</sub> to L<sub>y</sub>. By contrast, in a situation of very dissimilar languages, only the conceptual elements will transfer. This accounts for the higher correlations observed across similar as compared to dissimilar languages (Genesee, 1979). More recent research has shown that other aspect of literacy and pre-literacy skills transfer across languages (e.g. phonological awareness [Geva, 2000]).

In summary, depending on the sociolinguistic situation, five types of transfer are possible:

- Transfer of conceptual elements (e.g. understanding the concept of photosynthesis);
- Transfer of metacognitive and metalinguistic strategies (e.g. strategies of visualizing, use of graphic organizers, mnemonic devices, vocabulary acquisition strategies, etc.);
- Transfer of pragmatic aspects of language use (willingness to take risks in communication through L<sub>2</sub>, ability to use paralinguistic features such as gestures to aid communication, etc.);
- Transfer of specific linguistic elements (knowledge of the meaning of *photo* in *photosynthesis*);
- Transfer of phonological awareness—the knowledge that words are composed of distinct sounds.

The question sometimes arises as to whether we are talking about *transfer* or the existence of *underlying attributes* based on cognitive and personality attributes of the individual. In reality, these dimensions are not separate. The presence of the underlying attribute makes possible the transfer. Attributes develop through experience; in other words, they are learned. Once they exist within the individual's cognitive apparatus or operating system (Baker, 2001), they are potentially available for two-way transfer across languages (from L<sub>x</sub> to L<sub>y</sub> or from L<sub>y</sub> to L<sub>x</sub>) if the sociolinguistic and educational context is conducive to, or supports, such transfer.

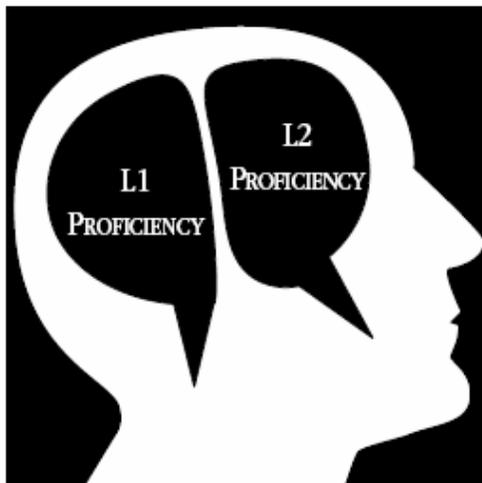
The interdependence hypothesis is illustrated in Figures 1-3. Figure 1 (The Separate Underlying Proficiency [SUP] Model) attempts to illustrate an alternative proposal to the Interdependence Hypothesis (sometimes termed the *time-on-task* or *maximum exposure* hypothesis [Cummins, 2001]). If there is no transfer across languages and no underlying proficiency that links L<sub>1</sub> and L<sub>2</sub> (and L<sub>3</sub> etc.), then language representations are stored separately in an individual's cognitive operating system. The SUP model implies that:

- proficiency in L<sub>x</sub> is separate from proficiency in L<sub>y</sub>;
- there is a direct relationship between exposure to a language (in home or school) and achievement in that language (time-on-task/maximum exposure hypothesis).

The second implication of the SUP model follows from the first: if Lx and Ly proficiency are separate, then content and skills learned through Lx cannot transfer to Ly and vice versa. In terms of the balloon metaphor illustrated in Figure 1, blowing into the L2 (or Lx) balloon will succeed in inflating L2 (or Lx) but not L1 (Ly). When bilingual education is approached with these "common-sense" assumptions about bilingual proficiency, it is not at all surprising that it appears illogical to argue that Ly proficiency can be effectively developed by means of instruction that is conducted through both Lx and Ly, or even primarily through Ly.

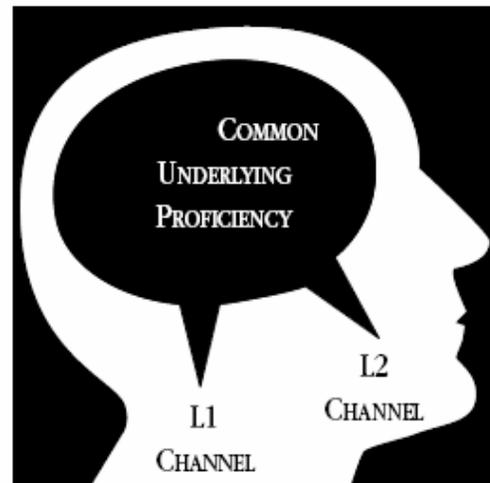
However, despite its intuitive appeal, the empirical evidence clearly refutes the SUP model by showing significant transfer of conceptual knowledge and skills across languages. In order to account for the research evidence, we must posit a *common underlying proficiency* (CUP) model in which various aspects of a bilingual's proficiency in L1 and L2 are seen as common or interdependent across languages. In other words, when applied to bilingual education contexts, the common underlying proficiency refers to the cognitive/academic knowledge and abilities that underlie academic performance in both languages.

### THE SEPARATE UNDERLYING PROFICIENCY (SUP) MODEL OF BILINGUAL PROFICIENCY



**Figure 1.**  
The Separate Underlying Proficiency Model

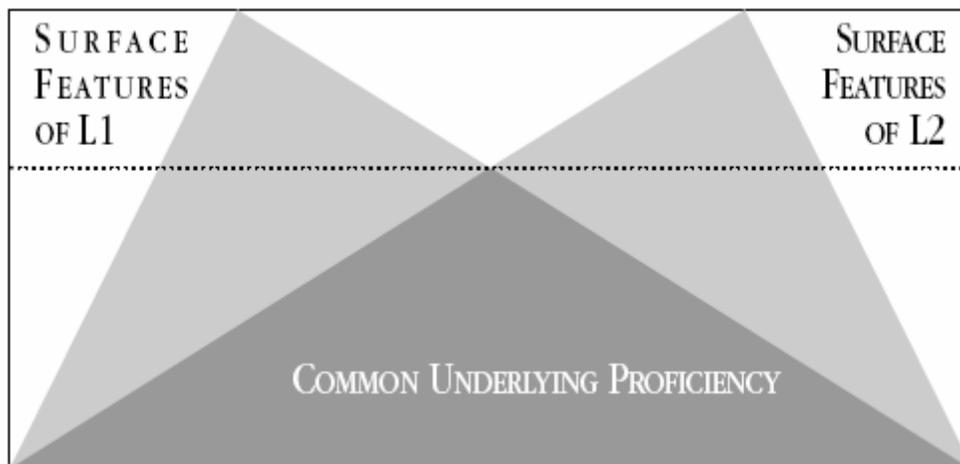
### THE COMMON UNDERLYING PROFICIENCY (CUP) MODEL OF BILINGUAL PROFICIENCY



**Figure 2.**  
The Common Underlying Proficiency Model

Figure 2 expresses the point that experience with either language can promote development of the proficiency underlying both languages, given adequate motivation and exposure to both either in school or in the wider environment. In Figure 3, bilingual proficiency is represented by means of a "dual iceberg" in which common cross-lingual proficiencies underlie the obviously different surface manifestations of each language.

Figures 1-3 represent visual metaphors. As such, they are illustrative rather than definitive. They provide only a general sense of what aspects of languages are interdependent. Empirical research, however, can provide much more specific information. For example, Cummins et al. (1984) found that grammatical knowledge showed minimal relationship across English and Japanese but significant relationships were observed for both literacy-related knowledge (e.g. reading comprehension and vocabulary) and pragmatic dimensions of oral language (communicative style). As noted above, there is also increasing evidence that phonological awareness transfers across languages (e.g. Durgunoglu & Verhoeven, 1998; Geva, 2000; Lambert & Tucker, 1972).



**Figure 3. The Dual-Iceberg Representation of Bilingual Proficiency**

### *Illustrative Research Studies from Bilingual Education Contexts*

Extensive reviews of bilingual education programs and of cross-lingual relationships among bilingual children exist (e.g. Baker, 2001; Cummins, 2001). Here, I will illustrate the general pattern of findings with two studies that involved Turkish-speaking children in northern Europe.

Verhoeven (1991a, 1991b, 1994) reported the results of two experimental transitional bilingual programs in which L1 literacy was promoted over several grades involving Turkish-background students in The Netherlands. He summarizes the results as follows:

With respect to linguistic measures, it was found that a strong emphasis on instruction in L1 does lead to better literacy results in L1 with no retardation of literacy results in L2. On the contrary, there was a tendency for L2 literacy results in the transitional classes to be better than in the regular submersion [Dutch-only] classes. Moreover, it was found that the transitional approach tended to develop a more positive orientation toward literacy in both L1 and L2. ... Finally, there was positive evidence for ... [the] interdependence hypothesis. From the study on biliteracy development it was found that literacy skills being developed in one language strongly predict corresponding skills in another language acquired later in time (1991a, p. 72).

Verhoeven (1994) reports stronger cross-lingual relationships for literacy and pragmatic language skills than for lexical knowledge. Phonology (as measured by phoneme discrimination tests) was also significantly related across languages which Verhoeven interprets as reflecting the influence of metalinguistic factors on phonological performance in both languages.

McLaughlin (1986) reports on a second study carried out by German linguist Jochen Rehbein (1984). This research found that:

the ability of Turkish children to deal with complex texts in German was affected by their ability to understand these texts in their first language. Rehbein's investigations suggest that there is a strong developmental interrelationship between the bilingual child's two languages and that conceptual information and discourse strategies acquired in the first language transfer to the second (McLaughlin, 1986, p. 34-35).

In summary, the research evidence suggests that the interdependence hypothesis at this point represents a stable explanatory construct that can be employed as a powerful tool in educational language planning . It explains why bilingual instruction (representing *less* time in both languages than monolingual instruction) entails no adverse effects on the development of either L1 or L2 academic abilities.

### **Implications of the Interdependence Hypothesis for Pedagogy in Bilingual/Immersion Programs**

The interdependence hypothesis implies that we should actively teach for transfer across languages in bilingual/immersion programs. This also applies to second language programs in general and in teaching the school language(s) to immigrant students. Lambert and Tucker (1972) noted that some students in the French immersion program they evaluated engaged in a form of contrastive linguistics where they compared aspects of French and English despite the fact that in this program (and in virtually all Canadian French immersion programs) the two languages were kept rigidly separate. If students in bilingual/immersion programs spontaneously focus on similarities and differences in their two or three languages, then they are likely to benefit from systematic encouragement by the teacher to focus on language and develop their language awareness.

The major reason this practice has not been applied in many bilingual/immersion programs is that it is seen as axiomatic that each language be kept rigidly separate from the other(s).

Similarly, many teachers of second languages (e.g. French in the Canadian context) believe that instruction should be delivered exclusively through the target language. They interpret communicative language teaching as a form of the direct method that mandates exclusive instructional use of the target language and discourages students from any use of their L1. Any use of the L1 by teachers or students is viewed as a regression to the grammar-translation method that has fallen into disrepute.

The dominant monolingual instructional orientation is evident in the following three inter-related sets of assumptions, none of which is empirically supported:

- Instruction should be carried out exclusively in the target language without recourse to students' L1. Bilingual dictionary use is discouraged (= *direct method* assumption);
- Translation between L1 and L2 has no place in the teaching of language or literacy. Encouragement of translation in L2 teaching is viewed as a regression to the discredited grammar/translation method; or in bilingual/immersion programs, use of translation is equated with the discredited concurrent translation method in which teachers switch constantly between languages translating all relevant instructional content;
- Within immersion and bilingual programs, the two languages should be kept rigidly separate (= *two solitudes* assumption).

When we free ourselves from these monolingual instructional assumptions, a wide variety of instructional opportunities arise for teaching students by means of *bilingual instructional strategies* that encourage cross-language transfer and the development of language awareness. Among the bilingual strategies that can be employed to promote literacy engagement in both L1 and L2 are the following:

- *Creation of dual language multimedia books.* Students write creatively in L1 and L2 and amplify these identity texts through technology (see, for example, the Dual Language Showcase <http://thornwood.peelschools.org/Dual/> and the Multiliteracies web site [www.multiliteracies.ca](http://www.multiliteracies.ca)).
- *Sister class exchanges.* Students engage in technology-mediated sister class exchanges using L1 and L2 to create literature and art and/or to explore issues of social relevance to them and their communities (e.g. Social History of Our Community, Voices of our Elders, etc.). Students can also create movies, audio CDs, and/or multilingual web pages in collaboration with their sister classes. In the context of a Turkish-English bilingual program in Turkey, students might connect with a school in the UK that has a large number of Turkish background students. For these minority students, the communication in both Turkish and English would serve to reinforce their L1 (Turkish); for the students in Turkey, the connection represents an opportunity to use the target language (English) in authentic exchanges and projects (Brown, Cummins, & Sayers, in press). In a situation where the sister class is only English-speaking (e.g. in an English-speaking country), students in the bilingual program might discuss their projects or research in Turkish (their stronger language) within class, draft ideas initially in Turkish, and then when they and

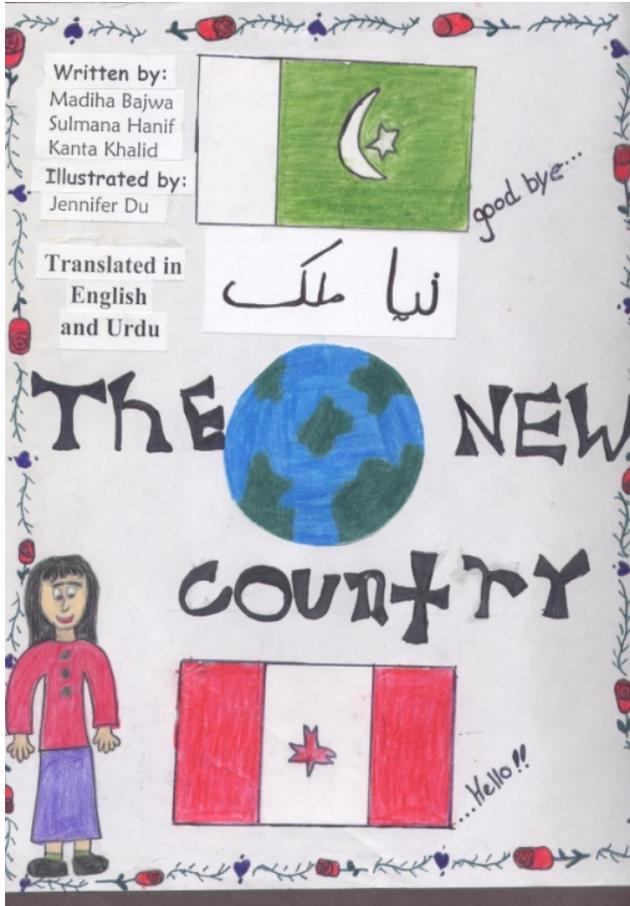
their teachers are satisfied with the results translate their writing into English for exchange with the English-speaking sister class students.

Classroom examples of each of these bilingual instructional strategies are described in the next section.

### ***Cross-Language Transfer in the Context of Creating Dual Language Books***

Less than a year after her arrival in Canada, Madiha Bajwa authored with two of her friends, Kanta Khalid and Sulmana Hanif, a bilingual Urdu-English book entitled *The New Country*. The 20-page book, illustrated with the help of a classmate, Jennifer Du, “describes how hard it was to leave our country and come to a new country.” The three girls were in Lisa Leoni’s grade 7/8 (mainstream) class in Michael Cranny Public School of the York Region District School Board. Both Kanta and Sulmana had arrived in Toronto in grade 4 and were reasonably fluent in English but Madiha was in the early stages of acquisition.

The three girls collaborated in writing *The New Country* in the context of a unit on the theme of migration that integrated social studies, language, and ESL curriculum expectations. They researched and wrote the story over several weeks, sharing their experiences and language skills. Madiha’s English was minimal but her Urdu was fluent, Sulmana was fluent and literate in both Urdu and English. Kanta’s home language was Punjabi and she had attended an English-medium school in Pakistan. Much of her Urdu acquisition had taken place since arriving in Toronto and she had become highly skilled in switching back and forth between Urdu and English. In composing the story, the three girls discussed their ideas primarily in Urdu but wrote the initial draft in English. Sulmana participated somewhat less in the discussion but was very skilled in turning the ideas into written text. She served as scribe for both languages.



#### About The Authors

We are three best friends. Our names are Madiha Bajwa, Kanta Khalid, and Sulmana Hanif. We are in grade 7 at Michael Cranny E.S. in Maple, Ontario. This story we wrote mostly describes how hard it was to leave our country and come to a new country.

ہم تین بہت اچھی دوست ہیں۔ ہمارا نام ہے مڈیہ، کانتہ، خانمہ، قانتہ، فلالہ، اور سلمانہ، حنیفہ، ہم ساتویں کلاس میں پڑتے ہیں اور ہم سائیکل کرڈیز، ہائیڈریٹ، اسکول جس پڑتے ہیں ہم سبیل اور ٹیریو جو کیریڈا میں ہے۔ یہ ایک کہانی ہے جس میں بتایا گیا ہے ایک ملک سے دوسرے ملک میں جاننا کتنا مشکل ہوتا ہے۔

In a “normal” classroom, Madiha’s ability to participate in a grade 7 social studies unit would have been severely limited by her minimal knowledge of English. She certainly would not have been in a position to write extensively in English about her experiences, ideas, and insights. However, when the social structure of the classroom was changed in very simple ways, Madiha was enabled to express herself in ways that few bilingual/ESL students experience. Her home language, in which all her experience prior to immigration was encoded, became once again a tool for learning. She contributed her ideas and experiences to the story, participated in discussions about how to translate vocabulary and expressions from Urdu to English and from English to Urdu, and shared in the affirmation that all three students experienced with the publication of their story.

Madiha’s expression of her intelligence, feelings, and identity was facilitated by the collaboration with bilingual peers who used both languages to construct their story. Because they were all personally invested in creating *their* story, they spent a lot of time getting it right in both languages. Their teacher (Lisa Leoni) discussed their ideas with them and provided feedback on drafts of the English version. But the three girls had total ownership of both the process and the product of their intellectual and imaginative work.

We use the term *identity texts* to describe the products of students’ creative work or performances carried out within the pedagogical space orchestrated by the classroom teacher

(Cummins et al., 2005). Students invest their identities in the creation of these texts which can be written, spoken, visual, musical, dramatic, or combinations in multimodal form. The identity text then holds a mirror up to students in which their identities are reflected back in a positive light. When students share identity texts with multiple audiences (peers, teachers, parents, grandparents, sister classes, the media, etc.) they are likely to receive positive feedback and affirmation of self in interaction with these audiences. Although not always an essential component, technology acts as an amplifier to enhance the process of identity investment and affirmation. It facilitates the production of these texts, makes them look more accomplished, and expands the audiences and potential for affirmative feedback.

Thornwood Public School in the Peel District School Board pioneered the process of enabling bilingual students to create dual language identity texts (Chow & Cummins, 2003; Schecter & Cummins, 2003). A large number of student-created identity texts in multiple languages can be viewed and downloaded at the Dual Language Showcase web site (<http://thornwood.peelschools.org/Dual/>). In the initial project, grades 1 and 2 students from culturally and linguistically diverse backgrounds created stories initially in English (the language of school instruction); they illustrated these stories and then worked with various resource people (parents, older students literate in L1, some teachers who spoke a variety of students' languages) to translate these stories into their home languages. The stories and illustrations were then entered into the computer through word processing and scanning. The Dual Language Showcase website was created to enable students' bilingual stories to be shared with parents, relatives or friends in both Canada and students' countries of origin who had Internet access.

Does the use of bilingual instructional strategies help students transfer their knowledge from L1 to English? The students themselves speak eloquently to this question. We asked the students who were involved in dual language writing projects at several schools to respond in writing to three questions:

1. When you are allowed to write stories in class using your first language or home language, how do you feel?
2. Do you enjoy reading your stories in your first/home language? Why or why not?
3. When you are allowed to use your first language in class does it help you with your writing and reading of English?

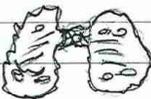
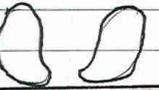
Despite their still limited English, the students insightfully described what happens inside their heads as they grapple with the learning of English. Madiha's response, written about a year after she had co-authored *The New Country*, illustrates the themes that emerged from all the students.

1) When I am allowed to write story in class using Urdu I feel very comfortable and very special and very important. I feel good that people see my Urdu and English story. I feel very comfortable because I know how to write in Urdu and I know why we write Urdu because we learn more English. I feel special because I don't want to forget my language.

2) I like reading story in Urdu because I like my language and I like reading into my language because it's really easy for me I like to read Urdu stories because I understand my language I like Urdu stories because some story is true.

3) When I am allowed to use Urdu in class it helps me to read and write English. When I have to learn new English words I remember them faster if I study the words in Urdu. Like this

New words

English	UrDU	Pictur
Lungs	پھیپھڑے	
Kidneys	گھردے	
heart	دل	

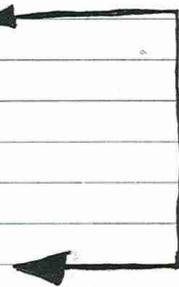


Figure 4. Madiha's insights into L1/L2 connections

Students' responses highlighted the transfer of concepts and strategies across languages and forcefully call into question the prevalence of monolingual instructional assumptions that essentially deny students access to their L1 as a resource for learning.

Other students expressed similar sentiments about the value of L1/L2 connections and transfer. For example, Hira, a grade 5 ESL student, expresses the interplay and facilitation between languages as follows:

When I am allowed to write stories in Urdu, I feel very comfortable because when I write English its difficult for me. If I write in Urdu I feel very comfortable because in Pakistan People speak in Urdu and we also write in Urdu. ...

I enjoy reading in Urdu because its easy for me and I can understand it. In English, I can't understand very well. So, Its not so easy for me to understand English. I can read it very well but Its difficult for me to understand it. In Urdu, I can read anything.

When I am allowed to use Urdu in class it helps me because when I write in Urdu and then I look at Urdu words and English comes in my mind. So, its help me a lot. When I write in English, Urdu comes in my mind. When I read in English I say it in Urdu in my mind. When I read in Urdu I feel very comfortable because I can understand it.

In short, the creation of dual language books (multimedia or just print) encourages students to take ownership of the target language in the context of a cognitively challenging (but engaging) task. They are enabled to express (and amplify) their identities through both languages and, literally, see themselves as bilinguals who can communicate with a wider audience by using two languages rather than just one.

### ***Development of Language Awareness in the Context of a Sister Class Exchange***

*DiaLogos* was an Internet based sister class project that was carried out over 2 school years between elementary school classes (4th, 5th, and 6th grades) in Canada and Greece (Kourtis Kazoullis, 2001). Students in the Greek elementary schools attended English lessons for three one-hour periods per week. The *DiaLogos* students attended regular English classes twice a week and engaged in the *DiaLogos* project once a week. A number of the students in Toronto were of Greek heritage and were learning Greek in community-run classes.

A wide variety of cognitively challenging projects were carried out collaboratively by the students over the course of the two years. The potential for literacy development and cross-language transfer in this kind of exchange can be illustrated with reference to just one of these projects.

Evgenios Trivizas, a well-known Greek writer of children's stories was asked for permission to use one of his stories for *DiaLogos* in order to foster sister class collaboration through creative writing. Trivizas provided the introduction to a story that he had just begun but had not completed. This introduction was translated into English and was circulated in Greek and

English to all the schools via email with directions to the teachers and students on how it could be used. The students were to continue the story in any way they wanted and were to decide on joint endings with students in their sister classes.

Each class in Greece was divided into smaller groups of two or three students who jointly worked on the activity. Eighty different stories were written. Fifty-nine stories were written by the students in Greece (35 stories in Greek and 24 in English) and 21 stories were posted on the bulletin board from students in Canada (nine in Greek and 12 in English).

What is particularly significant about this project in the present context is the degree of cognitive engagement and identity investment that was evident on the part of the students. Although the activity was begun in the first year of DiaLogos' implementation, editing of the texts went on throughout the two years. The students often went back to the texts on the web site adding information and making changes. Kourtis-Kazoullis (2001) points out that this was the first time most of the Greek students had shown this kind of sustained interest in one particular text. As noted above, this kind of collaboration and engagement with literacy does not happen in typical "pen pal" projects. For sister class collaboration to contribute to students' literacy development, students need to feel ownership of both the process and products of the collaboration. The motivation must be intrinsic rather than just extrinsic.

The sister class exchange also contributed directly to the Greek students' language awareness. The English language used by their sister classes opened up entirely new possibilities for using the language. The Canadian students were using expressions that were completely new to the students in Greece, as the following two examples illustrate [spelling mistakes are original]:

[Student from Canada]

Katerina – I didn't have much of a Christmas this year because I was moviong and we didn't put up a tree and stuff like that but it was fun moving and stuff. On Christmas eve we went to my aunt's house and had a big feast and me and cousin Maria were chilling out. On New Years eve we went to my moms friends house and clebrated it there and we brought in 1999 we [with] a really big bang!!  
BYE FOR NOW KATERINA!!!!!!!!!!

[Student from Canada]

On my winter break I had a remarkable week. My sister had her 8<sup>th</sup> birthday party. We had a blast!

Expressions in the letters from Canadian students such as *stuff like that*, *and stuff*, *chilling out*, *with a really big bang*, *we had a blast* and *whaz up*, fueled the students' curiosity and resulted in critical analysis of language forms. *Cool* and *bad* were words that students in Greece were familiar with, however, they were not familiar with the different way in which they were used. The Canadian students were using English but a different type of English. This had a significant effect on the students in Greece who began using the English language in similar ways to the students in Canada as early as the first year of correspondence (Kourtis-Kazoullis, 2001).

This kind of exchange is also likely to lead students to contrast and compare languages. For example, in discussing the meaning of an expression such as *we had a blast* students are likely to search for an equally expressive "youth-friendly" equivalent in their L1.

## Conclusion

If bilingual and immersion programs are to reach their full potential, I believe we must question the monolingual instructional orientation that dominates the implementation of many of these programs and in some cases has assumed the status of dogma. There is simply no research basis for either the direct method or the two solitudes assumption. Similarly, there is no research evidence that translation, used appropriately, is in any way an impediment to effective language learning. On the contrary, there is empirical evidence that translation can serve useful pedagogical purposes. Orleanna, Reynolds, Dorner, and Meza (2003), for example, highlight the relevance of Latino/a students' translation practices and abilities for in-school literacy instruction. While extensive use of the target language within foreign/second language and bilingual/immersion programs is clearly a useful and important instructional strategy, it should not be implemented in a rigid or exclusionary manner. As the examples in this paper illustrate, students' L1 is a powerful resource for learning and bilingual instructional strategies can usefully complement monolingual strategies to promote more cognitively engaged learning.

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