# Common Underlying Proficiency and Its Role in the American Bilingual Education Debate 

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#### Abstract

Bilingual education in the United States is debated by groups at opposite ends of the spectrum relating to the value or harm of dual-language classrooms. Distinct groups involved in the discussion find basis for their ideas in theories of second language acquisition and the pedagogy of language instruction. Proponents comment upon the value of bilingual instruction and its capacity to foster a community competent in many languages, while opponents claim bilingual education interferes with the learning of English and leads to a linguistically divided nation. This paper will focus on one part of the philosophy belonging to those who back bilingual education, the idea of Common Underlying Proficiency. First, CUP will be introduced and eight empirical studies that deal with CUP will be summarized. Finally, an analysis and discussion of the studies and their place in the United States bilingual education debate will be presented.


## Introduction

CUP, also referred to as interdependence, is defined as the availability of common literacy capabilities in any given language a person utilizes, regardless of the language these capabilities were originally fostered in (Cummins \& Swain, 1986). In describing CUP, Cummins (2000, p.38) writes, "To the extent that instruction in Lx is effective in promoting proficiency in Lx, the transfer of this proficiency
to Ly will occur，provided there is adequate exposure to Ly（either in school or the environment）and adequate motivation to learn Ly＂．Cummins and Swain（1986），and Francis（2000），make use of the＂iceberg＂model to portray CUP．The model portrays two icebergs（two languages）whose tips rise out of a body of water separately from each other，not possessing a shared area．The tips of the icebergs hold characteristics， such as fluency and phonology，which are unique to the languages represented by the respective icebergs．These characteristics are considered to be a very small part of what composes language and literacy．Meanwhile，the iceberg foundations overlap and share a large amount of common space beneath the surface level of the body of water．The overlapping foundations symbolize a core sector that embodies collective universal language fundamentals that are accessible and applicable to any language． The submerged bodies of the icebergs are exhibited as a much larger part of language proficiency which is able to transfer between languages．Cummins and Swain（1986） go on to remark that the transfer of proficiency illustrated in this model may be more readily seen occurring from a developed L 1 ，to an L 2 which is learned later in one＇s life．

In the context of the United States，Lessow－Hurley（2005）makes use of CUP to propose that bilingual education serves to solidify and enlarge a common base of linguistic knowledge that will benefit a student＇s learning of any language．According to Lessow－Hurley（2005），bilingual education is a program（usually K－5）which takes the view that instruction in a language other than English，while complimented with English language instruction to one degree or another，is beneficial to children and their academic growth．Krashen（1996），also an advocate of dual－language education，notes that these programs are especially important for non－L1 English students who may receive instruction in their heritage language，thereby allowing them to receive comprehensible input and become familiar with their own L1 in an
early academic setting. Furthermore, supporters such as Cummins (1995) state that the giving and receiving of instruction in a student's heritage language may promote within them a strong feeling of identity and self-worth, as their home language is not disregarded upon entering the public school system.

Yet, perhaps even more important to the proponents' side of the bilingual education debate, by utilizing CUP exponents maintain that heritage language instruction in the context of a bilingual classroom is favorable to the eventual acquisition and use of English by non L1 English students as proficiency will transfer from the L1 to the L2 (Lessow-Hurley, 2005). For advocates of duallanguage classrooms (Cummins \& Swain, 1986; Cummins, 1995; Cummins, 2000; Krashen, 1996; Lessow-Hurley, 2005), CUP is a confirming idea which may justify the presence and promotion of bilingual education in American public schools as it relates to students whose linguistic origins are in a language other than English, and as it relates to the potential development of a more linguistically and culturally aware English L1 student population.

## Empirical Studies

The eight empirical studies that follow vary from each other in a multitude of ways, for instance they take place in seven different countries including Brunei, Canada, England, Israel, Mexico, Spain, and the United States. Nonetheless, they all claim to test Cummins's theory of interdependence in their investigations, and they all work with multilingual populations. All of these studies take place outside the realm of the American bilingual education debate and thus give a wider perspective with which to view CUP, matters of language education and issues relevant to multilingualism.

In the first study reviewed here, Johnson (1996) uses metaphor as a tool to test the
idea of interdependence．Johnson states that metaphor is an inherent and oft－used part of the conceptual basis of language，yet it is seldom taught as part of everyday language use．Based on this，L1 students who are able to construct metaphors in an L2 environment may be exhibiting CUP，given language instruction in general focuses on literal，and not metaphorical，meaning．

The definition of metaphor given in this study states that a metaphor is any concept that is expressed linguistically without having to follow conventional semantic protocol（the example＂kick the bucket＂is used）．Johnson（1996）asserts that unless metaphorical communication is taught explicitly in an L2 through vehicles such as idioms，we may assume that students will most likely interpret metaphors in a literal sense．The researcher remarks here that while it is the case that metaphor is not generally taught in L2 settings，students do not interpret metaphor as literal．Johnson asserts that this is a result of a universal conceptualizing capacity that is similar to CUP which students have in their L1，making metaphor apparent regardless of the language．Although language learners may not always arrive at the correct meaning of a given L2 metaphor，Johnson maintains that they nonetheless are able to sense which type of terms and statements are literal and which are figurative． Johnson（1996）created a test to measure the ability language learners have in constructing metaphor in an L2．The students who took part in the study were from seven to twelve years old and enrolled in Toronto public schools which teach wholly in English．The children were divided into three groups： 34 English monolinguals， 39 Spanish L1 students who had been in Canada five years or more，and 21 Spanish L1 students who had resided in Canada three years or less．The main portion of the test administered to these students consisted of a cloze activity（in English for the monolinguals，in English and Spanish for the bilinguals）where the students would complete sentences based on options from a given vocabulary list．Students were
graded on their ability to construct an appropriate metaphor given these conditions.
The results showed that appropriate metaphor construction was only significantly different between age groups (ages were grouped in the following manner: 7-8, 9-10, 11-12), yet not significant at all between monolinguals and bilinguals, nor between bilinguals with longer residence and those with shorter residence. The author's culminating point is that experience with metaphor that bilingual students have in their Spanish L1 lends itself to metaphorical awareness in their L2. Furthermore, the ability of the Spanish L1 students with the least amount of residency in Toronto (also claimed to have the least amount of proficiency in English) to create L2 metaphorical meaning, is said to emanate from L1 abilities, and thus interdependence.

The second case centers upon CUP in Brunei public schools. Liew (1996) remarks that her investigation shows the failures of the bilingual system of Brunei in not nurturing students' L1, and the consequent effect this has on attainment of an L2. Liew seeks to discuss how CUP may lessen the challenges faced by the majority of Brunei students (whose mother tongue is Bahasa Melayu Brunei, or BMB), who upon entering the public school system must learn the standard national language, Bahasa Melayu (BM) and English.

Liew (1996) collected data from five years of observations in Brunei classrooms where she recorded the linguistic interactions between children in the public school environment along with written work completed by the children in the classroom. The author claims her data documents the difficulties that BMB L1 schoolchildren have in managing the BM national language and English upon exposure to them in the primary grades ( BM is officially the language of instruction from $\mathrm{K}-3$, with instruction in English becoming predominant in the fourth grade). Among the common persistent problems encountered are misuse and misspelling, codeswitching to compensate for learning gaps, errors in syntax, and phonological
inaccuracy．
While proficiency in both BM and English is lacking，Liew（1996）notes that Brunei＇s main preoccupation in regards to these issues is specifically directed at nationwide low performance in English．The author declares that this is a preoccupation that should obviate the need for investigation first into the acquisition of BM．Liew claims that inadequate acquisition of BM cannot be neglected in analyzing the lack of language gains made in English，owing to the idea that limited development of students＇BM（and of BMB before that）precludes a foundation of underlying literacy proficiency from which English may be engaged in an appropriately literate manner．

Ultimately，Liew（1996）calls for a model that would give the BM national language development priority in the schools before introducing English．She notes that according to CUP，initial fostering of literacy abilities in BM would later benefit competency in English as well．Surprisingly，she argues for the minimization of school instruction in BMB，a language which represents the L1 of a majority of Brunei students（we are told that BMB is the predominant lingua franca and＂home language＂of the nation，while BM holds an official status）．In not supporting the instruction and development of BMB，along with BM and English，she actually argues against one of the principal tenets of CUP，which endorses the development of L1 fundamentals along with those of the L2（Cummins \＆Swain 1986；Lessow－ Hurley，2005）．

In this next look at CUP，Francis（2000）carries out a study in the central Mexican states of Tlaxcala and Puebla．The research included the participation of third and fifth grade students who predominantly came from the same L1 background （Nahuatl），and who received their schooling by means of instruction in L2 Spanish． Francis adds that Nahuatl has been given limited academic attention in school．

Through separate testing in Nahuatl and Spanish, Francis sets out to answer the research question of whether or not Spanish L2 literacy skills may be applied to Nahuatl L1 literacy activities, and if so, how is this indicative of an environment in which CUP is manifested?

The method used to approach the research question involved the administration of four tests, in Spanish and Nahuatl, composed of cloze passages and story closure/ writing. Francis (2000) gave the test to a population of 69 third and fifth graders who he had previously worked with a year earlier in a similar manner. The data obtained from the children's test performance showed an increase in accuracy of both Spanish and Nahuatl literacy when compared to the results from a year before. Yet, the Nahuatl scores were substantially lower than, and did not rise proportionately to, the Spanish scores. Due to the fact that academic instruction in Nahuatl is minimal, Francis believes it is possible to judge part of this increased accuracy in Nahuatl literacy as owing to literacy development in Spanish, which may be evidence of a CUP transfer of information.

In closing, Francis (2000) proposes that, eventually, the correlation of success in Nahuatl literacy would not continue its upward progress in relation to Spanish. Francis also remarks that a greater amount of explicit instruction in the Nahuatl language would be needed to continue its specific development, apart from general CUP fundamentals which may transfer from Spanish.

Similar to the earlier work by Liew (1996), the following study by Huguet, Vila, and Llurda (2000), frames its inquiry in the context of a public education system which the authors feel may benefit by taking advantage of the multilingual characteristic of a sector of its populace. Based on Cummins's CUP model, the authors claim their research argues for implementation of dual language instruction towards the betterment of language education in eastern Aragon, Spain.

The researchers first introduce us to the sociolinguistic situation of two regions of Spain：Catalonia and eastern Aragon．Apparent in Catalonia is an environment of additive bilingualism in which a speakers heritage L1（Catalan）is given major support socially，academically，and institutionally．This occurs even though the nation＇s majority language（Spanish）is required to be studied，learned，and used proficiently，in the public school system．On the other hand，subtractive bilingualism is seen in eastern Aragon．Here，many L1 Catalan speakers encounter a low－ prestige attitude towards their own language that views it as having less value than the national Spanish language．Only minor institutional support is given to Catalan language maintenance in this setting．In the former scenario of additive bilingualism，the two languages co－exist and are viewed as complementary to each other．In the latter scenario，the opposite is true and often times there is a process of translinguification，whereby the heritage L1 is abandoned and wholly replaced by the majority L2．

It is within this reality，where differing attitudes reflect positively or negatively upon a heritage L1 and its relationship with the often times higher prestige L2，that Huguet，Vila，and Llurda（2000）pose their question：how does student proficiency in Spanish and Catalan differ between the subtractive bilingual environment of eastern Aragon，the additive bilingual environment of Catalan，and the Spanish monolingual environment of Aragon？To generate data that would answer these questions the researchers administered a battery of tests to groups of twelve year olds from each of the regions mentioned．The main differences between the three groups tested （389 students total）were L1 and language of instruction in school．In Catalonia， instruction was mostly in Catalan with some Spanish language arts classes（200 participants，Catalan L1）；in eastern Aragon，Spanish was the main language of instruction with optional courses offered in Catalan（100 participants，Catalan L1）；
in Aragon, instruction was wholly in Spanish (89 participants, Spanish L1).
The tests analyzed proficiency in listening comprehension, syntax, spelling, reading comprehension, writing, speaking, and pronunciation, in both Spanish and Catalan (the participants from Aragon were only tested in Spanish). Results were divided into three clusters, proficiency in Spanish, proficiency in Catalan, and command of both languages. Students from Catalonia scored the highest with respect to knowledge of Catalan, and there was no significant difference amongst the three groups for Spanish proficiency. However, when variance was restricted to the eastern Aragon and Aragon groups, the eastern Aragon students who took optional Catalan classes scored statistically better in Spanish than did their Spanish monolingual Aragon counterparts, while those eastern Aragon students who did not take optional Catalan classes scored statistically lower in Spanish when compared to the Spanish monolinguals.

In their discussion, Huguet, Vila, and Llurda (2000) emphasize the scores pertaining to command in both languages. Students from Catalan had the highest degree of dual-language command for seemingly obvious reasons, immersion in Catalan and wide accessibility to Spanish in the greater environment. Even more interesting to the authors was the difference within eastern Aragon, where the Catalan L1 speakers who took optional Catalan courses had a significantly greater command of not only Catalan, but Spanish as well, when compared to their Catalan L1 counterparts in the same region who did not take the optional classes. It was also noted that Aragonese Spanish monolinguals were not included in this analysis because they were not tested in Catalan, but as mentioned, results show their command of Spanish to be no greater than that of the other groups. Huguet, Vila, and Llurda observe that CUP is evident in this situation where support of L1 Catalan lends itself to comparatively greater proficiency in Spanish. The case of L1
development having a positive impact on L2 proficiency is an endorsement of the idea of interdependence，and the researchers state，reason to promote the widening of dual－language instruction in multilingual and multicultural places like eastern Aragon．

The subsequent investigation by Bournot－Trites and Reeder（2001）shows how the math achievement of students from a bilingual school in Vancouver，Canada，was used as the basis to observe interdependence．This study examined two cohorts of students in sixth grade．Each cohort received a different degree of in－class exposure to French depending on the immersion program they were in．Based on this，the authors attempted to arrive at a conclusion regarding whether or not students who received a higher percentage of school instruction in French would achieve lower scores in a test administered in English，when compared to the scores of the cohort that received a higher percentage of school instruction in English．Bournot－Trites and Reeder state their purpose in carrying out this study was to respond to doubts that some parents had regarding the increased amount of French instruction for their children，and the possibility of this affecting the students in a negative manner when tested in English．

Bournot－Trites and Reeder（2001），explain that historically the language of instruction at the school was an $80 / 20$ French to English ratio through grade three（all subjects were in French with the exception of English language arts）， whereas grades four through seven were taught at a $50 / 50$ French to English ratio． The increase in English instruction was due to math being taught in English as opposed to French from the fourth grade on．This ratio changed when the school administration implemented a new program that kept the balance at $80 / 20$ for grades four through seven as well（i．e．，maintaining math in French）．This change was based on information that the 50／50 switch was resulting in a French＂plateau＂effect，and
that further development of French proficiency would be aided by maintaining the 80/20 ratio. When this policy was enacted, parents expressed concern that being taught math in French would put students at a disadvantage given the fact that math is tested in English at this school. In subscribing to CUP, Bournot-Trites and Reeder stated that no disadvantage would be seen, owing to the idea that increased academic exposure to, and proficiency in, French, would reflect positively in English capabilities as well.

The two cohorts of students who served as the data source took the same English written math test and had their results compared against each other. The first group was the last generation to switch from $80 / 20$ to $50 / 50$ in the fourth grade (switching to math instruction in English), and the second group was the first generation to maintain an $80 / 20$ split throughout their schooling (maintaining math instruction in French). Both groups were tested at the end of their sixth grade years. The authors noted that besides the difference in language of instruction for the subject of math, the French and English math textbooks were completely distinct for each generation and not simply a translation of each other.

Results between the two groups showed a significant difference in scores, with the $80 / 20$ group scoring higher than their $50 / 50$ counterparts on the test administered in English. Bournot-Trites (2001) and Reeder point to these results as indicative of Cummins's interdependence; increased conceptual exposure and proficiency in French language mathematics was successfully transferred to English. In acknowledging alternative explanations for the results of the second cohort, the authors recognized that motivation, increased study time in math due to the processing of the subject in French, and additional support from parents who perceived that their children were at a disadvantage, could also have been factors in the higher test scores for the $80 / 20$ children. Overall though, Bournot-Trites and

Reeder suggest that the scores are a substantiation of CUP as French knowledge was retrievable in English．

In the next look at CUP，Abu－Rabia（2001）considers the relationship between English and Russian language skills amongst a group of Russian L1／English L2 students attending university in Haifa，Israel．The author states that while interdependence has received a substantial amount of attention in multilingual children during their developmental stages of literacy，adult multilinguals have rarely been part of the research related to CUP．Abu－Rabia continues by pointing out that most of the studies directed at examining interdependence deal with bilinguals who are managing languages that utilize the same Latin alphabet．Thus it is the author＇s goal to obtain data which assess CUP in adults who are bilingual in languages with different alphabets．

The researcher states two positions related to language transfer．The first position is simply a reiteration of Cummins＇s CUP，which in the context of this study would propose that proficiency in Russian will generally underlie and exhibit itself in the abilities that these students have in English．Abu－Rabia（2001）also comments that according to Cummins＇s theory，orthography is considered a surface－level trait which is not part of general literacy skills that are readily transferable between languages． This indicates that management of English script may be a problem for the Russian students whose L1 consists of a distinct orthography（Cyrillic）．This brings the author to his second position，the script－dependent hypothesis．This hypothesis maintains that it is easier to gain literacy in languages whose graphemes consistently match certain phonemic expressions（Russian），as opposed to those languages that manifest variations between graphemes and their phonemic expressions（English）．The author questions whether a contrast in orthographies results in a script－dependent problem in accessing English L2 literacy when coming from Russian L1 literacy，or whether
interdependence proves stronger in the transfer of literacy capabilities from L1 to L2.

Abu-Rabia (2001) administered 14 tests, seven in Russian and seven in English, which measured students' abilities pertaining to letter-sound association, grammatical awareness, working memory (ability to retain old written information while processing new written data), orthography, and semantics. The total pool of participating students numbered 50, all of whom were first year English literature majors between the ages of 25 and 30 . Results showed that the scores for specific sections of the test (for instance, grammar and working memory) correlated between languages, with the exception of the orthography section, where all the students scored higher in Russian than English. The author asserts that this supports both the interdependence hypothesis and the script-dependent hypothesis; the students' ability to process Russian at high levels was generally reflected in English L2 processing, yet orthographic skill did not transfer from Russian to English. The researcher closes by suggesting the presence of both CUP and script-dependence in these results.

The seventh study by, Buckwalter and Lo (2002), begins by addressing one of the arguments given by those who oppose bilingual education: teaching children two languages may result in inadequate learning of either of the languages, or interference and confusion of one by the other. In performing research that seeks to ascertain if the previous statement holds true in the emergent language capabilities of a bilingual child, the authors spent approximately two hours a week, for 15 weeks, presenting literacy activities in Chinese and English to a five-year-old Taiwanese boy who had lived in the United States for five months prior to the start of the study.

One type of literacy activity amongst the many completed consisted of telling the child a sentence in either language and asking the child to write the sentence down. The results illustrated that Chinese statements were written as characters
approximating those of Chinese，and English statements were written in characters approximating those of English．In other words，the two languages did not interfere with each other．Throughout the course of the investigation the authors state that age－ appropriate language development was evident in both languages．

Ultimately，Buckwalter and Lo（2002）complete an analysis of evolving bilingual literacy which refutes the idea of language mixing and instead frames the data as representative of interdependence．Particularly noticeable were instances of foundational level literacy，represented by the boy＇s knowledge of notions such as the spoken meaning of written characters；and surface level characteristics，whereby the child was perceived to categorize specific non－transferable qualities of both languages into appropriate distinct groups．The perceived complementary growth amid languages，as well as the appropriate maintenance of qualities unique to the individual languages，is seen as an endorsement of CUP in this study．

The last investigation was realized by Sneddon and Patel（2003），who reference CUP when assessing if narrative skills transfer from L2 English to L1 Gujerati． The authors conduct an examination that proposes to discover some of the ways in which children are able to interact with the formal version of their home language， which they had previously only been exposed to in an informal manner．The study is couched within a third generation Muslim community in London where the children were raised in a multilingual environment as speakers of the Indian dialect Gujerati along with standard British English．

The researchers asked the children＇s parents（who were standard Gujerati literate） to read the formal Gujerati version of a well known Indian folk tale to their children，with the children to later read the English version of the text on their own． Subsequently，the researchers listened to a re－telling of the story from the individual children（separately in Gujerati and English）to observe ways in which the formal
speech version of the tale in Gujerati would affect the children's non-standard spoken dialect of that language. Furthermore, Sneddon and Patel (2003) were interested to observe if the Gujerati re-telling would be executed in a formal manner, either by making use of the formal Gujerati read by their parents, or by utilizing interdependence via accessing in Gujerati formal language skills that the children possessed in English.

The data shows that the children do not bring formal linguistic and narrative skills from English to Gujerati as manifested in their re-telling of the story. Mistakes of syntax, verb tense, gender and vocabulary, as well as code-switching, were noted in the Gujerati re-telling but not in the English which was classified as age-appropriate, accurate language use. Sneddon and Patel (2003) state this scenario may show counter evidence to CUP, wherein linguistic and narrative strategies are not able to be accessed by an L1 even though they exist in an L2.

## Analysis \& Discussion

Of the eight studies presented above, the work of Sneddon and Patel (2003) is the only one that claims to refute the concept of CUP. Yet, the case of L2 English narrative skills not transferring back to L1 Gujerati may not truly constitute a denial of transfer. The traits which Sneddon and Patel examine may be surface level characteristics that are assumed not to transfer or be part of underlying proficiency (Cummins \& Swain 1986; Cummins, 2000; Francis, 2000). Sneddon and Patel give an interesting account of a language shift that occurs through time, but in doing so they are not able to clearly show how their example refutes CUP. All told, it would be interesting to view if the loss of narrative competence by the young generation of Gujerati speakers may compel this community to work towards an education for their children which takes the development of their linguistic identity into account.

Although Liew（1996）does not contest interdependence as Sneddon and Patel （2003）do，her investigation is not able to provide an example of CUP among the multilingual Brunei school children she observes．Liew references interdependence when she remarks that obstacles to language proficiency exhibited by these learners may be lessened if development of language fundamentals is given priority in one language，which may later transfer to another．However，the author endorses BM development as a precursor to English，instead of arguing for BMB as the transitional literate language on the way to BM and English．In doing this Liew disregards L1 development in favor of the L2，something that Cummins＇s model argues against（Cummins \＆Swain，1986）．Nonetheless，this case seems to illustrate the need for language instruction that will assure the acquisition of fundamentals in L1 and L2，instead of exposing students to a multilingual education that does not result in competency of any language．

In contrast to the previous two cases，the investigations completed by Johnson （1996），Buckwalter and Lo（2002），Francis（2000），and Abu－Rabia（2001）do portray，in varying degrees and strength，what may be characterized as CUP．Johnson contends that interdependence is evident in an investigation that depicts the ability of L2 learners to sense and produce L2 metaphors．However，standards related to the assessment of students＇metaphor construction were absent in the text and there is no example of what protocol one follows in judging what is a meaningful metaphor； thus，who determines the difference between a proper and improper metaphor？ Although Johnson has some insightful comments concerning linguistic transfer of common cultural experience，it would be challenging to use this as a significant example of CUP．Next，the research by Buckwalter and Lo shows that instruction in two languages can be managed without detriment to the acquisition of either one， and the researchers claim that CUP is apparent in their analysis．Yet，findings based
on the limited linguistic capabilities of a five-year old seem to make the case less compelling. The investigation by Francis is a stronger indication of interdependence in that it uses a more linguistically developed population to observe what may be the transfer of literacy from L2 to L1. While this is counter-conventional (it is the L1 which is usually thought to transfer fundamentals to the L2; Cummins \& Swain, 1986), it still yields data which may promote the basic premise of CUP as the author shows the possible sharing of language strategies, from a more developed Spanish to a less developed Nahuatl. Abu-Rabia's look at interdependence is placed in an interesting light in that it deals with adults who are bilinguals managing different orthographies. Likewise, the methods of assessment used to observe transfer of proficiency give a strong impression of the nature and existence of CUP. Abu-Rabia also brings a new element to the CUP discussion by drawing on the script dependent hypothesis to suggest what qualities transfer from the L1 to the L2. This study gives a great deal of insight into CUP, as well as the ability to manage and acquire multiple languages.

Of all the studies presented here, those by Huguet, Vila, and Llurda (2000), and to a somewhat lesser degree, Bournot-Trites and Reeder (2001), are the most applicable to the main themes of this paper: CUP and the domestic bilingual education debate. The obvious difference in the two studies concerns the populations they work with; while the former deals with the relevance and success of instruction in heritage languages to a linguistic minority community, the latter analyzes interdependence in the environment of a linguistic majority receiving instruction in a voluntary L2 immersion program. Although the studies are different in some ways, they are similar in their ability to successfully test interdependence in clear and measurable terms. The Canadian situation is unique in its premise of testing transferability through the medium of math. Bournot-Trites and Reeder make a compelling case
for the existence of，and benefits from，CUP．To some extent，Huguet，Vila，and Llurda have a case that is even more directly related to the domestic scenario in the Unites States，wherein linguistic minorities may not have access to the development of their L1，and may sometimes face ambivalent or hostile opinions in regards to their L1 maintenance．Huguet，Vila，and Llurda illustrate the possible advantages of supporting heritage L1 development in this type of environment，as it may lead to the fostering of a positive identity and greater proficiency in an L2．Overall，both of these studies promote the utility of CUP and counter the position which asserts that dual－language instruction is a barrier to linguistic competence．These cases illustrate that bilingual education may indeed bring benefits to young language learners．

## Conclusion

While it is apparent that the majority of the works included in this review do support the idea of language transfer，do the different perspectives on the nature of CUP，language acquisition，and multi－language instruction presented here have implications on the American bilingual education debate？May advocates refer to the literature in arguing justification for bilingual instruction based on interdependence？ Although there is surely more research that directly speaks to CUP and bilingual education in the United States，the characteristics of CUP as given by the above researchers are of such a varying character that the answer to the above questions is probably no．By any manner，in the realm of the present day discussion regarding language education policy，research which investigates elements of acquisition such as CUP will rarely appear at the forefront of the debate．On the contrary，any newspaper or television show serves as a reminder that issues of race，class，gender， nationalism，politics，and economy are what really stoke public debate pertaining to issues such as bilingual education．Though ideas like interdependence may guard
advocates against charges of phenomena like linguistic interference and language mixing, CUP is really only an attractive theory if education that encourages the worth of a diverse and multilingual society is valued.

Opponents are firm in their belief of another reality: the fostering of one common language will unite the nation (Amselle, 1996; Chavez, 1991; Rodriguez, 1983). While bilingual education advocates point to CUP as providing grounds to justify multilingual education (Cummins \& Swain, 1986; Krashen, 1996; Lessow-Hurley, 2005), there is an opposing view. Some bilingual education opponents subscribe to a concept of subtractive bilingualism called Separate Underlying Proficiency (SUP) which challenges CUP. Through SUP critics proclaim that a finite space is available for the learning of languages, that literacy in one language is distinct from literacy in another, and that the L1 is maintained at the expense of learning L2 English (Cummins \& Swain, 1986). These opponents believe that bilingual programs divert valuable exposure time away from English for instruction in heritage L1s (Amselle, 1996; Chavez, 1991; Rodriguez, 1983). They argue that culture and heritage languages are to be managed in the home as personal affairs (Rodriguez, 1983). Additionally, with the existence of immersion programs which may lead to rapid literacy and fluency in English, without basis in a student's L1, sustaining programs that offer instruction in a language other than English amounts to an educational system that is taking away academic, civic, and future professional opportunity that comes with the quick learning of English (Amselle, 1996).

The complexity of the debate is better viewed not as centering upon a right and wrong type of educational model, but as a difference in social, political, and economic philosophies. It is perhaps here that further research needs to be executed, by looking into the beliefs and structural forces that maintain a division of opinion concerning our educational system. The commentary these philosophies create will
surely state that CUP is just one part of a much more dynamic and volatile whole， and as such it is naïve to think that it may singularly settle a debate that has no clear solution．Ultimately，while examination into concepts of language acquisition similar to those of interdependence should persist，we must acknowledge that tension will always endure in a struggle of ideologies，even while we work towards equity．

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Common Underlying Proficiency and Its Role in the American Bilingual Education Debate

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