

Accelerated Schooling for All Students: research findings on education in multilingual communities

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As we educators prepare our students for the 21st century, we are aware of many changes occurring globally. Population mobility continues throughout the world at an all-time high in human history, bringing extensive cross-cultural contact among diverse language and cultural groups. Predictions focus on an increasingly interconnected world, with global travel and instant international communications available to more and more people. Businesses and professions seek employees fluent in more than one language, to participate in the international marketplace as well as to serve growing ethnolinguistic minorities living within each community. Students who graduate with monocultural perspectives and knowing only one language will not be prepared to contribute to their societies (Cummins in Ovando and Collier, 1998).

This chapter examines schooling in diverse contexts in the United States, with the goal of sharing insights for schools in the United Kingdom and Europe. During this century, US schools have not overcome enormous equity gaps between middle-class native-English-speaking students and those students who enter the schools with no proficiency in English. Ethnolinguistic minorities of many different language backgrounds are among the lowest achievers in American schools. It has been common practice to forbid these students to speak their native language in school and to teach them in separate classes while they are learning English, or to keep them in mainstream classes with just a little support from English as a

Second Language (ESL) specialists. These practices, we have found, have not worked well.

Our research has examined many different types of school programs provided for students in all regions of the US. Over the past fifteen years, we have conducted research in twenty three school districts in fifteen states, with over one million student records collected from 1982 to the present (Collier, 1989, 1992; Collier and Thomas, 1989; Thomas and Collier, 1997a, 1999b). We now have clear long-term student achievement data that unravels some of the mysteries surrounding the schooling of these students. Our data analyses from many school districts in diverse regions clearly show that enrichment bilingual programs that accelerate student learning are among the most promising models for schooling. Furthermore, these same programs are dynamic models for school reform for *all* students. When native-English speakers in US schools have the opportunity to receive schooling through two languages, where they have same-age peers to serve as peer teachers, they not only develop a deeper proficiency in the new language but also accelerate their own academic growth. We will devote most of this chapter to the factors that promote acceleration of school achievement for students who begin their schooling with no proficiency in the language of the school. In the end the reader will see that these factors also apply to all students, majority and minority.

How Long?

Since 1985, we have been asking the research question 'How long?' as we analyze many data sets from different school districts. This question addresses the length of time required for students being schooled in their second language to become academically competitive with native speakers of the school language. Jim Cummins (1981) conducted the first published study addressing this question, analyzing the school records of 1,210 immigrants who arrived in Canada at age 6 or younger and at that age were first exposed to the English language. Cummins found that when following these students across the school years, with data broken down by age on arrival and length of residence in Canada, it took at least five to

seven years, on the average, for them to approach grade-level norms on school tests that measure cognitive-academic language development in English. However, many US school administrators are extremely sceptical that five to seven years are needed for the typical immigrant student to become proficient in academic English. Furthermore, many policy makers still insist that there must be a way to speed up the process, stating that schools have just not done a good job and can do better. We became intrigued with the acerbic debates on this issue and decided that more research needed to be conducted on the 'How long?' question. More than a decade later, we have some clearer expansions for school administrators and policy makers.

Many measures for academic success are used in US schools that could potentially answer the question 'how long?'. Teacher-made tests examine ongoing progress, resulting in a grade for each subject or category of assessment at the end of each grading period. These grades are an important diagnostic measure, but the standards vary from teacher to teacher and cannot be generalized beyond the classroom level. Some school districts use locally developed tests to measure students' growth in each subject area, following district-wide objectives or competencies for each grade level established by curricular teams. These local tests help individual schools compare their performance to other schools in the same school district, but they cannot be generalized beyond the district level. Many states have developed standardized tests, based on statewide objectives or competencies that are required for all students in each state, but these cannot be generalized beyond the state level. Norm-referenced tests based on general curricular standards across the US for each grade level and normed on students nationwide provide the most generalisable and the highest difficulty measure of student achievement. These tests are usually commercially developed, and many states set standards that include testing students on one of these norm-referenced tests, commonly at Grades 4, 6, 8 and 11. (In the American constitution, education is a duty reserved to the individual states, not the national government, so there are no official national curricular standards or national testing requirements.) In our

research, we use the national norm-referenced tests as the ultimate measure, a very challenging standard. These measure typical performance of native-English speakers across the country in all subject areas. Students' performance on this type of measure in Grade 11 is strongly correlated with their success in continuing with university studies when they graduate from high school.

Not all students choose to continue their education at university level, but we take the position that all students should have the opportunity if they so desire. Equal educational opportunity is a basic right in the United States, guaranteed by federal legislation and court decisions, but not all groups in the US have achieved educational success. When students of one ethnolinguistic background consistently score low throughout their schooling on the measures of educational achievement, then schools have under-served these students. Something is wrong.

Our operational definition of equal educational opportunity for US students with no prior background in English is this: The test score distributions of English language learners (known also as English as an Additional Language or EAL pupils in the United Kingdom) and native-English speakers, initially quite different at the beginning of their school years, should be *equivalent* by the end of their school years as measured by on-grade-level tests of all school subjects administered in English. This does not mean that every individual student must be on grade level. There will always be some high scorers and some low scorers among both the English language learners and the native-English speakers. But when these two groups of students are compared, the averages and variation of their test score distributions should be equivalent by the end of their school years. Our 'how long?' question examines the length of time required for these distributions to become equivalent and what influences students' success in reaching this point.

Confirming Cummins' (1981) research, we have also found that reaching parity with native-English speakers takes a long time. But politicians and laypersons assume that the only thing English language learners have to do is to become fluent in English, which is

commonly thought to take about one or two years. Linguists and educators strongly disagree, pointing out that primary language acquisition is a process that takes from birth until young adulthood to acquire the full adult system of oral and written language across many contexts of language use and that second language acquisition is an equally complex developmental process that takes time.

However, the main point that policy makers need to understand is that for the school-age child, proficiency in the language of the school is only one of many, many processes occurring simultaneously. With every year of school, each student is experiencing intense academic, cognitive, linguistic, social, emotional, and physical development. This development is measured by the school tests, which examine cognitive growth as well as vocabulary and concept knowledge in English, applying this knowledge through problem-solving across the curriculum – mathematics, science, social studies, language arts, and literature. Language proficiency tests do not adequately measure language use in a school setting. But the school tests do, because they also measure age-appropriate language use at school, including the expanded knowledge acquired with each year of schooling. For example, with each year of school, to stay at the 50th percentile, typical students must make ten months of achievement gain on the tests given across the curriculum.

English language learners (ESL/EAL) are not generally given the norm-referenced school tests in English during the first one to two years after their arrival, since these tests will underestimate what the students actually know but cannot yet demonstrate in English. But after around two to three years of schooling in the US, these tests are given to EAL learners as well as all other students. We have found that, as a group, ESL learners typically score around the 10th to 11th percentile when tested on grade level and in English. That is a 40-percentile gap (equivalent to about 1.3 standard deviations) with typical native-English speakers nationwide, whose average score is at the 50th percentile. To close that large 40-percentile gap, ESL learners must accomplish more than one year's achievement for a number of years in a row. More specifically, they must make fifteen

months of progress for each ten months of progress that the native-English speaker is making each year of school, and they must do this for six consecutive years to eventually reach the 50th percentile – a dramatic accomplishment! This is true for any ‘at risk’ group of students who initially score low on a norm-referenced test.

The vital thing for policy makers to recognize is that the native-English speaking students are not sitting around waiting for EAL pupils to catch up with them. While ESL pupils are acquiring English, the native-English speakers are forging ahead, making enormous progress with each school year in all school subjects as well as English language development and demonstrating their cognitive, linguistic, academic, social and emotional growth in the school tests. So we must help ESL learners not only to acquire the English language but also to *accelerate their academic growth* beyond that of typical native-English speakers. We have found that it is impossible to expect groups of even the most gifted bilingual students to accomplish this incredible feat in less than four years (the shortest time we have seen). Most ESL learners attending quality enrichment schooling programs that accelerate their growth take five to seven years – the same time period as Cummins found.

School Program Influence on Long-term Student Achievement

Sadly, we have found that typical school programs across the US have not succeeded in closing the achievement gap from the 10th to the 50th percentile. The large majority of ESL learners in the US are graduating around the 10th percentile and significant numbers are leaving school without completing a high school degree. Teachers often say, ‘But my students are making great progress,’ and they are. When a student first tests at the 10th percentile and completes school at the 10th percentile it means that the student has made tremendous growth, keeping up with the pace of the typical native-English speaker; making ten months of academic progress with each ten-month year of school, but not closing the gap at all. To become competitive with typical native-English speakers who are achieving at the 50th percentile, *former ESL learners must achieve sub-*

stantially more than ten months of academic progress for at least five to six consecutive years. A student graduating at the 10th percentile has little chance to enter university study and his/her educational opportunities are severely limited beyond high school.

Another pattern that we see in our data analyses is that ESL learners initially make dramatic progress. Whatever school program they attend; in the short term they appear to be closing the achievement gap, moving up to the 20th and then the 30th percentile in the first two to three years. But then as they leave their special program and enter the mainstream and as the cognitive and academic demands of the curriculum become greater at middle and high school (Grades 7-12), their percentile scores go back down to those of among the lowest achievers.

See Figure 1, Lines 4-5 and 6 for a visual illustration of this pattern. This figure presents student achievement in normal curve equivalents (NCEs), which represent a conversion from percentile ranks (with different amounts of achievement in each unit) to equal-interval scores. The 23rd-24th NCE is the 10th-11th percentile, which are the beginning and end-points of Line 6, representing those students who received one to two years of ESL pull-out when they first entered US schools in kindergarten. The three program types represented by Lines 4, 5, and 6, are among the most common in the US and the least successful in the long term. In these programs, students receive one to three years of assistance from specialists (bilingual and/or ESL teachers) and the remainder of their school years are spent in the mainstream.

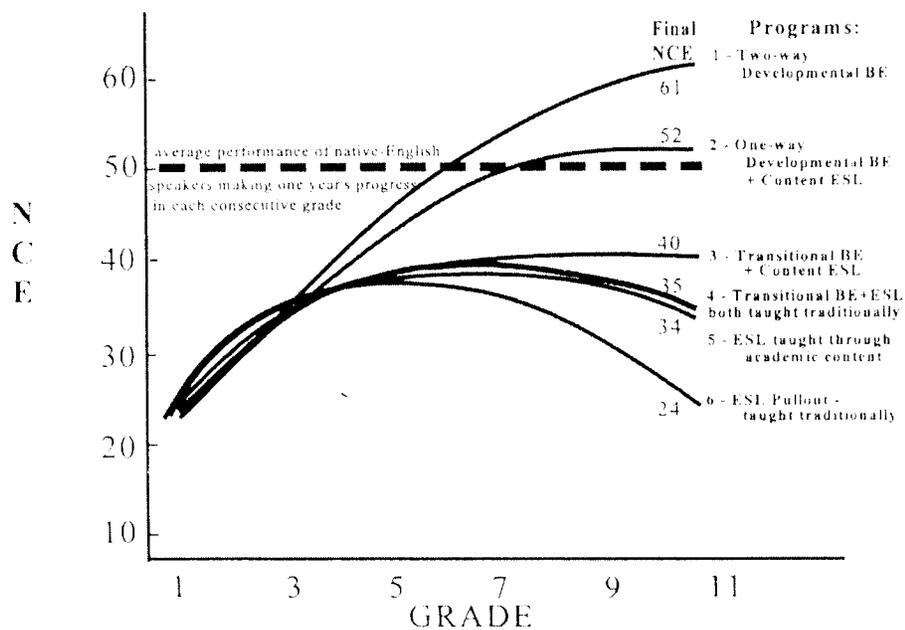
But there are exceptions to this low achievement pattern, as can be seen in Figure 1. Some ESL learners are able to close the achievement gap by making fifteen months' progress with each year of school, reaching the 50th percentile in about six years and maintaining that high level of achievement or achieving still higher (as can be seen in Lines 1 and 2). These students will have many educational opportunities when they graduate from high school. Enrichment bilingual programs produce these exciting student outcomes. These programs are still uncommon in the US but are growing in number,

PATTERNS OF K-12 ENGLISH LEARNERS' LONG-TERM ACHIEVEMENT IN NCEs ON STANDARDIZED TESTS IN ENGLISH READING COMPARED ACROSS SIX PROGRAM MODELS

(Results aggregated from a series of 4-8-year longitudinal studies
from well-implemented, mature programs in five school districts)

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- Program 1: Two-way developmental bilingual education (BE)
- Program 2: One-way developmental BE, including ESL taught through academic content
- Program 3: Transitional BE, including ESL taught through academic content
- Program 4: Transitional BE, including ESL, both taught traditionally
- Program 5: ESL taught through academic content using current approaches
- Program 6: ESL pullout - taught traditionally



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Figure 1. (.jpg file)

as educators work on school reforms and discover these models. In enrichment bilingual programs, students receive the mainstream curriculum through both their primary language and English, with challenging academic work that is cognitively on grade level. Teachers use cooperative learning, thematic interdisciplinary units, hands-on materials, and much work with video and microcomputers, as in any mainstream class. The materials and books present a cross-cultural perspective, and lessons activate students' prior knowledge for bridging to new knowledge. Enrichment bilingual classes for older students include problem posing, knowledge gathering, reflective thinking, and collaborative decision making.

Program Variations in the US

Of the distinguishing features influencing the dramatic differences in former ESL learners' long-term achievement, two factors stand out as especially powerful. One is the way the program is set up and perceived by staff – is it for remediation (ie to fix what is viewed as a problem) or for enrichment (ie to add to what the student already knows)? The second factor is the use of the students' primary language for instruction.

• *From Remediation to Enrichment*

Pull-out or separate bilingual and ESL classes generally have a stigma attached, because too often teachers focus on remediation and water down the curriculum, and the students know they are not being challenged with age-appropriate schoolwork. Initial assessment of the new arrivals focuses on what's missing and when students have little or no English, they are sent to a specialist to be 'fixed.' Even inclusion classrooms too often have the specialist (a bilingual or ESL teacher or 'aide' sitting at the back of the room tutoring students; whereas team teaching leads to more meaningful integration of students with varying proficiency in the language of instruction. Remediation in separate classes or in the back of the room most often results in lowered expectations and lower achievement for students. Furthermore, when ESL learners have no ongoing interaction with native-English-speaking peers, they have little

opportunity for natural second language acquisition. Same-age peers are a crucial source of second language input. But they are beneficial only in settings that bring students together cooperatively and permit interactive negotiation of meaning and sharing academic tasks equally (Wong-Fillmore, 1991).

In contrast to remediation, bilingual enrichment classes provide quality, challenging, on-grade-level schooling through two languages in an integrated setting for all students. The strengths that ESL learners bring to the classroom, including knowledge and life experiences from other cultural contexts, as well as native-speaker knowledge of another language, are used as resources for learning, as essential building blocks. After enrichment bilingual classes are established, they are often perceived as classes for the gifted. Yet students of all levels of socioeconomic status and ethnolinguistic background and with varied levels of proficiency in the languages of instruction are able to flourish in these classes. Every class member is working on acquiring a second language, so all have an equally challenging task, including the native-English speakers who have chosen to enroll in the bilingual class.

- ***The Power of Using Students' Primary Language for Instruction***

The second most powerful and positive influence on student achievement is to increase the amount of instruction in the students' primary language. ESL pull-out and ESL content alone (Lines 5 and 6 in Figure 1) are the two US programs with no primary language support. Graduates of ESL content programs significantly increase their achievement over graduates of ESL pull-out, from the 11th to the 22nd percentile. But by adding primary language support for two to four years in a well-taught bilingual class, which always includes ESL content, student achievement reaches a significantly higher level, the 32nd percentile (Line 3 in Figure 1).

Students in transitional bilingual classes are **closing** the achievement gap while they attend the program, but at the point where they are moved into all-English instruction, they continue 'to **keep pace** with

the native-English speaker (making ten months' progress in each school year) but no longer are closing the gap. Whereas students who are placed in enrichment bilingual classes that focus on teaching the mainstream curriculum through two languages for at least six or seven years until the end of elementary school, are able to close the achievement gap in their second language and maintain their high performance (50th percentile or even higher) throughout the remaining years of their schooling.

We have found that groups of students who enter the program in kindergarten reach the 50th percentile on the school tests in their second language sometime between the 4th and 7th grade.

English-Only Programs

Figure 2 provides an overview of characteristics of the US school programs represented in Figure 1. In addition to the six program types, we have included in Figure 2 a theoretical description of Proposition 227 as specified in the referendum, approved by voters in the state of California in June 1998.

In actual implementation, California schools have varied greatly in their response to the Proposition, some following the guidelines closely, and others choosing to implement many variations, including bilingual schooling. We have no data on student outcomes for the program plan proposed by Proposition 227, but we would predict that its average long-term student achievement will be even lower than for ESL pull-out, since it has still fewer of the support characteristics of other program models. The programs presented here have greatly varying names from one school system to another, but we have chosen the most common terms used across the US.

• ESL pull-out

As can be seen in Figure 2, moving from left to right across the figure, the programs range from little or no support to strong support for students. ESL pull-out is generally carried out by an ESL resource teacher who receives ESL learners throughout the day for half, one or two hours, after which they return to their mainstream

Summary of Characteristics and Effectiveness of Common Programs for English Language Learners							
	REMEDIAL					ENRICHMENT	
	As in law	As well implemented				As well implemented	
While in these programs students receive:	Proposition 227 in California	ESL Pullout	ESL Taught Through Content	TBE with Traditional Teaching	TBE with Current Teaching	One-way DBE	Two-way DBE
Cognitive Emphasis	None	Little	Some	Some	Moderate	Strong	Strong
Academic Emphasis (in all school subjects)	None	None	Yes	Yes	Yes	Yes	Yes
Linguistic Emphasis L1=primary language, L2=English	Only Social English (only in L2)	Only Social English (only in L2)	Academic English (only in L2)	Develops Partial L1 + L2 Academic Proficiency	Develops Partial L1 + L2 Academic Proficiency	Develops Full L1 + L2 Academic Proficiency	Develops Full L1 + L2 Academic Proficiency
Sociocultural Emphasis C1=1st culture C2=2nd culture	None	Little	Some	Some	Moderate	Strong C1+C2	Strong C1+C2
Program Length	Transitory 1 year	Short-term 1-2 years	Short-term 2-3 years	Short-term 2-3 years	Intermediate 3-4 years	Sustained 6-12 years	Sustained 6-12 years
Native Language Academic Support	None	None	None	Some	Moderate	Strong	Strong
Exposure to English Speakers	No	Yes	Yes	No	Yes Half-day	Yes Half-day	Yes All day
Extra Instructional Cost	High (extra teachers needed)	High (extra teachers needed)	High (extra teachers needed)	Small-to-moderate (special curriculum)	Small-to-moderate (special curriculum)	Least expensive: Standard mainstream curriculum	Least expensive: Standard mainstream curriculum
Percent of Achievement Gap With Native-English Speakers Closed by End of Schooling (based on data-analytic research)	Presently un-researched but expect no long term gap closure or expect an increased achievement gap	None final average NCE scores equivalent to 11th national percentile	About one-fourth final average NCE scores equivalent to 22nd national percentile	About one-third final average NCE scores equivalent to 24th national percentile	About one-half final average NCE scores equivalent to 32nd national percentile	All of gap fully closed by end of school -- average scores at 50th national percentile	All of gap fully closed by end of school -- average scores above 50th national percentile

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Figure 2. (.jpg file)

class. Some schools have implemented ESL inclusion, in which the ESL resource teacher comes to the mainstream class and tutors the students for a time, helping to make the mainstream lessons more comprehensible. We include this as part of ESL pull-out, because the students only get this support for a limited period, and long-term achievement outcomes are similar. ESL pull-out is expensive because it requires extra ESL resource teachers (Crawford, 1997).

It is less effective because students miss important subjects while they attend ESL class; articulation with the mainstream teachers who send their students to ESL is difficult to maintain; and students have no access to primary language schooling to keep up with grade-level academic work while learning English (Ovando and Collier, 1998).

• **ESL content**

ESL content programs, also labelled sheltered instruction, provide much more support than ESL pull-out, because the ESL teacher is focused not just on teaching the English language but on teaching the entire curriculum. At middle and high school levels, ESL content staff team together to teach their strengths in curricular subjects. Sometimes a mainstream teacher teams with an ESL teacher when the ESL teacher is not certified in a particular subject. A well implemented ESL content program, taught during the first two to three years after the immigrants' arrival (with students gradually moving into the mainstream in Year 3), can raise former ESL learners' achievement to the 22nd national percentile by the end of schooling, which is much better than the 11th percentile for graduates of ESL pull-out.

This level of achievement (22' percentile) may be enough to allow admission to a community college, which can eventually lead to university study.

Remedial Bilingual Education

• ***Transitional bilingual education***

This program provides half a day of ESL content teaching and half a day of instruction in the students' primary language in a self-contained classroom where students are all speakers of the same primary language (eg. Spanish). Students are gradually introduced to more instruction in English with each year until they are mainstreamed, typically after two to four years. This program model has been supported at state and federal levels, with extra funding provided for school districts that choose to apply. Some states such as Texas, Illinois, Massachusetts and New York passed legislation in the 1970s making this program mandatory for students who are not yet proficient in English when they enter school. In these states schools can also choose to create enrichment bilingual models, enhancing the transitional model if they wish.

Enrichment Bilingual Programs

• ***Two-way developmental bilingual education***

The term 'two-way' refers to bilingual classes where two language groups are being schooled through each other's languages (eg. English and Spanish). This integrated model is a powerful one for school reform. We and other researchers have found that academic achievement is very high for all groups of participants, compared to groups of similar background who receive schooling only through English. This holds true for students of middle-class status and of low socioeconomic status, as well as African-American students and students of ethnolinguistic minority background (Christian, 1994; Collier, 1992; Lindholm and Aclan, 1991; Thomas and Collier, 1997a).

Some important implementation characteristics of two-way bilingual schooling include: a minimum of six years of bilingual instruction, focus on the core academic curriculum rather than a watered down version, quality language arts instruction in both languages, separation of the two languages for instruction, and use of the non-English (or minority) language for at least 50 percent of the

instructional time and as much as 90 percent in the early grades. Also, a successful two-way program requires a positive bilingual environment that has full support of school administrators; a balanced ratio of students who speak each language (eg. 50:50 or 60:40, preferably not to go below 70:30, to have peer models for each language); promotion of positive interdependence among peers and between teachers and students; high-quality instructional personnel; and active parent-school partnerships. (Lindholm, 1990; Thomas and Collier, 1997b)

• ***One-way developmental bilingual education***

The demographics of a given school community influence the feasibility of two-way programs. When there are insufficient native-English speakers enrolled, a one-way developmental bilingual program is an option, in which one language group is schooled through two languages. This model shares all the features of two-way-bilingual education and can be used in any school with large numbers of students of one primary language heritage. This enrichment model teaches the core academic curriculum through the students' primary language and the majority societal language in an intellectually challenging way, using students' linguistic and cultural experiences as a resource for interdisciplinary, discovery learning. The characteristics above for 'two-way' also apply to 'one-way'. (For more sources on the specifics of implementation of all of the programs discussed above, see Genesee, 1999; Ovando and Collier, 1998; Thomas and Collier, 1997b, 1999b.)

Current Approaches to Teaching

In our research we have found that some teachers use very traditional teaching methods while others have adopted teaching innovations of the last ten to fifteen years. We have found both types of teachers in almost all programs, so this factor, also influential, is a 'within-program' variation, rather than something that distinguishes one program from another.

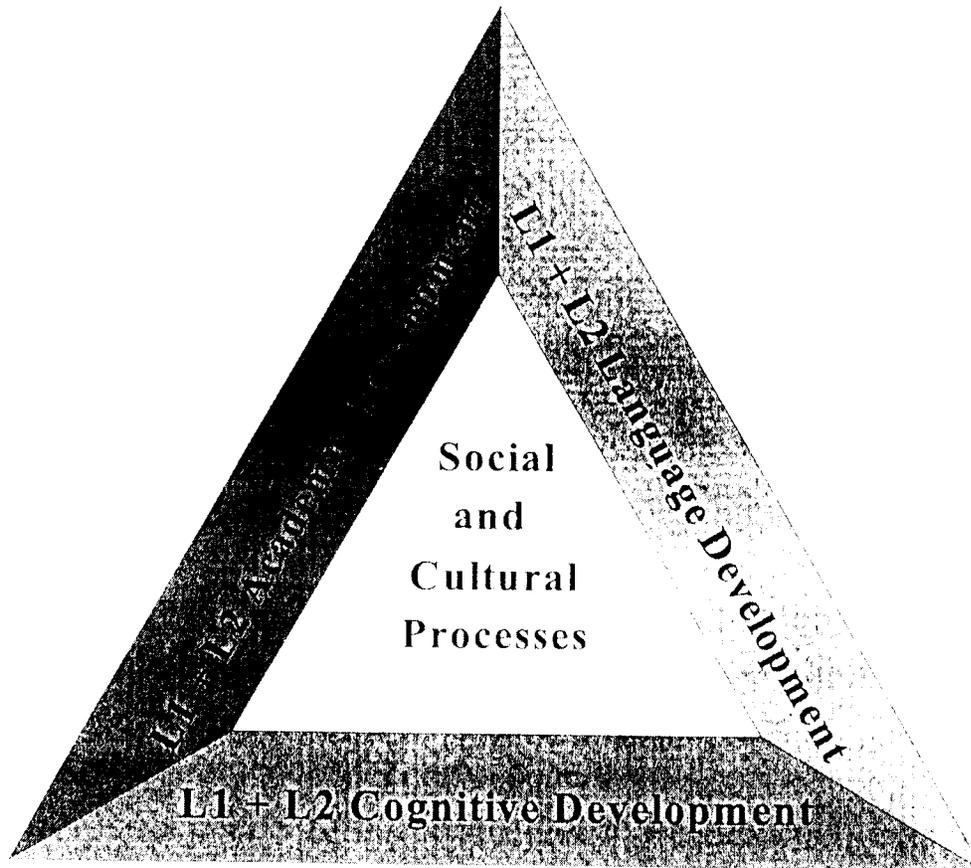
In Figures 1 and 2 we provided one example for graduates of transitional bilingual classrooms. After attending a traditionally taught transitional bilingual class, student achievement outcomes, at the 24th percentile, were very similar to those for graduates of ESL content programs, at the 22nd percentile. Primary language support did not boost students' performance significantly in a traditionally taught bilingual class, whereas graduates of transitional bilingual classes taught with current approaches were at the 32nd percentile by the end of high school. This is a very significant difference.

We define traditional teaching as classes that are more textbook-driven and very teacher-controlled, allowing students few opportunities to interact with each other. In contrast, classes using what we call 'current approaches' focus on interactive, discovery, hands-on learning. Teachers in these classes often use cooperative learning, thematic interdisciplinary lessons, literacy development across the curriculum, process writing, performance and portfolio assessment, microcomputers, critical thinking, learning strategies, and global perspectives infuse the curriculum. In the two enrichment models – 'one-way' and 'two-way' developmental bilingual education – most of the teachers embrace current approaches, and ongoing staff development helps teachers to implement discovery learning across the curriculum.

Why Enrichment Programs Work Well

To accelerate students' academic growth, ethnolinguistic minorities need a school context that provides the same basic conditions that the majority group experiences. This includes attention to all the ongoing developmental processes that occur naturally – nonstop – for any child: *cognitive, academic, and linguistic* development in a supportive sociocultural context. We have created a model (Figure 3) which illustrates the importance of equal attention to these four dimensions of learning for students who come from a bilingual community.

Language Acquisition for School



The Prism Model

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Figure 3. (.jpg file)

The four major components are interdependent and complex. If one is developed to the neglect of another, this may be detrimental to a student's overall growth.

For adult immigrants, second language is an appropriate first focus, because they are already cognitively and linguistically mature (including those not formally schooled). Thus, adults who learn a second language in a favourable sociocultural environment face a completely different endeavour than do children, who must make cognitive and academic progress while they are learning a second language. Consequently, programs that emphasize learning the second language as the main goal are appropriate for adults but cannot meet children's needs. Adult policy makers must remember this when making program decisions for children.

When students are given the opportunity to develop academically and cognitively through both their primary language and a second language, this accelerates their learning. But when students are denied use of their primary language in school, they lose several years of cognitive and academic growth while focusing on acquiring the second language, and we find that very few can make up the lost time (so drop out of school or graduate at the 10th percentile).

Sociocultural support is equally important. In schools with such support, ethnolinguistic minorities are respected and valued for the rich life experiences in other cultural contexts that they bring to the classroom. The school is a safe, secure environment for learning. Majority language speakers treat minority language students with respect, and there is less discrimination, prejudice, and open hostility. Minority students' primary language is affirmed, respected, valued, and used for cognitive and academic development. Families develop partnerships with the school and celebrate ongoing bilingual/bicultural learning in the community, for all ages.

For long-term success, ethnolinguistic minority students must receive the same benefits of a supportive learning environment that society automatically affords the majority language group.

Examining the Change Process

School policy makers have many decisions to consider in the process of school reform. Ethnolinguistic minorities are rapidly becoming a majority in many communities around the world, and schooling all students well leads to increased productivity and cooperative relations among all groups. It is in our own best interests to enrich our school programs so as to provide accelerated learning for **all**.

The following should be considered in school reform decisions:

1. The potential quality of program type

This refers to the power of a particular program's features to influence student achievement. Some of the programs discussed above are 'feature-rich', with enhanced potential to affect student achievement, while others are 'feature-poor', with little or no theoretical reason to believe that their use will help ethnolinguistic minority students to close the achievement gap.

2. The realized quality of program type

This is the degree of full and effective implementation of a program in terms of administrative support; teacher skills and training to deliver the full instructional effect of the program; and the degree to which program installation, processes and outcomes are monitored and formatively evaluated.

3. The breadth of program focus

This refers to instructional focus on the Prism Model dimensions of cognitive, academic and linguistic development to native-speaker levels in the second language as well as in students' primary language, in a supportive sociocultural school environment, as contrasted with a narrow and restrictive instructional focus, such as 'just learning enough of the majority language to get by.'

4. The quality of the school's instructional environment

This refers to the degree to which the school becomes an additive language-learning environment rather than a subtractive environ-

ment, including parental engagement and support of the instructional program. In an additive bilingual environment, students acquire their second language without any loss of their primary language. Students who continue to develop cognitively in their primary language and develop age-appropriate proficiency in both first and second languages can out-score monolinguals on school tests (Baker and Jones, 1998).

5. The quality of available instructional time

This is the degree to which instructional time is used effectively so that students receive maximally comprehensible instruction for an instructionally optimum time period, in classrooms where ethnolinguistic groups are not isolated, but where all students interact together and where instruction is driven by students' cognitive, academic and linguistic developmental needs.

Linguists know that more time in the second language is not necessarily better; the human brain can cope with only a few hours of intensive work in the new language in any one day. Thus primary language schooling for part of the day keeps students on grade level cognitively and academically and accelerates students' learning.

A successful program in the US allows average students who were ESL learners to out-gain average native-English speakers for four to seven consecutive years, so that the initial large achievement gap is gradually closed over time in all subjects and in English. This program must be 'feature-rich,' must be well implemented and delivered, must focus on all four of the Prism Model dimensions, must create an additive instructional environment in the neighborhood school, and must offer instruction that is fully comprehensible and appropriate for meeting students' developmental needs.

Such programs are rare in the real world. Most schools fall short on some or all of the above factors. However, it is vital that we realize that educators can create effective change by using these factors to design and implement programs. We only need the resources and the will to use them appropriately.

When we do this, ethnolinguistic minorities' school achievement will match or exceed majority students' achievement over time, achieving true equality of educational opportunity. As the number of under-served students continues to rise in most countries, our national productivity and welfare in the 21st century demands that we move away from polemics and toward action-oriented policies and accelerated education strategies that will dramatically improve the quality of education for all students.

Authors' note: For more information and research findings on enrichment bilingual education and other program models in bilingual/ESL education in the United States, visit the National Clearinghouse for Bilingual Education's website: [www.nche.gwu.edu] and the national Center for Research on Education, Diversity and Excellence's website: [www.crede.ucsc.edu]. Project 1.1 of the CREDE research, conducted by Drs. Thomas and Collier, addresses distinguishing curricular features of programs and the long-term academic achievement of English language learners who attended these programs. Findings from this new study will be reported in 2000-2001 on the CREDE website.

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