The Use of First and Second Languages in Education

A Review of International Experience

By Nadine Dutcher, Consultant, EA3PH
with the collaboration of G. Richard Tucker, Consultant

PACIFIC ISLANDS DISCUSSION PAPER SERIES
NUMBER 1
EAST ASIA AND PACIFIC REGION • COUNTRY DEPARTMENT III
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AND SECOND LANGUAGES IN
EDUCATION

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school speaking one of 15 mother tongues; children in the Solomon Islands speak one of
60 indigenous languages in their homes and many also speak Pijin; and children in
Vanuatu speak one of 100 indigenous languages, many also speak Bislama. In all of
these countries, sooner or later, another language is the language of instruction, a
language of wider communication little known by the teachers and little understood
by the children.

This paper examines the experiences of seven other countries in dealing with the kinds of
language-in-learning problems that these Pacific Island nations face. It offers some
preliminary recommendations for effective teaching and learning of both the first and
second language.

DISCUSSION PAPERS PRESENT RESULTS OF COUNTRY
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This paper is an updated and expanded version of an earlier World Bank paper, "The Use of First and Second Languages in Primary Education: Selected Case Studies," Nadine Dutcher, World Bank Staff Working Paper No. 504, January 1982. It was later included in the Pacific Islands Education Study, which was prepared for the Pacific Island Countries (PIC) Development Partners Meeting in Suva, Fiji, on February 22-23, 1995, with support from the New Zealand Trust Fund.

Additional copies of this paper are available from East Asia and Pacific Country Department III, World Bank, 1818 H Street, NW, Washington, DC 20433-0001, fax (202) 522-1671. Marianne Haug, Director.
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ACKNOWLEDGMENTS

We thank Himelda Martinez of the World Bank for her support and encouragement throughout the development of this paper and Alfonso F. de Guzman, also of the Bank, who produced the earlier version of this paper as part of the Bank's Pacific Islands Education Study for the Pacific Island Countries Development Partners Meeting in Suva, Fiji, in February 1995.

We also thank the following individuals who generously shared their materials and experiences with us.

For general orientation to the research in the field of language learning: Cortney B. Cazden (Harvard Graduate School of Education, Cambridge, Massachusetts), Anna Chamot (Georgetown University, Washington, D.C.), Donna Christian (Center for Applied Linguistics, Washington, D.C.), Virginia P. Collier (George Mason University, Fairfax, Virginia), Jodi Crandall (University of Maryland, Baltimore County, Maryland), Jim Cummins (Ontario Institute for Studies in Education, Toronto, Ontario), David Dolson (California Department of Education, Sacramento, California), Ralph Fasold (Georgetown University, Washington, D.C.), Nancy Hornberger (University of Pennsylvania, Philadelphia, Pennsylvania), Dora Johnson (Center for Applied Linguistics, Washington, D.C.), Tove Skutnabb-Kangas (University of Roskilde, Roskilde, Denmark), Rudolph C. Troike (University of Arizona, Tucson, Arizona), and Stephen L. Walter (Summer Institute of Linguistics, Dallas, Texas).

For information on the Canadian experience: Fred H. Genesee (McGill University, Montreal, Quebec, Canada), Suzanne Lafleur (Department of Canadian Heritage, Ottawa, Ontario, Canada), Boyd Pelley (Council of Ministers of Education, Toronto, Canada), and Merrill Swain (Ontario Institute for Studies in Education, Toronto, Ontario, Canada).

For information on the National Program for Bilingual Education in Guatemala: Ray Chesterfield (Juarez Associates, Washington, D.C.), Susan Clay (U.S.A.I.D. Guatemala), and Julio Diaz (U.S.A.I.D. Guatemala).

For information on the situation in Haiti: Rebecca Adams (U.S.A.I.D. Haiti), Yves Dejean Universite d’etat d’Haiti, Port-au-Prince, Haiti), Rosny Desroches (Fondation Haitienne de L’Enseignement Prive, Port-au-Prince, Haiti), Simon Fass (University of Texas, Dallas, Texas), Dana Fischer (U.S.A.I.D. Washington), Uli Locher (McGill University, Montreal, Quebec, Canada), Karen Tietjen (U.S.A.I.D. Washington), Albert Valdman (Indiana University, Bloomington, Indiana), and Pierre Vernet (Universite d’etat d’Haiti, Port-au-Prince, Haiti).

For information on the bilingual education program in the Philippines: Richard Benton (New Zealand Council for Educational Research, Wellington, New Zealand) and Andrew Gonzalez (De La Salle University, Manila, Philippines).

For information on the Maori programs in New Zealand: Richard Benton (New Zealand Council for Educational Research, Wellington, New Zealand).

For information on the Six Year Primary Project in Nigeria: Ayo Bamgbose (University of Illinois Urbana, Champagne, Illinois).
EXECUTIVE SUMMARY

This paper summarizes the literature on the use of first and second languages in education. It is intended as a contribution for the language policy analysis that the Pacific Island countries will need to understand in the future.

Part I of this paper presents the findings from basic research related to a number of commonly held assumptions about children and language learning. According to current research the following are true:

- Children require at least 12 years to learn their first language.
- Children do not learn second languages more quickly and easily than adults.
- Older children and adolescents are more skilled than younger children in learning a second language.
- The development of the child’s first language with its related cognitive development is more important than more exposure to a second language.
- Children in school settings need to learn academic language skills, as well as social communication skills.
- Children learn a second language in different ways, depending on their culture, their group, and their individual personality.

Part II summarizes findings from programs in seven different countries. The countries are grouped according to three categories which represent one facet of the task faced by educational systems: countries where there are no or few mother tongue speakers of the language of wider communication; countries where there are some mother tongue speakers of that language, and countries where there are many speakers of the language of wider communication.

From countries where there are no or few mother tongue speakers of the language of wider communication:

- In Haiti, Creole-speaking students in both public and private schools, learning in grades 1-4 through their first language (Creole) acquired about as much knowledge in the second language (French) as those who had been exposed only to the second language.
- In Nigeria, Yoruba-speaking students learning in grades 1-6 in their first language (Yoruba), outperformed their peers, who had been learning in only grades 1-3 in that first language, on all tests of achievement in the second language (English).
- In the Philippines, Tagalog-speaking students outperformed in the two languages of the bilingual education policy (Tagalog and English) those students who did not speak Tagalog in their homes.

From a country where there are some mother tongue speakers of the language of wider communication:

- In Guatemala, by grade 3 students who have studied in their first language (a Mayan language) achieve higher scores in tests given in the second language (Spanish) than do their Mayan-speaking peers who have studied only in Spanish.
And from countries where there are many mother tongue speakers of the language of wider communication:

- In Canada, students from the English-speaking majority language group in bilingual immersion programs outperform their peers in traditional programs in the learning of the second language, French.
- In New Zealand, some English-speaking ethnic Maori students, are receiving preschool and primary school in Maori as an attempt to preserve and revitalize the Maori language and culture.
- In the United States, Navajo students learning throughout their primary school in their first language (Navajo) as well as their second language (English), outperformed their Navajo-speaking peers who were educated only through English.
- In the United States, Spanish-speaking students in late-exit programs where they were learning through their first language, Spanish, as well as through English, were catching up to English-speaking students in academic work and in acquisition of English, whereas their Spanish-speaking peers in submersion or early-exit programs appear to be falling behind.

Part III offers some conclusions from this review of the literature:

- There are a range of models used in programs throughout the world. They can be classified into four general types: submersion in the second language, with no support from first language; some mother tongue instruction along with more instruction in the second language; more mother tongue instruction along with less instruction in the second language; and three-tier instruction, with instruction successively in the mother tongue, a regional or group language, and the national language.
- Development of the mother tongue is critical for cognitive development and as a basis for learning the second language.
- Teachers must be able to understand, speak, and confidently use the language of instruction, whether it is their first or second language.
- Parental and community support and involvement are essential to all successful programs.
- Development costs for mother tongue programs are not available in ways that would make the information generalizable to other programs. Recurrent costs are: They are about the same for bilingual programs as for traditional programs.
- Cost-benefit calculations can be estimated in terms of cost savings to the education system and improvements in income from additional years of schooling. Both types of calculations are possible in situations where data are available.

Part IV establishes a preliminary framework for use in discussing language matters with officials and educators in Pacific island countries. It summarizes the language in education situation of the countries and offers some preliminary recommendations to ensure effective teaching and learning of both the first and second language.
INTRODUCTION

The purpose of this paper is to summarize the literature on the use of first and second languages in education.

Fiji, the Solomon Islands, Vanuatu, and Western Samoa face daunting language problems. Children in Western Samoa speak Samoan at home; children in Fiji come to school speaking one of 15 mother tongues; children in the Solomon Islands speak one of 60 indigenous languages in their homes, many also speak Pijin; and children in Vanuatu speak one of 100 indigenous languages, many also speak Bislama. In all of these countries, sooner or later, another language is the language of instruction, a language of wider communication little known by the teachers and little understood by the children.

In this paper we address the topics: What have schools done to help children progress to the language of wider communication? What can schools do to help the child move from the language they use in their home to the language necessary to gain access to the world’s knowledge and to integrate within the global economy? What information do we have on language in the Pacific island countries and what additional information do we need?

First we summarize the findings from basic research on first and second language acquisition (Part I). Then we explore experiences from seven countries: Canada, Guatemala, Haiti, New Zealand, Nigeria, the Philippines, and the United States (Part II). We offer conclusions from both the basic research and experiences presented (Part III). Finally we offer recommendations for consideration by the Pacific island countries (Part IV).
PART I: FINDINGS FROM BASIC RESEARCH

There are now hundreds of research studies on acquisition of first and second languages. However, despite the research, many myths and misconceptions persist about children and language learning.

This section discusses these myths, attempting to clarify a number of important issues by presenting findings from research. It is based largely on the work of Barry McLaughlin (McLaughlin 1992), as well as work by Virginia Collier, Jim Cummins, and Lily Wong Fillmore (see bibliography).

Myth 1: Children have learned their first language by the age of six when they go to school.

Many people believe that children have finished learning their first language by the time they go to school. However, current research indicates that at least 12 years are necessary to learn one's first language. In fact, adults are still learning aspects of language all their lives—vocabulary, the social aspects of language, decontextualized language, and pragmatic skills (Collier 1989 citing McLaughlin 1984).

From birth through age 6, children acquire the basics of phonology and extensive amounts of vocabulary, grammar, semantics, and pragmatics. They learn from 8,000 to 12,000 words, or about four words a day. They learn to use word order, and the forms of their language which make a difference to native speakers, for instance, markers to indicate plurals and tense in English. By the age of five they generally have adult-like pronunciation. Moreover, they have an appreciation of words as sounds.

From ages 6 through 12, children accelerate their learning of vocabulary, tripling their word learning rate so that by the age of 20, they will know about 70,000 words or about 20,000 word families. They learn how to talk about complex topics, how to express relations between ideas, and how to use language in a metaphorical way. Much of their development is assisted by acquisition of the complex skills of reading and writing, and their acquisition of information from language arts, mathematics, science, and social studies. Much of the school language is abstract or decontextualized, without the concrete references which supported the language development of the earlier years.

All of this language learning contributes to cognitive development—the ability to plan, remember, categorize, learn intentionally, take several perspectives, understand complex phenomena, analyze and solve problems, and so on. In turn, the cognitive development contributes to language development.

Myth 2: Children learn second languages more quickly and easily than adults.

Many people believe that children acquire languages quickly and effortlessly. This belief is based on observation of children's apparent ease socializing with peers with whom they lack a common language. It is also based on the "critical period hypothesis," an argument that children are superior to adults in learning second languages because their brains are more flexible than those of adults.
In recent years researchers have questioned the validity of the critical period hypothesis, saying that there may be social factors, rather than biological ones, that favor child learners. Such social factors include motivation and incentives for children because children may be placed in more situations where they are forced to speak a second language than are adults. In addition, children may appear to learn more easily than adults because they can learn what is appropriate for their age. The relatively shorter and simpler constructions and smaller vocabulary for children present a much easier task cognitively than the level of competence required for an adult.

Moreover, when controlled research is conducted, in both formal and informal learning situations, results typically indicate that adult (and adolescent) learners perform better than young children. Older children and adults can learn a language easily if they are exposed to the language in ways that support their learning efforts. In fact, they have an advantage over the young child because they bring to the task all of their knowledge and life experience—the full range of their cognitive development.

The exception is in pronunciation where in most cases children do have the advantage. For reasons which are not well understood, children do acquire native-like accent more easily than adults (Asher & Garcia 1969 and Oyama 1976 (cited in McLaughlin 1992).

**Myth 3: The younger the child, the more skilled in acquiring a second language.**

Many people believe that younger is better when learning a second language. Recent research cites evidence to the contrary. A study of 17,000 British children learning French in a school context indicated that, after five years of exposure, children who had begun French instruction at age 11 performed better on tests of second language proficiency than children who had begun at eight years of age (Stern, Burstall, and Harley 1975 cited in McLaughlin 1992). A study of English-speaking children in Canada in late-immersion programs (in which the second language is introduced in grades seven or eight) have been found to perform just as well or better on tests of French language proficiency as children who began their immersion experience in kindergarten or grade one (Genesee 1987). (See Part II for a description of the Canadian early-immersion program.)

Only in the case of pronunciation does the younger is better theory stand up to practice. Studies have found that the younger one begins to learn a second language, the more native-like the accent one develops in that language. cited in McLaughlin 1992).

**Myth 4: The more time students spend in a second language context, the quicker they learn the language.**

This is the more is better myth: that the more exposure to the second language the quicker the learning in the second language. Research has shown that speed of learning a second language is not necessarily related to the amount of exposure to the second language, especially when that exposure to the second language comes at the expense of the development of the first language. For the development of the second language, the amount of time in the first language is much more important than the amount of
time in the second. In other words, development of the first language is more important than time on task in the learning of the second language.

This argument is counter-intuitive, but is borne out in many studies, including those reviewed in Part II of this paper. The apparent anomaly is explained by the "interdependence hypothesis"—that there is a common underlying proficiency for the two languages that makes it possible to transfer academic skills learned in one language to the other language. This common underlying proficiency draws upon access to linguistic universals, as well as the child's academic knowledge, cognitive development, and life experience. All of this proficiency is available once the superficial features of the second language are acquired (Cummins 1981).

**Myth 5: Children have learned a second language once they can speak it.**

Many teachers believe that children have learned a second language when they have developed social communication skills in that language. However, much more is involved in learning a language, especially a language that will be used in a school setting. In school, children have to deal with language in a decontextualized way—without the support from concrete reality that comes from face-to-face communication. For example, the child needs to learn what nouns and verbs are and what synonyms and antonyms are. He or she will have to read a chapter in a textbook and answer comprehension questions, take notes from a lecture, conduct a science experiment, take a standardized achievement test—all abstract tasks which require skills quite different from those necessary to negotiate meaning in a social situation.

Researchers now consider that learning a second language requires learning two different kind of skills: (1) social communication skills; and (2) academic language skills. To learn the first, requires only one or two years; to master the second, at the level approaching grade norms, requires from five to seven years (Cummins 1984).

**Myth 6: All children learn a second language in the same way.**

Although most people would say that individual differences count for a great deal in learning a second language, teaching methods seldom reflect those differences. They seldom adapt to the wide variety of cultural, social, and personality differences in ways of learning that are present in many classrooms.

Cultural differences are reflected, for instance, in the United States by mainstream children and children from other diverse groups. Mainstream American families use language to communicate meaning, to convey information, to control social behavior, and to solve problems. Middle-class parents teacher their children through language. They give instructions verbally to children from a very early age. Other less technologically advanced, nonurbanized societies teach children primarily through nonverbal means. Skills are learned through observation, supervised participation, and self-initiated repetition. There is none of the information testing through questions that characterized the teaching-learning process in American middle-class homes.
Children in some cultures are more accustomed to learning from peers than from adults. When they enter school, they are more likely to pay attention to what their peers are doing than to what the teacher is saying.

Individual differences are reflected in how children react to school and learn. Some children are outgoing and sociable and learn the second language quickly if it is a language spoken by their peers. Other children are shy and quiet. They learn by listening and attending to what is being said around them. The sociable child works well in classrooms where group work is stressed; the child who is actively listening is more apt to succeed in the traditional, teacher-oriented classroom (McLaughlin 1992).

Educators working in the Pacific Island countries should understand the task involved for island children confronted with a Western style education and learning a world language which may be based on values and norms different from the homes and villages of the children. They should endeavor to understand those differences and help the children bridge them. One way of doing this, of course, is beginning preschool and primary instruction in the child’s mother tongue.
PART II: THE CASE STUDIES

OVERVIEW

We have chosen the programs discussed in this paper from among programs which address language issues in multilingual countries. Our basis for selection is threefold:

• They represent well-documented research on second language acquisition and its relationship to academic achievement;
• They demonstrate innovative ways of addressing language matters; and
• They demonstrate lessons relevant to other countries, especially the small island countries of the Pacific.

The programs reflect decisions about the media of instruction on the part of governments, educators, parents and community members. In most cases, the parties took their decisions because they wanted to ensure that their children had access to a language of wider communication, the world of knowledge beyond community and national borders. That desire is fundamental and present everywhere. In addition, the responsible parties wanted to accomplish other kinds of educational and political goals.

The educational goals are

• equity and access (Guatemala, Haiti, and the U.S.);
• efficiency (Guatemala, Haiti, and the U.S.); and
• quality and improvement in student learning (a concern of all programs).

The national political goals are

• consolidation of national identity (Haiti and the Philippines); and
• building a bilingual nation (the Philippines and English and French in Canada).

There is another kind of goal prevalent in some settings—one that does not focus on the student or the nation, but on the group. It is preservation and revitalization of an indigenous language. The Maori programs in New Zealand reflect this kind of goal. The Rock Point Community School in the U.S. does as well. The school began 30 years ago with mainly student educational goals. As fewer and fewer children enter Kindergarten speaking Navajo, the school’s mission has broadened to include preservation of the Navajo language and culture. Mayan language programs in Guatemala will also increasingly reflect this goal, as Mayan groups work for greater support for and control of school programs in Guatemala.

TYPES OF COUNTRIES

We can gain perspective on the language in education issues if we consider that the nations of the world fall into three rough categories:

• Countries where there are no or few mother tongue speakers of a language of wider communication, the language which is used in those countries for secondary level education and for access to the world community. The four Pacific island countries are in this category, along with many African countries. In alphabetical order, we discuss Haiti, Nigeria, and the Philippines.
Countries where there are many mother tongue speakers of the language of wider communication. Many nations are in this category. In alphabetical order, we discuss Canada, New Zealand, and the United States.

COUNTRIES WITH NO OR FEW MOTHER TONGUE SPEAKERS OF THE LANGUAGE OF WIDER COMMUNICATION

Haiti: Education reform


Languages. Haiti has two languages: Creole and French. According to the Constitution of 1983, French is the official language, and Creole and French are the national languages. Everyone speaks Creole; only a few speak French (2 to 5 percent according to Dejean). For more than 150 years, French was the language of education, with the use of Creole prohibited in many schools. In 1979 as part of the movement toward school reform the President decreed that Creole would become the official language of instruction for primary education.

Educational problems. Until the 1980s the main thrust of education had been to prepare a small urban elite. National enrollments were low, especially in the rural areas, where less than half of the children enrolled in school, and of the children who did enroll, only about 20 percent finished grade 6. Of those children who finished, in both urban and rural areas, achievement was low. Educators became convinced that among the causes for the poor educational attainment was a curriculum modeled on that of France in the early part of the century, and the exclusive use of French as the medium of instruction, a language that few teachers had mastered and even fewer children understood.

Reform. In 1982 the Government began a sweeping reform of the educational system. All aspects were to change—objectives, organization, methods, texts, and the language of instruction. Henceforth, education would

- reflect Haitian reality;
- embody global processes;
- provide links to economic development;
- offer accessibility and equity.

It would be mass education. The result would be a more productive work force and hence accelerated development.

---

1 Creole is a language with 95 percent of its words borrowed from French, and with a grammar system that has some similarities to West African languages. No one knows when and how it developed, whether it was before or after the massive introduction of slaves during the spread of the sugar plantations. In either event, by 1720 blacks outnumbered whites (10:1), and by 1750 most residents were speaking Creole (Dejean).
The use of Creole would improve children's learning of subject matter, eradicate illiteracy, help the transition to the learning of French, and promote Creole as an expression of national culture. Creole would be the medium of instruction in grades 1-4, with French introduced orally in grade 1 and in its written form in grade 3. French would be the medium of instruction subsequently.

Besides the use of Creole, there were other sweeping changes mandated by the reform:

- provision for 10 years of basic education; primary was to be in two cycles: four years and three years and secondary in one cycle of three years. At the end of the first cycle of primary (grade 4), the children were to be functionally literate;
- automatic promotion from grade 1 to grade 2 and from grade 3 to grade 4, with the same teacher remaining with the students for the two years;
- emphasis on basic subjects in primary, namely reading, writing, mathematics, and environmental sciences; and
- teaching methodology which encouraged student participation and discovery over memorization and recitation.

The reform was to be implemented progressively, with the schools, both public and private, free to choose whether to participate, and if they participated how much of the reform they would follow. In 1980-81, new curricula, texts, and techniques were tested in 1,000 classrooms.

The World Bank through the International Development Association (IDA) supplied most of the financing and much of the technical support. From 1976 through 1992, the Bank approved four projects with credits totaling US$ 31.5 million. Among other goals, these projects aimed at increasing and correcting inequalities of access, improving relevance and increasing internal efficiency of primary education, and improving overall education management.

Other multilateral and bilateral donors supported the reform as well. U.S. A.I.D. financed a project which aimed to improve the quality and efficiency of the private schools, which in 1982 taught about half of the children enrolled in primary school. Other donors included the United Nations organizations, the Organization of American States, Interamerican Development Bank, and assistance from Canada, France, and Switzerland.

**Evaluation.** The reform aimed to change everything about the way education was conducted in Haiti. It was a reform by decree, with little opportunity for developing understanding and consensus. In spite of the best intentions of the educators who had hoped to modernize the system, the educational ideology and system were at odds with the political

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Legend: N = Number of students tested.

*Source: Locher, Educational Reform in Haiti, Results, Problems and Conditions for Success, 1988.*
structure and the dominant social relations of the country at the time. The entire reform became a political affair—if you were for the reform, you were for the Duvalier government, and if against, you were not. Overall it caused much disruption, confusion, and controversy.

The most controversial aspect was the use of Creole as the medium of instruction. Many parents resisted the use of Creole in schools because they believed it to be the language of the poor and oppressed. They feared that the Government was trying to limit their social mobility by giving them a second-class, marginal education. They questioned why their children should go to school to learn Creole, a language they already knew. Few understood that the use of Creole would provide a more efficient way of learning both content matter and French.

By 1988, only 16 percent schools had accepted the reform program in whole or in part. However, much teacher training had taken place; school buildings and teachers’ residences had been constructed; manuals for students and teachers had been produced, printed and distributed in large numbers; supplies had been distributed, and teachers’ salaries had been increased.

In 1987 the World Bank and UNESCO sponsored a large-scale evaluation of achievement of about 11,000 students in grades 4 and 6. These students had been exposed to the reform for up to six years. On traditional tests in three subjects, mathematics, French, and general studies, students in traditional classes outperformed those in the reform classes. (See Table 1 for the results of the 1987 tests.)

However, despite the fact that the reform students had received only one-third the exposure to French of their traditional counterparts, they had learned as much French as the students in traditional schools. The researchers concluded that there was no first hand evidence of Creole instruction preventing reform students from becoming just as proficient in French as their counterparts in the traditional schools. The researchers also noted that there appeared to be more progress from grade 4 to grade 6 on the reform side than on the traditional side, at least in mathematics, and probably in French as well (if those tests had been available for analysis).

When the researchers analyzed the results along urban/rural and congregational (religious)/nonreligious lines, the traditional classes came out ahead in 13 of the 19 comparisons. The real winners were the congregational or religious schools. They were often better managed than the nonreligious ones, and in addition often had school feeding programs and free textbooks in the lower class areas, and coherent organization and higher levels of teacher competence in the middle class areas. Thus, many of the factors which would have accounted for low student performance were at least partially controlled in the congregational schools. For the researchers, these factors explained student results more than the adoption or nonadoption of the reform program.

Current status. Information on the current situation comes from two sources: report on a 1991 seminar sponsored by the Haitian Foundation for Private Education (Fondation Haitienne de L’Enseignement Prive or FONHEP) and conversations with U.S.A.I.D. officials during the writing of this paper. The 1991 seminar discussed the curriculum in Haiti’s private primary schools, which at the time were responsible for more than 60 percent of the students in primary school. The seminar became an opportunity for stocktaking about the reform, almost 10 years after its decree.
Researchers from the University College of the Caribbean ("College Universitaire Caraibe") presented the results of a study on the status of the curriculum in the Catholic, Protestant and independent private schools. For this study, they observed 75 classes in nine schools in three departments, both rural and urban. They also solicited information from school administrators responsible for the 20,000 teachers in the 4,000 private schools.

In general, the researchers found promise of the reform had yet to be realized. Student repetition and dropout remained high. Teacher preparation was poor. Few schools had written statements on their curriculum with its philosophy, objectives and approaches. Although there was generally one teacher to a class, about 20 percent of the teachers shared rooms with other classes, up to four classes, and teachers, to one classroom. Passive learning was common, with the teacher encouraging recitations and collective repetition or dominating class time with monologues. Throughout the classrooms there was a lack of teaching and learning materials.

However, Creole as the language of instruction has gained in acceptability and use. In 60 percent of the classes observed, the teachers used both Creole and French, in 33 percent only Creole, and in 6 percent only French. In the classes where Creole was used there was more student participation, less collective repetition and less "dead time" where nothing of instructional value was going on.

As of this writing U.S.A.I.D. is working to develop consensus around education issues: raising an awareness of the importance of education and developing a national plan for education. In April, 1994, along with other donors (UNESCO, UNICEF, OAS, and Canada), they sponsored a seminar for a national education plan for the year 2004. Over 450 people attended from all levels of society—the Ministry of National Education, the University and student unions there, representatives from private schools, banks, labor unions, parliament, and political parties. The number one issue was teacher training. (A very high percentage of teachers have only a fourth grade education.) Interestingly enough for this review, the number one issue was not language. There was general acceptance of the use of Creole for the two cycles of primary education.

Costs. Financing for the reform was largely external, with the World Bank, through IDA, supporting the bulk of the developmental costs. The World Bank investments for the reform are estimated at US$ 15 million, about half of the US$ 31.5 World Bank lending to Haiti for education, the other half going to construction of primary schools, and to secondary education and vocational and technical training. Support from other donors (1982-1985), much of which was directed to the reform, has been estimated at US$ 60 million (Locher 1988).

Unit costs in 1988 were estimated to be US$44 to US$374 in private schools and US$122 to US$148 in public schools, including contributions from families of students and from external donors (Locher 1990).

Lessons. Haiti tried to modernize its school system, in all aspects, with its 1982 decree on reform. It was a democratic reform, undertaken in an undemocratic time. Because of widespread opposition, especially to the change of language policy, there was little chance of immediate success in spite of very considerable external financial assistance. However, in spite of the difficulties some positive elements remain. Many educators remain committed to modernizing schooling in Haiti, and even in these very trying times several donors are attempting to help.
What lessons can be passed along to others? There are at least five:

- Instruction in the mother tongue did not prevent students from learning the second language about as well as their peers in traditional schools;
- Well-trained teachers must be available. They must have the competence to deal easily with both the languages of instruction and the subject matter. Indeed, teacher preparation is now seen as the key issue in Haitian education;
- Materials supporting the reform must be available. Although it was not possible to get a count on the book provision, several people interviewed for this review said that the people became resentful when government failed to get the books to the schools at the time and in the numbers that they promised;
- Good school management is essential for successful educational reforms; and
- Strategies must be developed to include the public in the planning and implementation of educational reforms. Rosny Desroches, a former Minister of Education and now Executive Director of FONHEP, the organization which sponsored the 1991 seminar on curriculum, remains optimistic on the reform goals, but cautioned that changes such as this, especially in the medium of instruction, affect the whole society. It is necessary to plan strategically and act wisely when changes of this magnitude are considered.

Nigeria: Six-year primary project

The country. Nigeria is a country of about 100 million people (1991). Like much of Africa, it is very poor, with an annual per capita income of US$ 290 (1991). Literacy is low, 51 percent (1990). In 1960 it gained independence from Britain. In the years since, the country has had at least eight different governments, with control alternating between civilian and military authorities.

Languages. Nigeria is reportedly the most linguistically diverse country in Africa, with over 400 mutually unintelligible languages. An estimated 75 percent of the population speak, as a first or second language, one of three major languages: Hausa in the North, Yoruba in the West, and Igbo in the East. An estimated 30 percent speak Nigerian pidgin, either as a mother tongue or as a lingua franca. Except for foreigners living in the country, there are no mother tongue speakers of English, the language of wider communication, although about 1 percent of the population speak English as a second language. (Akinlasso 1993, Grimes 1992, and Oladejo 1991)

Language education policy has evolved over the last century. In the 1840s Christian missionaries began to educate the indigenous people in their mother tongues, as a way of better communicating their religious message. In 1925 a Memo on Education in British Colonial Territories approved the use of mother tongues in education. In 1977 Nigeria established a mother tongue policy for education. The medium of instruction would be:

- grades 1-3: the mother tongue or the dominant language of the community; and
- grades 4-6: English, with encouragement to learn one of the three major languages as well.
Educational problems. In the Western states there had been a tradition of Yoruba-language education for the first three grades, switching to English for the final three, and culminating with a Primary Six School Leaving Examination in English. With increases in numbers of students, educators believed that proficiency in English on the part of both teachers and students had declined. Indeed, the Survey of English Language Teaching in Nigeria (1966) highlighted a serious English language teaching problem. Furthermore, educators believed that many students who completed grade 6 were not proficient either in their mother tongue or in English.

Six-year primary project. Educators at the University of Ife wanted to explore other options. They wanted to compare students using Yoruba as the medium of instruction for all six years of primary, with English as a subject in grades 2-6, to students in traditional classes, with Yoruba instruction for only the first three years of primary. In addition, they proposed to enrich the curriculum, and to use specialist teachers of English.

They had three hypotheses:
- that the experimental children would not be worse academically than the children who followed the conventional route;
- that knowledge and performance in English language of experimental children would not be worse than those of children who followed the conventional route; and
- that the experimental children would be better adjusted, more relaxed, enterprising, and resourceful than the children who followed the conventional route.

With support from the Ford Foundation, this experiment became the Yoruba Six Year Primary Project. Its goals were to
- use Yoruba as the medium of instruction;
- teach English effectively;
- develop as primary education curriculum with a strong surrender value, since primary education was terminal for most Nigerian children; and
- develop culturally relevant materials together with appropriate methodology.

The project included reorganization of curriculum areas, development of new course materials in Yoruba (not translations), specially selected project teachers, new course materials for English as a second language; and a change of teaching methodology with more flexible scheduling and more student participation and homework.

The original project design provided for two groups at the same school in Ile-Ife. One was to have Yoruba as the medium of instruction for all subjects, except for English which was to be taught by a specialist teacher. The other was to have Yoruba for only the first three years, and no specialist English teacher. Both groups would have new curricula and materials.

In 1973, three years into the project, the project was extended to ten other “proliferation” schools outside Ile-Ife in order to take into consideration both urban and rural schools. The new experimental classes did not have specialist English teachers, because the authorities decided that such specialists could not be sustained once project funding had ended.
Evaluation. In 1976 the researchers began a longitudinal study to compare the achievement of five groups:

- Pilot experimental (PE): Yoruba grades 1-6, new curriculum, specialist English teacher. (Number = 66 in grade 1; 55 by grade 6);
- Pilot control (PC): Yoruba grades 1-3; new curriculum, no specialist English teacher. (Number = 27);
- Proliferation experimental (PrE): Yoruba grades 1-6; new curriculum; no specialist English teacher. (Number = 144 from two urban and two rural schools);
- Proliferation control (PrC): Yoruba grades 1-3; new curriculum; no specialist English teacher. (Number = 94 from one urban and one rural school); and
- Traditional Control (TC): Yoruba grades 1-3; traditional curriculum; no specialist English teacher. (Number = 112 from one urban and one rural school, with at least 20 dropouts)

From grade 4 on, the experimental classes outperformed the control classes in most academic areas, and in all tests of English achievement. (See Table 2 for results of 1976-1979 tests in English.)

In other tests the experimental students demonstrated that their six years of Yoruba had not handicapped them. In the School Leaving Examination (1974-75), there were no significant differences between the experimental group (43 students) and the control group (32 students). On the National Common Entrance Examination (1974-75) there were no significant differences in English scores, although the number was small (25 for experimental and 8 for the control). In 1975 a significantly larger proportion of the experimental students gained entry into secondary schools than did their counterparts in the control or traditional classes. According to tracer studies (1979-1985), graduates who had gone on to secondary

<table>
<thead>
<tr>
<th>Table 2. Nigeria: Results of 1976-1979 tests in English language, Six year primary project</th>
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</thead>
<tbody>
<tr>
<td><strong>Urban schools</strong></td>
</tr>
<tr>
<td>Primary 3 (1976)</td>
</tr>
<tr>
<td>English Oral</td>
</tr>
<tr>
<td>English Reading</td>
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<td>English Writing</td>
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<td>Primary 4 (1977)</td>
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<td>English Language</td>
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<td>English Language</td>
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<td>Primary 3 (1976)</td>
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<td>English Reading</td>
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<tr>
<td>Primary 4 (1977)</td>
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<tr>
<td>English Language</td>
</tr>
<tr>
<td>Primary 5 (1978)</td>
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</tbody>
</table>

Note: See previous page for key for types of groups: PE, PC, PrE, PrC, and TC.
school demonstrated superior abilities in most of their school subjects.

Thus, the first and second hypotheses were confirmed: that students with six years of mother tongue instruction would be no worse than students from traditional classes. The third was confirmed as well: that the students would benefit socially as well. On sociometric tests to assess affective outcomes, experimental students showed that they were slightly above average in social acceptability and notably above average in acceptability as leader, and as companions for study and play.

Nigerian scholars have drawn various conclusions from this evaluation. All agreed that the experimental groups performed better. Bamgbose has stated that the likely reason for the superior performance was not the specialist teachers or the new curriculum materials, but the use of Yoruba as the medium of instruction. Fafunwa, Macauley, and Sokoya have concluded that the experiment demonstrated that a Nigerian language was suitable for education, indeed that Nigerian and other African languages were rich and flexible enough to express scientific concepts and ideas. Akinnaso has written that although the project was successful, there were too many confounding variables to conclude that mother tongue was the cause of the superior performance. His conclusion was that the use of the mother tongue was not causal, but facilitating.

**Costs.** Financial support came from four sources: the Ford Foundation, the Universities of Ife and Ibadan, and the Western State Ministry of Education. From the Ford Foundation:
- at least US$ 420,000 for operational costs and evaluation;
- specialists, two years full-time and three-years part-time;
- equipment; and
- scholarships to the U.S.A. for higher degrees and visits.

From the University of Ife
- approximate equivalent of US$ 170,000 in local currency;
- nine staff members; and
- office space.

From the University of Ibadan
- evaluation assistance.

From the Western State Ministry of Education
- free access to selected schools;
- specially selected teachers; and
- help from inspectors.

**Current status.** The Six Year Primary Project in Yoruba has been adopted on an experimental basis in two Yoruba-speaking Western states, Oyo and Ogun. It is being introduced progressively in these states which are the only two linguistically homogeneous states in the country. Of the 146 textbooks published by the project, several have been translated into other local languages. At least 10 (out of Nigeria’s 21) states have used the material.
Lessons. There are two major lessons from the Six Year Primary Project:

- An indigenous language can be used successfully for education. In this case, the indigenous African language proved rich and flexible enough to express scientific concepts. This experience suggests that indigenous languages elsewhere could be adapted as well; and

- Time spent in using the mother tongue did not take away from the successful learning of the language of communication. Researchers would now conclude that the use of the mother tongue facilitated the cognitive development upon which the acquisition of the second language depends.

Philippines: Bilingual education policy

The country. The Philippines is a country of almost 63 million people, with a per capita GNP of about US$ 740 (1991). The literacy rate is 90 percent (1990). Colonized by the Spanish in the 16th century, it was a Spanish colony for over 300 years, and a U.S. occupied territory for almost 50 years (1898-1946). It became independent in 1946.

Languages. The Philippines presents a complex language picture with more than 160 separate languages (Grimes 1992). Seven languages have more than one million native speakers, and two of these—Tagalog and Cebuano—have more than 10 million native speakers each. In 1946 at independence, Pilipino (based on Tagalog) and English were declared the official languages; Pilipino because Tagalog was the language of the area around Manila the capital and had a century-old tradition of written literature, and English because of its place as a language of wider communication. Those languages remain official today, except that in 1987 Pilipino, with the addition of some vocabulary elements from other Philippine languages, became Filipino. An estimated 25 percent speak Filipino as a mother tongue and an additional 50 percent as a second language, a percentage that is growing. An estimated 50 percent speak English as a second language, the result of widespread public schools, in English, during the American occupation and subsequent education policy (Gonzalez in Baldauf and Luke 1990).

Bilingual educational policy. In 1974 the Department of Education and Culture mandated the use of English and Pilipino (later Filipino) as media of instruction in Philippines primary and secondary schools. Before that time the emphasis was on English, but the practice was variable, often beginning with the regional lingua franca in the early grades and then moving into English, with some teaching of Pilipino. The purpose of the new bilingual policy was to help the Philippines to become a bilingual nation, competent in both Pilipino and English. This competence was expected to have both education and civic outcomes: improvement of the ability of the students to learn subject matter and development of nationalism among the young. Under this policy, beginning in grade 1 and continuing through grade 10, the last year of secondary school, English was to be used for the English language, science and mathematics, and Pilipino for everything else. The local vernaculars were to be used in grades 1 and 2 only when necessary to facilitate understanding of what was being taught in English and Pilipino. In 1978 a further departmental order required that Pilipino be the medium of instruction in the colleges and universities as well, an order that was subsequently only partially implemented.
Evaluation of the bilingual education policy, 1985. After 10 years of implementation, the Directors of the Linguistic Society of the Philippines undertook a summative evaluation for the Ministry of Education. The goal was to obtain a cross-sectional picture of academic achievement in Filipino and English communication arts, as well as in the content subjects taught in Filipino and in English. Generally, the investigation was to determine whether the bilingual education policy was responsible for the perceived poor quality of education, especially in the public schools and in rural areas, and the perceived deterioration in the knowledge of English. Specifically, the investigation tested four hypotheses:

- That there is a positive, substantial and significant relationship between academic performance in Filipino and academic performance in English;
- That there is a positive, substantial and significant relationship between academic performance in Filipino and academic performance in the other subject areas;
- That academic performance in Filipino is directly related to measures of nationalism; and
- That these relationships hold true even when controlling for the intervening effects of general mental ability, home background, school quality and grade level.

Researchers tested over 7,000 students in 136 schools throughout the country, testing at the three main exit points of the system—grade 4, grade 6, and grade 10, the last year of secondary school. The independent variable was length of exposure to bilingual school; the dependent variables were achievement test results in language and subject matter and indices of nationalism. Background variables included:

- School: location; public or private; quality according to the standards of the Philippine Accrediting Association of Schools, Colleges and Universities; attitudes of principals, parents, and faculty toward bilingual education policy;
- Teacher: Competence as measured by tests on subject matter knowledge; attitudinal and linguistic nationalism scales; and
- Student: grade level, socioeconomic status, ethnic group, general mental ability.

The researchers carried out a variety of multivariate statistical analyses, which took into account the complexity of the background variables and their interrelationships with the independent variables and each other. Their overall conclusion was that there was a real failure of achievement on the part of students and their teachers throughout the system, but especially at the secondary level. In terms of the hypotheses, they found that:

- There was a positive relationship between academic performance in the two languages, but it was not related to amount of time spent in the bilingual education program;
- Competence in English predicted success more than competence in Filipino, even for subjects taught in Filipino;
- There was no unequivocal relationship between proficiency in Filipino and indicators of nationalism (desire to work or live abroad; attitude which equates ability to speak Filipino with Philippine nationality); and
- Socioeconomic status was the biggest predictor of achievement. Students who came from a Tagalog or English speaking area, especially in metropolitan Manila, and went to an excellent school...
outperformed the others. The second biggest predictor of achievement was proficiency of teachers in their respective subjects. If teachers had not mastered their subject matter, and the tests which teachers took indicated that they had not, especially the secondary school teachers, their students also failed to master that subject matter.

The researchers concluded that the bilingual education policy was not the cause of the perceived deterioration in the system because the amount of time implementing the program in each school was not significantly related to student achievement. Instead, the deterioration, if it exists, could be ascribed to other causes, mainly lack of competent teachers, lack of materials, and lack of financial support.

They made many recommendations to the Ministry of Education and the general public. A few are summarized below:

- If Filipino is to be a national language, it must be capable of making the world’s knowledge accessible in Filipino. For this to happen, “creative minorities”, preferably at the university level, working in engineering, medicine, physical science etc. should work to expand the special varieties of the language necessary;
- Vernaculars in non-Tagalog areas should be used as languages of transition, with both trained teachers and appropriate materials;
- When programs as important as the bilingual education of an entire people is planned, there should be a well-planned information campaign undertaken at the highest levels of government; and
- Teachers’ knowledge and skills should be upgraded, especially among secondary school teachers. Priority should be accorded to developing their knowledge of subject matter.

Current status. Since the 1985 evaluation there has been no formal evaluation nationwide of the language policy. The bilingual education policy continues, receiving support for political, nationalist reasons. Blaming of the policy for the suspected continuing “deterioration of English” also continues in face of evidence that it may be the enduring poor quality of general education, not the language of instruction, which should take the blame.

The intellectualization or language development work necessary to make Filipino truly capable of expressing the world’s knowledge has proved to be a much slower task than originally envisioned. Gonzalez, of the Linguistic Society of the Philippines and a principal investigator for the 1985 evaluation, has estimated that intellectualization of the social sciences for use at the secondary level is underway, but that perhaps another 50 years will be necessary to complete the process for use at the tertiary level. The process has not begun for the natural sciences and technology. He speculates that if they are to be learned through Filipino, and research is to be conducted at the university level, then another 100 years would be necessary.

Although there has been no attempt to suppress the many other mother tongues, their use in schools has not been addressed systematically. The exception is the work of such groups as the Summer Institute of Linguistics, a private religious and education group, who insist that the mother tongue is the best means of literacy.

Costs. There was no cost information on the bilingual education programs available for this review.
Lessons. The Philippine experience, and the detailed, multifaceted evaluation of 1985, offer many lessons for other multilingual countries. At least five come to mind:

- The significant advantages demonstrated for the Tagalog-speaking students provide confirmation of advantages that accrue to individuals who have the good fortune to develop literacy skills and study content material in their mother tongue;
- The especially poor performance of the minority language groups has implications for governments of similar countries. They must ensure that resources are available to sustain the educational offerings. These resources include teachers trained to teach in the minority languages and materials appropriate for the language, the content, and the child;
- Rigorous teacher preparation in subject matter is essential to all quality education programs;
- The time and talent necessary for the intellectualization of a language that has not been widely used for higher level education, in this case Filipino, have implications for countries considering adapting an indigenous language for use through all levels of education. The 50-100 year time horizon for this process is much longer than envisioned when pronouncements are made about use of such languages at the tertiary level of education, and beyond for research; and
- The importance of a broad public education campaign when changes of the magnitude of the bilingual education policy are being made has implications for countries who are contemplating such a change—or who have made the change and do not have popular support.

COUNTRY WITH SOME MOTHER TONGUE SPEAKERS OF THE LANGUAGE OF WIDER COMMUNICATION

Guatemala: National program for bilingual education (PRONEBI)

The country. Guatemala is a country of 10 million people (1993). It is one of the poorest countries in the Americas, with an annual GNP of US$ 930 (1991). Literacy is 55 percent (1990). About 52 percent of Guatemalans are Indians; about 48 percent are "Ladinos", a mixture of the Mayans and the Spaniards who conquered the area in the 16th century. Over 60 percent of Guatemalans live in the rural areas and most of them are Indians. The history of the country is one of Ladino dominance over the Indians, with occasional outbursts of violence from both sides. Such violence peaked in the early 1980s.

Languages. According to government records, Guatemalans speak 24 languages. (Some linguistics estimate more. The Grimes Ethnologue lists 52.) Spanish is the official language and until recently the only language of education. It is spoken as a mother tongue by roughly half of the population; the other half speak mainly Mayan languages. About 75 percent of the Mayan language speakers speak one of four Mayan languages—Kaqchikel, Q'eqchi', Mam, and K'iche'. Rural Indians are often monolingual in their own language; urban Indians are often bilingual in the Mayan language and in Spanish.

Educational problems. In the 1960s the authorities recognized that Indian children were having difficulty learning Spanish and staying in school. In 1965 the government began a program of teaching Spanish to children in preprimary classes (classes similar to kindergarten). They hired bilingual helpers, and offered the classes in Spanish throughout much of the rural areas. By 1984, over 1,000 bilingual helpers were working with children from 10 different Mayan language groups. However, despite these efforts,
education was reaching less than half of the population. Only 40 percent of the rural Mayans enrolled in school, and of those who enrolled, 50 percent had dropped out by the end of grade 1.

Bilingual education program. With financial assistance from the U.S. Agency for International Development (A.I.D.), the Government began a pilot project in bilingual education (1980-84). Its aim was to design linguistically and culturally relevant curricula for the four major language groups. The program used a transitional model of bilingual education, with the first language of the child being used as a bridge to the second language, Spanish. The pilot was implemented in Preprimary through grade 2 classrooms in 40 schools, 10 schools each in the four main language areas. There were control groups in an additional 40 schools. Materials were developed and bilingual teachers were trained. By the end of the pilot period there were 5,600 children in the bilingual classes in the project schools. Results for the pilot classes were positive in terms of achievement and retention rates; parents were generally supportive.

In a follow-on project (1985-1993), A.I.D. supported an expansion of the program, which had by now attained official status as the National Program for Bilingual Education. PRONEBI (the acronym in Spanish) gradually expanded into 400 “complete” schools, 100 each in the four major language areas, preprimary through grade 4. In addition, it worked only with preprimary in another 400 “incomplete” schools within the same language groups. By 1990, there were about 100,000 children being covered in the 400 complete schools offering the preschool through grade 4 program.

During this phase of the program about 1,100 teachers taught in the PRONEBI schools. Of these, only 73 percent were bilingual in a Mayan language and Spanish, although the aim was for all of them to be bilingual. PRONEBI bilingual supervisors trained about 860 teachers, of which 730, or 85 percent, were bilingual. Conducted in both a Mayan language and Spanish, training included the use of the Mayan language in the classroom, the use of the textbook, bilingual education methodology, and some aspects of community development. During this period, PRONEBI changed the education model to a parallel model of bilingual education, with bilingual and bicultural objectives and with some mother tongue instruction from preschool through grade 6. In most of the PRONEBI schools, however, where there were bilingual teachers, the time for each language was roughly as shown below:

<table>
<thead>
<tr>
<th>Mayan languages</th>
<th>Spanish</th>
</tr>
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<tbody>
<tr>
<td>Preprimary: 85-90 percent</td>
<td>10-15 percent</td>
</tr>
<tr>
<td>Grade 1: 80 percent</td>
<td>20 percent</td>
</tr>
<tr>
<td>Grade 2: 60 percent</td>
<td>40 percent</td>
</tr>
<tr>
<td>Grade 3: 50 percent</td>
<td>50 percent</td>
</tr>
<tr>
<td>Grade 4: 50 percent</td>
<td>50 percent</td>
</tr>
<tr>
<td>Grade 5: 0 percent</td>
<td>100 percent</td>
</tr>
</tbody>
</table>

In a third project (1989-1995), A.I.D. is assisting in the consolidation of PRONEBI. A.I.D. and government officials decided to concentrate on the 400 complete and 400 incomplete schools for now, with the government taking responsibility for gradually extending PRONEBI through the incomplete
schools. Linguistic maps are being prepared so that the program could be adjusted according to the
degree of monolingualism and bilingualism within the four Mayan language areas. Materials are being
revised to improve their usefulness in the classroom, and the ongoing teacher training is continuing to
improve teacher confidence and skill in the use of the Mayan language in the classroom.

**Evaluation.** PRONEBI has represented a remarkable reform in Guatemala's educational system. It has
focused Ministry attention on issues of quality and relevance in the rural curriculum. It has legitimized
the use of the mother tongue by the students, and it has empowered the bilingual teachers so that they
are now a vocal part of the Guatemalan political scene.

Evaluation measures over the years have considered several dimensions: parental attitudes; school access
and efficiency; quality; and student achievement in the languages and the content areas. In 1992 a
survey on parental attitudes indicated that three-quarters of the parents knew that there was a bilingual
school in their community and that the teacher could speak the local Mayan language. There appeared
to be a trend in the direction of increasingly positive views about instruction in the two languages, but
one of the parents' primary concerns was that their children gain Spanish language skills.

*Access* to schooling (as measured by enrollment as percentage of school age children) and *efficiency* (as
measured by promotion and retention rates) have improved for all rural children, but it is difficult to say
that PRONEBI is the direct cause of those improvements. In 1989-91 both PRONEBI and non-PRONEBI
students demonstrated similar trends of increase in promotion and retention rates. In 1986-1991 for
PRONEBI alone, there was a gradual improvement in promotion rates; for grade 1 from 60 percent to
82 percent; for grade 3 from 70 percent to 87 percent; and for grade 5: 81 percent to 90 percent.

In 1992 a school-based survey indicated that *school quality* was better in PRONEBI schools than in
traditional ones. Teachers showed a greater adherence to schedules, and they provided students with
more time on learning-related tasks than did their traditional counterparts.

*Student achievement* tests have given the edge to PRONEBI students. For the evaluation of the second
project, researchers analyzed tests given during 1986-1991. All of the tests were in Spanish, except for
the Oral Maya tests which were in a Mayan language. The evaluators selected the ten largest and most
complete data sets which included subject matter tests given to all four linguistic groups and controls.
They found that PRONEBI students outperformed students in comparison schools on six out of seven
measures of academic achievement where significant differences were found. Most importantly, the
results of tests at grade 3, where children would have been exposed to the bilingual program for four
years, showed the following:

- Written Spanish (1 test): no significant difference between groups;
- Mathematics (2 tests): PRONEBI significantly higher in one; no significant difference in the other;
  and
- Social Studies: PRONEBI students significantly higher.

Thus, despite spending less time in Spanish, PRONEBI students are doing as well or better than the
controls in the three subject matter areas tested. (See Table 3 for results of 1986-1991 tests.)

Another evaluation sheds light on the above scores, and helps explain why the PRONEBI scores in Table 3
are not higher than one would expect given the advantages of education in the mother tongue. In 1987, when
the program was operating in 350 schools, researchers analyzed the differences among three types of schools: (1) schools which met all the defining characteristics for PRONEBI, including bilingual teachers, teacher training, use of PRONEBI materials, and acceptance by the teachers of the bilingual education philosophy; (2) schools in which some of those characteristics were met; and (3) traditional Spanish-medium schools. Average scores on achievement tests in second grade, based on the objectives of national curriculum guides, showed clear advantages for PRONEBI students. (See Table 4 for 1987 results of second grade tests.)

In these tests the scores are higher for all subjects, except Spanish, for students in the full PRONEBI program. Thus, when the program is fully implemented the results are higher than for the other groups. The lower score in Spanish reflects the less time devoted to Spanish by second grade. Scores in third and fourth grade were expected to show greater gains, but unfortunately data on the succeeding years were not available for our review.

**Current status.** In 1993 there were over 160,000 students enrolled in the 400 complete and 400 incomplete schools. This number represented about 30 percent of enrolled Mayan children 6-12 years old, or 13 percent of all Mayan school age children.

**Costs.** A.I.D. investment costs over the 15 years of PRONEBI's existence, as both pilot and program, have totaled about US$ 20 million. At the time of the pilot, alphabets had been developed for the four Mayan languages, but little had been written using the alphabets beyond material of a religious nature. The languages had not been standardized, which means there had

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### Table 3: Guatemala: Results of 1986-1981 tests, PRONEBI

<table>
<thead>
<tr>
<th>Grade 1</th>
<th></th>
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<tbody>
<tr>
<td>Test Type</td>
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<td>62</td>
</tr>
<tr>
<td>Year</td>
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<td>Number</td>
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<td>Test Type</td>
<td>Oral Mayan</td>
<td>77</td>
<td>74</td>
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<tr>
<td>Year</td>
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<td></td>
</tr>
<tr>
<td>Number</td>
<td>2,376</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Type</td>
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<td>33</td>
<td>30</td>
</tr>
<tr>
<td>Year</td>
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</tr>
<tr>
<td>Number</td>
<td>307</td>
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<td></td>
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<td>Test Type</td>
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<td>82</td>
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<tr>
<td>Year</td>
<td>1991</td>
<td></td>
<td></td>
</tr>
<tr>
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<tr>
<td>Test Type</td>
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<td>62</td>
<td>69</td>
</tr>
<tr>
<td>Year</td>
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<tr>
<td>Test Type</td>
<td>Mathematics</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Year</td>
<td>1990</td>
<td></td>
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<tr>
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<tr>
<th>Grade 3</th>
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<tbody>
<tr>
<td>Test Type</td>
<td>Mathematics</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>Year</td>
<td>1986</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>757</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Type</td>
<td>Mathematics</td>
<td>37</td>
<td>36</td>
</tr>
<tr>
<td>Year</td>
<td>1987</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>746</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Type</td>
<td>Social Studies</td>
<td>42</td>
<td>39</td>
</tr>
<tr>
<td>Year</td>
<td>1987</td>
<td></td>
<td></td>
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<tr>
<td>Number</td>
<td>424</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Type</td>
<td>Spanish</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Year</td>
<td>1987</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>749</td>
<td></td>
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</tr>
</tbody>
</table>

**Legend:**
- **Pilot** PRONEBI pilot schools
- **Control** control schools
- **S** Statistical significance of test score differences
- **n** no statistical difference
- **s** statistical difference
- **Number** Number of students tested
- **N.A.** Not available.

**Source:** U.S.A.I.D., Rural Primary Education Improvement Project, Guatemala. Final Evaluation, 1993.
not been general agreement among
native speakers about which dialect
down within each language should be
chosen for education. There were
few Guatemalans experienced in
producing children's learning
materials and few Guatemalan
linguists available to help with
curriculum and materials development, as well as teacher training. Thus, much of the A.I.D. investment
supported development of an educational and linguistic infrastructure—materials writers, supervisors,
and teachers as well as the development of materials and tests, and their implementation. In addition,
the A.I.D. investment has supported some recurrent costs, including that of core PRONEBI staff (Diaz,
1994).

The World Bank has supported investment in PRONEBI as well, with almost US$1 million for textbooks
and educational materials from the Basic Education II project.

Recurrent costs for PRONEBI are low. At the present level of service total recurrent costs are estimated
at Quetzals 26.3 million a year. Divided by 107,000 students the unit cost, or cost per student per year,
is Q. 246 or US$ 42 (using an exchange rate of Q. 5.8 to US$ 1). This unit cost is slightly more than the
unit cost for traditional primary (Q. 235 or US$ 41), using 1993 statistics from the Center for National
Economic Studies ("Centro de Investigaciones Economicas Nacionales").

Lessons. Through PRONEBI, Guatemala has confronted the problem of educating a significant
proportion of its people who had been marginalized from the larger society. Over the last decade and a
half, it has given strong evidence that native speakers of the Mayan languages can succeed in Guatemalan
schools if their first language is given support and development as they are learning the second language.

There are at least four specific lessons from which other countries can learn:

- Children can learn the language of wider communication if they begin their education, including the
  development of literacy, in their mother tongue. This learning draws upon cognitive development in
  the first language and is encouraged by the self-esteem which comes from acceptance and success;
- Educational and linguistic capacity is critical. There are now a number of Guatemalan university-
educated educators and linguists, who advocate bilingual education. Most of these people were
developed because of PRONEBI;
- Political strategies are important. In the early years PRONEBI had strong political support from the
top—the President of the country, the Minister of Education, and high-level military officials, along
with the continual interest of the U.S.A.I.D. This support enabled it to survive, despite the extreme
violence throughout the countryside during those early years; and
- These changes take time. They do not come easily within a society, and after more than 15 years
there are still a number of problems to solve.

Table 4: Guatemala: 1987 Results of Second Grade Tests, PRONEBI

<table>
<thead>
<tr>
<th>Types of Schools</th>
<th>Mathematics</th>
<th>Spanish</th>
<th>Science</th>
<th>Mayan</th>
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<tr>
<td>PRONEBI (full)</td>
<td>45.6</td>
<td>32.4</td>
<td>49.6</td>
<td>46.6</td>
</tr>
<tr>
<td>PRONEBI (partial)</td>
<td>33.6</td>
<td>31.7</td>
<td>24.1</td>
<td>36.4</td>
</tr>
<tr>
<td>Traditional</td>
<td>40.1</td>
<td>36.4</td>
<td>36.4</td>
<td>-</td>
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</tbody>
</table>

*Source: Scott and Simon Chua, 1987.*
COUNTRIES WITH MANY MOTHER TONGUE SPEAKERS OF THE LANGUAGE OF WIDER COMMUNICATION

Canada: French immersion programs

The country. Canada is a country of almost 27 million people, with an annual per capita GNP of US$ 21,000 (1991).

Languages. Canada is a bilingual country; 98 percent of the people speak either English or French, the official languages, both of which are languages of wider communication. About 6 million Canadians, or 22 percent, speak French as a first language, living mainly in the province of Quebec, where about 80 percent speak French as a first language. The Constitution and federal legislation guarantee the equality of the two languages in federal institutions and the public’s right to receive federal government services in the language of their choice. Since the 1970s the federal government has transferred funds to the provinces for development of both French and English.

Political and educational environment. In the 1960s the political environment in Quebec was one of heightened tension between the French and English speakers, with many French speakers advocating an independent, monolingual French state for Quebec. Within that climate, a few monolingual English speaking parents in Quebec realized that their children were not learning much French although they studied French through both elementary and secondary school. The parents wanted to improve their children’s learning as a way of bridging the cultural and linguistic gap between the two groups and as a way of preparing their children for what was becoming an increasingly French-dominant situation.

St. Lambert experiment. Parents in the St. Lambert suburb of Montreal, Quebec pressured the school to begin an experimental French immersion program. In 1965 the school began such a program, with a kindergarten class of 26 children. The program design included all subjects in the traditional schools, but with change in the medium of instruction as shown below:

- Grade 1-2: 100 percent of the time in French
- Grade 3: 60 percent French; 40 percent English
- Grade 4-6: 40 percent French; 60 percent English
- Grade 7-11: 40 percent French; 60 percent English.

The program aimed for
- competence in written and spoken French;
- maintenance of normal levels of English language development;
- achievement in academic subjects; and
- understanding and appreciation of French Canadians without detracting from English Canadian culture.

The initial results showed that the program was very successful. Students learned French better than their counterparts in traditional programs at no loss to their English development; they achieved the same level of content subject mastery as students in traditional programs.
Current status. By 1993, about 300,000 students—or 7 percent of total national enrollments in grades 1 through 12—were enrolled in French immersion programs. The programs have taken several forms, depending on the timing of the introduction of French and the amount of instruction in both languages. Parent involvement has remained strong, with groups like the Canadian Parents for French serving as both lobby and information clearinghouse for the program in Ottawa.

Evaluation. Over its 30 year history, there have been many longitudinal studies, annual achievement evaluations, and specific research studies conducted with participants in these programs. This research has used standardized language and achievement tests, psycholinguistic and cognitive measures, and a variety of attitude measures. The general findings are summarized below:

- First language (English) skills: In the early grades the immersion students are below the others in English literacy but on par with others in their English oral skills. By grade 3 they begin to catch up. By the end of grade 5 they perform as well or better in English than their English-only educated peers, and significantly better in English punctuation, spelling, and grammar than those peers;
- Second language (French) skills: Immersion students demonstrate higher levels of French language proficiency than do similar students in traditional classes. They are closer to native proficiency in reading and listening than in speaking and writing. In speaking and writing they use a more restricted vocabulary, and a more simplified grammar than do the native French speakers;
- Academic achievement: Immersion students score as well as the others in content subjects, even in the early grades; and
- Student attitudes: In interviews, Grade 11 immersion students reveal more satisfaction with French learning than do their traditional counterparts. They are confident that they could work, study, and live in a French environment, and are willing to meet and integrate with French-speaking Canadians.

Studies have examined the performance of English-speaking children in immersion classes at risk of failure for one of several reasons: below average general ability, poor first language ability, low socioeconomic status, and ethnic minority status. (All of these so-called at-risk children speak a variety of the majority group language—English. They are not at risk because of a lack of or limited proficiency in English.) These studies show that the at-risk children demonstrate the same levels of English development and academic achievement as similar children in traditional programs, but with more French development than those in traditional programs.

Other studies have examined the performance of students in immersion programs for whom French is a third language. One such study concerned students who speak one language in their home, have learned English from their siblings or from friends and at school, and are adding French. Speakers from a Romance language (Italian) and non-Romance languages showed that while the Romance language speakers were better than their non-Romance language peers in learning French, both groups were better than the English-only children on French tests, namely measures predicting French grammar and vocabulary and on French oral usage. Another study highlighted the importance of literacy in the mother tongue. It showed that minority language children who were literate in their first language outperformed those minority language children who were not literate in their first language on all significant measures of French language performance. Thus, minority language literacy had an enhancing
effect on third language learning, a finding that showed up irrespective of the socioeconomic status of the children's families.

Costs. Information on development costs for the French immersion program was not available. However, they should include:

- recruiting French-speaking teachers;
- training French-speaking teachers in ways of teaching content and meaning to students with little knowledge of French; and
- developing special content matter texts.

Recurrent costs for immersion and tradition programs are about the same. According to a 1990 study by the Carleton Board of Education (Carleton, Ottawa), Carleton spent $4,428 a year to educate an elementary student in regular English classes, and $4,453 a year to educate an elementary student through French immersion. The $25 difference was mainly offset by grants from the federal government.

Lessons. Canadian French immersion programs are the most well-known foreign or second language programs in North America. They have been successfully used as a model for programs in the United States where majority language speakers, from the dominant social group, are taught through a minority language as well as their own majority language (English).

They have also served, less successfully, as a model for many programs in the U.S.—so-called submersion programs where language minority children have been put in a sink-or-swim English environment. This model has been a poor fit because the French immersion programs, though often beginning instruction in the second language, are bilingual programs aiming to develop the first language as well, which the submersion programs do not. In addition, it is believed that middle-class language majority children, like the English-speakers in Canada, can succeed initially in a second language environment because their first language continues to be developed in the home and in the English context in which they live. Disadvantaged language minority children often do not have the support for learning in their first language that they can apply to learning in the second language.

Other attempts to adapt this model might be based on the argument that it provides maximum exposure to the second language being learned, and therefore would expedite that language development. In fact, there is ample evidence from a number of research studies cited in this paper that more exposure in the second language, to the exclusion of instruction in the first, is not necessarily better; but rather that the fullest possible development of the first language provides the strongest basis for learning the second.

However, there are at least three aspects of the program that are applicable to other situations:

- The parents take very seriously the goal of facilitating the fullest possible development of the mother tongue, although the programs do not begin with the mother tongue;
- The program has full parent support. It was the parents’ concern which instigated the program, and parents must chose to have their children participate in the program; and
- Two curriculum features are replicable elsewhere: (i) integration of language and academic instruction. Content instruction is a powerful means for promoting second language learning. It provides intrinsic motivation for students. If they are motivated to succeed with their academic tasks, they find that
language is the vehicle for this success; and (ii) interaction as the basis for instruction. Teachers and students must negotiate meaning. Teachers have to modify their talk so that they will be understood. They must be sensitive to the students' nonverbal feedback and questions. Students must take responsibility for ensuring that they learn the meaning behind the words, and question their teachers if they do not, either nonverbally, through the second language, or through the first.

**New Zealand: Maori Programs**

*The country.* New Zealand is a country of 3.4 million people, with an annual per capita GNP of US$12,000 (1991). About one-tenth of the population are Maori, a Polynesian people from Tahiti or Rarotanga who are said to have arrived in the islands in the Ninth Century. The British colonized the country in the 19th century.

In 1840 the Maori Chiefs and representatives of the British Crown signed the Treaty of Waitangi. Through this treaty, governance was ceded to the British Crown in return for guarantees to the Maori about their lands, forests, and fisheries. The guarantees were not always honored, although in recent years, the Treaty has been interpreted as establishing a bicultural partnership between the Maori and the European population. In 1977 the Waitangi Tribunal was set up to ensure that all government agencies take account of the Treaty in their policy-making and service delivery.

*Languages.* There are two principal languages in New Zealand: English, the language of the colonizers, and Maori, the language originally spoken by all Maori tribes, and ironically the only official language of the country. Most of the population now speak English, including the Maori. In 1913 about 90 percent of the Maori children were said to be fluent in Maori; in 1958 the number was only 26 percent.

*Educational problems.* The Maori are only 10-12 percent of the overall New Zealand population, but they are 20 percent of the primary age population. Their progress in school has been marked by low achievement and high failure rates within mainstream education programs. As a result, they are under-represented in the professional classes and over-represented in unemployment statistics.

*Preschool programs: “Te Kohanga Reo”.* The Maori began to see the revitalization of Maori language and culture as essential to the improvement of Maoris in school and society. They feared that with few children speaking Maori, the language would cease to be a living language within another generation. In 1979 and 1980 at the national meetings of Maori leaders, the Maori asked the Department of Maori Affairs to make revitalization of the Maori language a priority. In 1981 with the Department of Maori Affairs, the Maori leaders developed the concept of Te Kohanga Reo (TKR, literally “language nest”), a program of immersion in Maori language and values for children from birth to school age. The TKR were conceived as a way to care for the needs of the extended family, the children and the adults. As preschool classes they were and are small, usually 10-19 children. These classes have two objectives:

- to nurture and educate children; and
- to empower and re-educate the adults.

The primary caregivers are Maori grandparents who speak Maori and can pass along Maori culture and values to the children. Other staff are usually Maori as well, many of them learning the language and the culture along with the children. Most of the staff are volunteers. The extended family of the TKR...
manage the TKR, and are accountable to the Te Kohanga Reo Trust, established in the 1980s as a way of facilitating partnership between the Maori and the Government.

TKR growth has been very fast, and largely in the urban areas. In 1982 there were only five of them. By 1988 there were over 500, with about 8,000 children enrolled; and in 1993 over 800, with over 10,000 children enrolled, about 40 percent of Maori preschoolers.

**Primary schools.** There are several kinds of schools and programs which offer instruction in Maori. They include (1) Bilingual schools, (2) Kura Kaupapa Maori schools, and (3) Other programs. (1) The Bilingual schools predate the Kohanga Reo movement. They are state schools whose communities persuaded the government to allow them to develop a school-wide program using Maori as a medium of instruction along with English. (2) Kura Kaupapa Maori (KKM) are Maori-agenda schools, and also community-based. They were organized to continue instruction in Maori for children who had learned it in Te Kohanga Reo. About 1.4 percent of Maori children attend the KKM. (Some of the former bilingual schools have become KKM.) (3) Other programs are of three types: (a) programs which include some songs and poems in Maori, (b) others where the Maori language is taught as a separate subject, and (c) Maori-medium schools where some subjects are taught through Maori.

**Evaluation.** Te Kohanga Reo were established to rescue the Maori language from its path to extinction. Are they succeeding? There is no clear answer to that question at present. We do know that they are popular, and considered successful in the teaching of Maori to young children. In 1984 a Maori linguist reported on a visit to a community where ten years before there had been no Maori speakers among the children under age 15. In his visit he found that the preschoolers’ exposure to Maori had stimulated the parents to attend night classes in order to communicate in Maori with their own children. (Smith, 1984 reported in Cazden, Snow and Heise-Baigorria, 1994).

Te Kohanga Reo were also established to develop ethnic knowledge and pride, give Maori young people a solid base from which to grow, and hence increase their chances for school and job success. Has that happened? Again, there are no answers. There is the belief that this is so, but no data are at present available.

The Kura Kaupapa Maori were established to further develop within the child the Maori language and culture which he or she had experienced at Te Kohanga Reo. Although we did not read any evaluations of the program, we understand that the results so far have been positive in terms of achievement in reading, including reading in English, writing, and arithmetic. (Reedy Report quoted in Waho 1993.) One study reported that children in one KKM outperformed similar children in a nearby school in mathematics problem solving and computational skills in both Maori and English (Clive Aspin, 1983, reported by Benton).

**Costs.** In 1991, 140,781 students were enrolled in Maori language programs:

<table>
<thead>
<tr>
<th>Program</th>
<th>Enrollment</th>
</tr>
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<tbody>
<tr>
<td>Preschool (TKR)</td>
<td>10,451</td>
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<tr>
<td>Kindergartens</td>
<td>6,324</td>
</tr>
<tr>
<td>Primary</td>
<td>87,703</td>
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<tr>
<td>Secondary</td>
<td>36,313</td>
</tr>
<tr>
<td>Teacher Training</td>
<td>1,160</td>
</tr>
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</table>

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In 1993, the educational expenditures above the norm for Maori education totaled $25,820,000 (NZ) or US$14,500,000. If the 1993 enrollments are similar to the 1991 enrollments, the aggregate unit costs for language related education would be about US$ 103. This unit cost is a kind of fiction however because it masks the differences at each level.

*Lessons and questions.* The Te Kohanga Reo movement is a vivid demonstration of community efforts to save a language and a culture. It has been copied by other language groups: the Samoan and Cook Island communities in New Zealand; the Native Hawaiians in Hawaii through their own Punana Leo movement.

It is too soon to draw lessons from these Maori programs. Instead, we pose three questions:

- Will the Maori programs succeed in the revitalization of the Maori language and culture? Fishman, writing in *Reversing Language Shift* indicates that there is a chance of success in reversing the “intergenerational disruption”. That is, they could teach Maori to a cohort of non-native speaking Maori who can pass the language on to children of their own. This change in language use would involve much more than the Te Kohanga Reo and the Kura Kaupapa Maori, although that is a place to begin. Another place is with adult education, encouraging adults to interact with children. In addition, the Maori would have to develop other home-family-neighborhood-community institutions and processes, and use their literacy to establish communication links with other Maori throughout the country. And the actions would have to be fast because there are comparatively few remaining native speakers;

(In many ways the Maori situation is similar to that of the Navajo, discussed below, but much more acute because there are so few Maori children who are mother tongue speakers of Maori. In the Navajo case, in spite of the pressure from English, many children living on the Navajo Reservation enter kindergarten speaking only Navajo.)

- Will the Maori language movement succeed in another aim—that of improving the success of Maori children in school and the work place? We do not know at this point. It is possible, and even probable, that attendance at the Maori schools will make a positive difference in the lives of some Maori children and adults; and

- What about the development of English, the Maori children’s first language? The major theme of this review has been the importance of development of the mother tongue. What role does the development of English play in these preschool and primary school programs? Is teaching in Maori to children who still speak English to their families sufficient to nourish the cognitive development that is necessary for growth in both languages? If the Maori schools, like the Canadian immersion schools, provide instruction in both languages in a context where there is home and community support for the first language, it is very possible that the necessary first language support will be available.

*United States of America: Rock Point Community School*

*The country.* The United States is a country with a population of 252 million people, and a per capita GNP of almost US$ 23,000 (1991). Almost 2 million, or less than 1 percent, are Native Americans, including American Indians, Eskimos and Aleuts. Of the 2 million Native Americans approximately
219,000 (about 11 percent) are Navajo. Navajo unemployment and underemployment are among the highest in the U.S. (Fishman 1991).

Languages. Linguists estimate that when Columbus arrived in 1492 there were 300 native languages in North America. (Michael Krauss, president of the Society for the Study of the Indigenous Languages of the Americas, speaking at a U.S. Senate hearing) About 190 are still spoken, 35 exclusively in Canada, and 155 in the U.S. The number of speakers of these languages is rapidly declining. In 1970 about 90 percent of Navajo children at age 6 could speak Navajo; now it is the reverse, estimated at only 10 percent who speak Navajo. For years the Government policy towards the native Americans and their languages was one of termination and assimilation. Within the last three decades that has changed. The Government has enacted four laws which stressed learning English as well as cultural and linguistic preservation: the Bilingual Education Act (1967), the Indian Education Act (1972), the Indian Self-Determination and Educational Assistance Act (1975), and most recently the Native Americans Language Act (1991).

Educational problems. Educational achievement for Native Americans averages several years behind state and national averages. Dropouts of 8th to 10th graders are high—nationwide over 9 percent, in contrast to 5.2 percent for Non-Hispanic Whites (The Condition of Education in the Nation, U.S. Department of Education, 1992).

Rock Point Community School. In the 1930s Rock Point School began as an English-medium two-room school on the Navajo Reservation in Arizona, part of the Chinle Agency of the Bureau of Indian Affairs (BIA). At the time, the community was very isolated, 100 miles away from any Anglo community of any size. Roads were impassable during the rainy season because they were unpaved, and the washes were unbridged. There was no electricity.

In the 1950s, realizing that English was essentially a foreign language for the students, teachers at the school began English as a second language instruction. Some of them became interested in the possibility of developing literacy in Navajo, building on the work of Young and Morgan, an Anglo and Navajo team who had devised an orthography, written a dictionary, and completed two sets of primers.

In the 1960s many changes occurred. The community began to take increased responsibility for the school, first with a three member education committee and then as a six member community school board. The road through Rock Point was paved, the washes were bridged, and electricity was brought in. In 1967 the school quietly began teaching initial reading in Navajo.

In 1972 the Board received approval to become a contract school, that is, a school which contracts with the BIA to perform services previously performed by the BIA, and a school which would be wholly responsible for its own management. With these changes the Board decided to aim for quality education in two languages, stressing schooling through a contemporary Navajo way along with achievement in the English language and basic subjects.

Under the guidance of the school board, a bilingual, bicultural program has evolved over the years with much parent and community involvement. The school teaches Navajo language and culture throughout the 12 years of school, beginning in Kindergarten. In grade 1 the students learn to read in Navajo, and in grade 2 they begin to learn to read in English, in addition to continuing their reading in Navajo; in
grade 1 and 2 mathematics is taught in both languages. In grades 3 through 6 students receive specialized instruction, including Navajo literacy, Navajo social studies and science in Navajo. At the junior high level, all students study science in Navajo, and at the senior high level Navajo social studies and Navajo applied literacy.

Separate teachers are used for the two languages. To avoid the usual pattern of Anglo teacher and Navajo aide, the Board hired Navajo teachers to teach Navajo subjects, many of whom were without formal teacher credentials at the time.

**Evaluation.** To address BIA concerns about the nonconventional curriculum and teachers, in 1980 the school evaluated the program. They aimed to demonstrate that their students were doing at least as well in English and the other subjects as other Navajo students who were not in such a bilingual program. They compared 220 Rock Point students, in grades 2 through 6, with 780 students from similar backgrounds in other schools, using the Metropolitan Achievement and Stanford Achievement Tests, as well as the Test of Proficiency in English as a Second Language.

Rock Point proved its contention. Despite the late start in English reading, the bilingual group had high mean scores on the reading tests at all grades above grade 3. With each successive year, they made more gains; at grade 6 they were two years ahead of the control schools in the Chinle agency.

Moreover, the school produced the first-ever generation of Navajo-literate youngsters, and helped to revive many of the half-forgotten songs, dances, crafts, and traditions.

**Current status.** Since the 1960s Rock Point has seen many changes. The community is not as isolated as before. Electricity has come, roads are better, the mass media is available, and parents have more education than before. This year there are 430 students in the school: 210 in Kindergarten-grade 6 and 220 in grades 7-12.

The bilingual/bicultural model has endured. Most of the teachers and others at the school are Navajo (113 out of 124). Many have returned to teach at the school after completing their college education. Each year fewer kindergartners enter speaking fluent Navajo, so school authorities are talking about teaching standard Navajo (as a second language) along with English.

Evaluations in the last two years have aimed to compare students, not with others from a similar background as with the 1980 evaluation, but with national norms. The challenge now is for the students to succeed when measured with others across the country from a wide variety of backgrounds. In 1993 using the California Test of Basic Skills, mean national percentiles for Rock Point students were as follows:

**Grade 3:**
- 33 percent mathematics
- 31 percent English language arts
  (Number of students = 40)

**Grade 6:**
- 27 percent mathematics
- 32 percent English language arts
  (Number of students = 40)
Grade 12:

45 percent mathematics
42 percent English language arts

(Number of students = 17)

Source: School authorities, Rock Point Community School, 1994.

The school aims to move those scores into the 50 percentile range so that they can say that their students are doing as well as at least one-half of the rest of the students in the country, not just as well or better than other Navajo students on the Reservation.

On efficiency measures, Rock Point has done well. Only 1-2 percent of its students drop out of school, in contrast to the 9 percent cited earlier for the Native American average. (Many sixth grade graduates choose to attend another high school, hence the discrepancy between the 40 students in grade 6 and the 17 in grade 12 on the scores above.) Last year nine out of the 17 graduates from high school went on to college or university.

Costs. For both development and recurrent costs Rock Point has relied mainly on BIA funding, working within the BIA formula. Last year the cost per student per year for students in grades 1-6 was US$ 2,875, an amount which includes one half of the busing costs, but does not include costs for maintenance of the physical plant. This unit cost is about one-third less than the minimum per student per year costs in other public schools in Arizona, New Mexico, and Utah. In spite of this lower cost, Rock Point has a higher pupil to adult ratio than other schools, the result of lowering administrative salaries and raising paraprofessional salaries to build a career ladder for local people to become teachers.

Lessons. The Rock Point Community School offers three lessons:

- Beginning education in the first language and continuing with some use of that language through secondary school is effective in teaching content and in laying the foundation for learning the second language;
- The school has demonstrated a way of strengthening family and community networks at a time when the community is much less detached from the wider community than before. Its efforts will help to preserve Navajo language and culture; and
- Communities can take control of the education of their children. In the words of Wayne Holm, former assistant director at the school, each year the Rock Point community has shown greater ability, legitimacy, and success.

United States of America: Longitudinal study of structured English immersion strategy, early-exit and late exit transitional bilingual education programs for language-minority children

Country and languages. As stated above, the United States has a population of 252 million and an annual per capita income of $23,000 (1991). Always a nation of immigrants, that character has never been more so than at present. According to the 1990 census almost 32 million of the then 248.8 million population, or about 12 percent, spoke a language other than English in their homes. More than half
were speakers of Spanish. By 2040, the percentage of persons who speak a language other than English in the home is projected to rise to about 28 percent, with 65 percent of those being speakers of Spanish.

**Educational problems.** In 1990 about 6.3 million children from five to 16 years of age spoke languages in the home other than English. From 2.3 to 3.5 million of these children were termed “limited English proficient” (LEP) students who have difficulty following academic studies in English, but only a small fraction received special help in school. As a result, the LEP students drop out of school at a rate higher than that of white, non-Hispanic students. In 1990, for instance, the dropout rate for Hispanics from 8th to 10th grade was 9.6 percent, in contrast to 5.2 percent for white, non-Hispanic students. (The Condition of Education in the Nation, U.S. Department of Education, 1992)

**Educational programs.** Since the 1960s, a series of federal laws and regulations have sought to ensure that children speaking other languages in the home have the opportunity to learn in U.S. schools. These laws have supported a number of federally financed programs, for a relatively small number of limited English proficient students (LEP students).

In 1993 about $196 million of federal funds was appropriated for programs authorized by the Bilingual Education Act. In 1990-91 funds appropriated for this act helped over 250,000 students in bilingual education programs, defined as programs where initial academic instruction is through the medium of the students’ home language, with English taught as a second language. The programs are continued until the student is considered able to receive all instruction through English. In 1991 most of the funds (79 percent) supported transitional bilingual education; a fraction supported developmental bilingual education (1 percent) which may prolong the time devoted to the first language. (The remaining 20 percent of the funds went to an assortment of other language programs.)

State and local funds also support bilingual education, but information was not available on the amounts from these sources for this review.

**Ramirez longitudinal study.** From the beginning, controversy has surrounded bilingual education in the U.S., with many believing that such programs were not worth the money being spent on them. To test their effectiveness Congress mandated a longitudinal study of bilingual education programs. It was called formally the *Longitudinal Study of Structured English Immersion Strategy, Early-Exit and Late Exit Transitional Bilingual Education Programs for Language-Minority Children.* Informally it is the Ramirez Study, from J. David Ramirez the principal investigator. Commissioned in 1983 and finished in 1991, it is by far the largest and most influential study of bilingual education to date in the U.S.

The study compared the effectiveness of three kinds of bilingual education programs:

- structured English immersion: instruction in English, with some brief explanatory periods in the first language;
- early exit transitional bilingual program: instruction in English, except for 30-60 minutes of instruction in the first language in grade 1; and
- late exit bilingual programs: minimum of 40 percent of time in the first language through grade 5 or 6.

The research question was: Which of the three would help the non-English speaking students catch up to their English-speaking peers?
Subjects were 2,000 Spanish-speaking students in schools in five states: California, Florida, New Jersey, New York, and Texas. Effectiveness of instruction was measured by scores on tests in English language arts, reading, and mathematics. Scores were compared at grade 3 for all three program types and analyzed at grade 6 for the late exit programs.

Findings included the following:

- From Kindergarten to Grade 3 limited English proficient students in all three programs improved their skills in English language and reading, and mathematics better than similar LEP students in the general population;
- At the end of Grade 3, after four years in their respective programs, LEP students in immersion strategy and early-exit had comparable skill levels in language, reading, and mathematics;
- Both immersion strategy and early-exit students show slowing in rate of growth in each content areas as grade level increases (similar to that for similar LEP students in the general population). In contrast, students in late-exit programs showed acceleration in rate of growth from grade 1 to grade 3 and from grade 3 to grade 6, appear to be gaining on students in the general population;
- Students in the immersion strategy and early exit programs tend not to be placed in regular English-only classrooms at least for the first four years of program participation. This delay seems to represent teachers’ belief that the LEP students will do better if they remain longer in the special program;
- When students in the late-exit programs are compared, students in programs with more instruction in their primary language learn mathematics, English language, and English reading skills as fast or faster than the norming population used in this study;
- Teachers in all three programs offered a passive language learning environment, with limited student opportunities to produce language and to develop more complex language and thinking skills; and
- Parents of students in late-exit programs are more likely to be involved with school programs and to help children with homework than parents in the other programs. This is probably because they can communicate with some of the staff and can help with homework in the home language.

The study was subjected to a number of critical reviews, including ones from the National Academy of Sciences, the National Center for Research on Cultural Diversity and Second Language Learning and many educators and linguists. While there was a good deal of quibbling about the study’s design, (the National Academy of Sciences would have preferred a random sample, instead of using groups of students carefully selected to fit each program type), the reviewers agreed with the conclusions of the authors of the study:

- Providing LEP students with substantial instruction in their primary language does not interfere with acquisition of English language skills, but helps the students catch up to their English-speaking peers in the three areas tested;
- Providing LEP students with almost exclusive instruction in English does not accelerate their acquisition of the areas tested. By grade 6 students provided with English-only instruction may actually fall further behind their native English-speaking peers; and
- Learning a second language will take six or more years.
Lessons. There are many important lessons which can be derived from this study. Ramirez, the principal investigator, listed these policy recommendations:

- Provide LEP students with language support services for a minimum of six years, or until they can successfully demonstrate the English language skills necessary to function in an English only mainstream classroom;
- Provide LEP students with content instruction in their primary language until such time as they can profit from English only instruction. Delaying such instruction until after English language skills are developed will only exacerbate skill differences between them and their mainstream English-speaking peers, putting an additional burden on the LEP students to learn content material in a shorter time than is provided to English-speaking students;
- In mixed language settings, provide for primary language support through cross-age or peer tutoring, parent home learning activities, and instructional aides; and
- Encourage university teacher training institutions to include these elements in staff development programs: (1) providing a theoretical framework for bilingual education; (2) modeling effective instructional strategies; (3) practicing the instructional strategies; and (4) on-going coaching of teaching

All of these recommendations could be applied to situations in other countries, where languages other than English are the languages of wider communication.
PART III: CONCLUSIONS

OPTIONS FOR EDUCATIONAL PLANNERS: PROGRAM TYPES

Most of the programs reviewed in Part II aimed to teach the language of wider communication to children whose mother tongue was not that language of wider communication. Those programs fall in four general categories: submersion, some mother tongue instruction, more mother tongue instruction, and three-tier instruction.

Submersion. The child begins instruction immediately in the second language without assistance through the mother tongue. Worldwide it is the most common method of instructing children who come from homes which do not use the language of wider communication.

Advantages are that it is conceptually easy to understand—the more exposure to the second language the better. As parents often say, “We do not send our children to school to learn a language they already know.” Disadvantages are (1) it is not effective. It makes it difficult for the children to learn reading skills and subject matter. It does not help the child develop the cognitive foundation necessary for academic learning in the second language. (2) It is very costly in countries where there are few teachers who speak the language and the child rarely hears the language outside of school.

In this review, this type was represented by the structured immersion program evaluated in the U.S. Ramirez Study. It was also represented, but not much discussed in the Philippines bilingual education policy when viewed from the viewpoint of the student who begins school knowing neither Tagalog nor English. It was not represented by the Canada immersion program. Although the Canadian program begins schooling in the second language, the first language is added subsequently, so that by grade 4 about 60 percent of the instruction is in the first language.

Some mother tongue instruction. The child has some school exposure to the mother tongue, usually oral only, and is quickly introduced to all classwork in the second language. In many situations this approach is a matter of policy, a compromise with the reality of the difficulties of using a mode of communication which is ineffective. In many other situations this approach is a matter of covert practice. Teachers, who know the child’s mother tongue will use it informally thinking that they should not, but trying to get the child to understand in the mother tongue that which was not understandable in the language of wider communication.

Advantages are that it may enjoy some public support. Disadvantages are that it is not effective on two counts: (1) The child does not continue to develop his first language; (2) He or she does not fully learn the second language. It also can be very costly in a situation where there are few teachers who know the second language.

In this review, this type was represented by the U.S. early exit program of the U.S. Ramirez study.

More mother tongue instruction. The child enters a school environment where the mother tongue is used from the beginning and for a significant part of his or her primary school career. The child begins to learn the second language, often with some oral exposure in grade 1, in gradually increasing amounts until the instruction is in about equal amounts with the first language.
Advantages are (1) When it is implemented under good conditions, it is effective. The conditions would include: good school organization, well trained teachers who are trained in both the first and second language of the child, adequate and appropriate material, and firm support of parents and the community. (2) It is consistent with language acquisition research that the foundation in the mother tongue is essential for second language learning. (3) The parents can be involved. (4) When the mother tongues are fragile, their use in school can help prevent language shift. Disadvantages are (1) Difficulty of implementing with more than one mother tongue in a classroom. (2) Difficulty in gaining public acceptance in situations where the language is not highly valued by the majority society. (3) High development costs, especially in situations where there has been little experience producing learning materials in the mother tongue.

This type was represented by the Guatemala National Program for Bilingual Education, the Haitian educational reform, the Nigerian Six Year Primary Yoruba Project, the Philippines bilingual education policy when the students came from Tagalog-speaking homes, the U.S. Rock Point Community School, and the U.S. late-exit programs in the Ramirez study.

Three-tier instruction. The child begins primary school in his mother tongue, receiving instruction soon through a *lingua franca* or regional language, and then progressing to the language of wider communication.

The advantage is that it would appear to be practical for societies where there are many mother tongues and where children learn a *lingua franca* from their peers. Disadvantages are (1) The *lingua franca* may not be valued as a language fit for the school, the case of pidgins and creoles throughout the world. (2) The *lingua franca* may also require development in terms of vocabulary necessary to express school subjects. (3) There is no research evidence that school use of the *lingua franca* would provide the cognitive development associated with learning in the mother tongue.

This type was represented in this review only in the reference to programs in Canada where children whose mother tongue is not English, have learned English from peers and in school, and who then participate in French immersion programs.

**IMPORTANCE OF THE MOTHER TONGUE**

The most important conclusion from the research and experience reviewed in this paper is that when learning is the goal, including that of learning a second language, the child’s first language should be used as the medium of instruction in the early years of schooling. Learning via the language in preschool is not enough. The child requires at least 12 years to develop his first language—six years before formal schooling, and six years within the school. For optimum results, the first language should be continued as the language of instruction through primary school as the child is learning the second language. If feasible, the first language of the student should be included among the subjects in secondary school when the language of instruction has changed.

The first language is essential for the initial teaching of reading, and for comprehension of subject matter. It is the necessary foundation for the cognitive development upon which acquisition of the second language is based. When can children begin to learn a second language? A good rule of thumb would be after they have achieved literacy in their first language.
This principle is an exception to the time-on-task rule, that the longer a subject is studied (the second language), the better it is learned. In Guatemala, Haiti, Nigeria, the Philippines and the U.S. children educated first in their mother tongue did as well or better in acquiring the world language than similar children who had received much more exposure to that world language.

The case of English-speaking Canadians beginning their schooling in French is the only exception to this principle. Here the explanation is that the young English-speakers were able to learn well in French because they continued their learning in English through their experiences at home, in the community, and in the later years of primary school.  

**IMPORTANT OF TRAINED TEACHERS**

Teachers must be able to understand, speak, and use the language of instruction. If the language is a vernacular which they did not use in their own schooling, they must receive special and ongoing training in order to feel comfortable writing and reading in the language, as well as to appreciate that the language is one worthy of a place in formal education. If the language is one they learned as a second language, teachers must have a level of competence in that language which enables them to communicate with adults who are native speakers of that language, as well as to teach the language in a meaningful way to children. In other words, rote learning is not enough. Furthermore, teachers must have mastered the subject matter of instruction. One of the more alarming results of the Philippine evaluation was that many of the teachers did not know the subject matter. Thus, they were not able to impart knowledge to children which they themselves did not have.

**IMPORTANCE OF THE POLITICAL CONTEXT**

All education takes places in a political context. It is the result of what parents, community members, and government authorities have decided they want children to learn. All effective programs need that political support. At the national or provincial level, the support is translated into technical help and funding and at the community level, daily interest in children’s learning and sharing of both knowledge and physical resources.

When one of the interested parties decides to change the manner of providing education, all parties must be brought into the picture. Most must accept the changes before they can be sustained. Haiti learned this lesson with its educational reform of 1982. Because the reform did not have the necessary support from many government officials and because the parents did not understand what was being attempted, many soon announced that the reform failed. (Many others now do not take such a dim view. They would say that the reform is taking a longer time than anticipated, for a number of reasons, many of which are indeed political.)

Parental and community involvement is essential. One of the benefits of education in the first language is that parents can be directly involved with the education of their children. They can, and do, provide vital resources for the process.
FINANCING ISSUES

Information on development costs assembled for this paper represents very rough estimates. Projects contemplating change in the language to be used in education should detail the costs in terms of:

- assessing community attitudes and interest;
- developing preprimers and primers;
- developing materials in subject matter areas;
- printing and distributing materials;
- training teachers;
- planning and implementing a pilot program;
- developing evaluation measures; and
- implementing the evaluation

Recurrent costs were about the same for all programs reviewed: it costs no more to teach a child in the mother tongue, than in another language. In all cases the primary cost is that of teacher salaries—which must be paid in any event—and materials—which also must be available. The only exception to that is when extra teachers are hired to supplement the regular classroom teachers.

COST-BENEFIT ISSUES

There are two categories of benefits from bilingual education that can be quantified: (1) cost savings as a result of reduced student repetition; and (2) improvements in income realized from additional years of schooling.

A method for calculating cost savings is illustrated in the World Bank education sector study for Guatemala (1994). Significant efficiency gains were estimated using the differential repetition rates for the Guatemala PRONEBI and traditional programs.

(See Table 5 for simulated cost savings.)

A method for estimating benefits of additional years of education is also illustrated in the same World Bank education sector study for Guatemala (1994). Here significant earnings benefits are estimated as a result of the additional years in schooling attributed to PRONEBI. These earnings are based upon Bank research (Patrinos

| Table 5: Guatemala: Simulated cost savings as a result of reduced repetition due to PRONEBI |
|---------------------------------|---|---|
|                                 | A  | B  |
|                                 | PRONEBI | Traditional |
| 1. Repetition Rates             | .25 | .47 |
| 2. Annual Unit Costs            | Q 246 | Q 235 |
| 3. Number of Indigenous Students (1991) | 96,194 | 653,413 |
| 4. Number of Repeaters (1*3)   | 2,299 | 307,104 |
| 5. Total Cost of Repetition (2*4) | Q 565,554 | Q 72 169,440 |
| 6. Simulated Cost of Repetition if PRONEBI | — | Q 40,184,838 |
| Rate and Cost Structure Prevailed (3B*1A*2A) | |
| 7. Simulated Savings due to PRONEBI (5B-6B) | Q 31,984,602 |


The case of English-speaking Maori children learning first in Maori is another exception. We do not know how this experience will affect achievement in school. In any event, improvement of student achievement and acquisition of a world language are not the goals; language preservation is.
1994) which has shown that the portion of overall earnings differential due to disparities in the productive characteristics of indigenous and nonindigenous working males is about 50 percent. That is, the earnings differential between indigenous and nonindigenous workers would narrow by at least 50 percent if each group were endowed with the same productive characteristics, in this case education. (See Table 6 for simulated benefits in incremental earnings.)

Table 6: Guatemala: Simulated benefits of reduced drop-out rates due to PRONEBI

<table>
<thead>
<tr>
<th></th>
<th>A PRONEBI</th>
<th>B Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number of Students</td>
<td>19,243</td>
<td>130,905</td>
</tr>
<tr>
<td>2. Drop-out Rates</td>
<td>.13</td>
<td>.16</td>
</tr>
<tr>
<td>3. Number of Drop-outs (1*2)</td>
<td>2,506</td>
<td>20,945</td>
</tr>
<tr>
<td>4. Simulated Decrease in Dropouts if PRONEBI Rates Prevail (3B<em>2A</em>IB)</td>
<td>Q 186</td>
<td>Q 730,422</td>
</tr>
<tr>
<td>5. Incremental Earnings Associated with Extra Year of Schooling</td>
<td>Q 730,422</td>
<td></td>
</tr>
<tr>
<td>6. Simulated Combined Annual Incremental Earnings due to PRONEBI</td>
<td>Q 730,422</td>
<td></td>
</tr>
</tbody>
</table>

PART IV: CONSIDERATIONS FOR PACIFIC ISLAND COUNTRIES, FRAMEWORK FOR DISCUSSION

This section establishes a preliminary framework for use in discussing language matters with officials and educators in Pacific island countries in the context of the findings from research and from education programs discussed above. At a later date, it will be supplemented with detailed analysis of the situations in those countries.

REVIEW OF FINDINGS

Basic research on language acquisition has shown that:

- Children require at least 12 years to learn their first language;
- Children do not necessarily learn a second language quickly and easily;
- Older children and adolescents learn a second language more easily than younger children;
- Children who are given the opportunity to develop their first language learn a second language more easily than children who have not had that opportunity. This first language development is more important than "time on task" in the second language;
- Children who have learned social skills in a second language may not have mastered academic language skills; the first kind of skill takes much less time to develop than the second; and
- Children learn in different ways, depending on their culture, group, and individual personality.
- Educational programs have been successful when they have exploited these language learning characteristics:
  - In Guatemala, students who have studied through their first language achieve higher scores in tests given in the second language than do those students who have studied only in the second language;
  - In Haiti, students in both public and private schools learning in grades 1-4 through their first language acquired about as much knowledge of the second, as those who had been exposed only to that second language;
  - In Nigeria, students learning in their first language in grades 1-6, outperformed their peers learning in the first language only in grades 1-3, in all tests of achievement in the second language;
  - In the Philippines, students who spoke as a first language one of the languages of the bilingual education policy outperformed those students who did not speak in the home either of the two bilingual education languages;
  - In the United States of America, Navajo children at Rock Point Community School learning in their first language had higher scores in the second language than those of their peers who had been exposed only to the second language; and
  - In the United States of America, Spanish-speaking students in late-exit programs in the Ramirez Longitudinal Study learning at least 40 percent of the time through their first language were catching up to English-speaking students in academic work and in acquisition of the second language. This growth is in contrast to their Spanish-speaking peers in immersion or early-exit programs who demonstrated a slowing in rate of growth as each grade level increased.
In addition,

- In Canada, students from a majority language group, who receive full support for development in their first language, learn in and through a second language better than those students, also from the majority language group, who have less exposure to the second language.

**FIJI**

Fiji has two national languages, Fijian, a group of indigenous languages spoken by about 46 percent of the population, and English spoken natively by about 2 percent of the population. In addition, according to Census figures about 48 percent speak Hindi and/or six other Indian languages. About 1 percent speak Rotuman, the second indigenous language (Grimes, 1992 and Benton, 1981).

Fiji is a country in category one, described in Part II, where there are few mother tongue speakers of the language of wider communication, English. Its language in education policy is that of option three, described in Part III, where the mother tongue is used as the medium of instruction in the first three primary school grades and the language of wider communication (English) taught as a subject from grade 1 on. In grade 4 English becomes the medium of instruction. A complicating element to the implementation of the mother tongue policy in the lower grades is that only the classical varieties of the vernacular are used in school, so that language of instruction bears little resemblance to the form of the language used in the home (Benton 1981).

There is no language planning agency. The development of the monolingual Fijian dictionary, in progress since 1971, has served to focus attention on the Fijian languages, of which Buan is the accepted standard.

**SOLOMON ISLANDS**

The Solomon Islands has one national language, English, a *de facto* but not official national language, Pijin, and more than 60 indigenous languages.

Solomons Pijin has a grammar close to the grammars of the indigenous languages of the Solomons. It developed through contact between British seaman and plantation managers in the latter part of the 19th century, when indentured Melanesian laborers were taken to work on the plantations of Queensland Australia, Fiji, Samoa and New Caledonia. Pijin is widely spoken in the towns throughout the Solomon Islands; most children in towns or on plantations have learned it by the age of seven when they begin school, and there are a growing number of urban children with Pijin as a mother tongue (Baldauf and Luke 1990).

The Solomon Islands is a country of category one, described in Part II, where there are no or few mother tongue speakers of the language of wider communication (English). Its language in education policy is that of option one, described in Part III, where the language of wider communication is used throughout school. The country does not have a language planning agency.

In *Vernacular Languages in South Pacific Education* (1988), Horoi and Ramo recommended the following actions:
For the long term:
• develop a clear national language policy, stating the roles of the national language, the official language, and the status and use of indigenous languages;
• reflect national level planning at the community level; and
• generate awareness among people of the Solomon Islands about language issues.

For the medium term, establish a data base on:
• vernacular education, beginning with pre-schools. Survey preschools and primary schools to determine resource implications and problems that might exist in establishing vernacular education, but “the idea has to be sold to the people first;”
• teaching of English as a Second Language;
• bilingual education; and
• production of materials, reference dictionaries and grammars after the national language policy has been ratified.

VANUATU

Vanuatu has the most complex language situation of the four Pacific island countries. The national language is Bislama, a pidgin with English vocabulary and Melanesian grammar. The official languages are Bislama, English, and French. The languages of education are English, spoken by about 1 percent of the population, and French, spoken by about 4 percent (Grimes 1992). In addition, there are over 100 indigenous languages.

Most ni-Vanuatu speak Bislama. This language developed in the 19th century when the people came into contact with English and other Europeans as crew on whaling ships, and later in connection with trade in sandalwood and sea-slugs. The language was developed further in Queensland Australia when the ni-Vanuatu, like the Solomon Islanders, were recruited as indentured laborers for the sugar plantations. Although in the past, some considered it a dialect of English, it is now accorded the status of a separate language, partially intelligible with Solomons Pijin and the Tok Pisin of Papua New Guinea. Although most ni-Vanuatu learn it as a second language, there are a number of mother tongue speakers in urban areas, children of parents from different language backgrounds (Tryon).

Vanuatu is a country of category one, described in Part II, where there are few mother tongue speakers of the languages of wider communication (French and English). Its language in education policy is that of option one, described in Part III, where the languages of wider communication are used as the media of instruction throughout school. The “Komiti blong Bislama” (Committee of Bislama) is the language planning body for Bislama.

In Vernacular Languages in South Pacific Education (1988), representatives from Vanuatu endorsed the following proposals (somewhat paraphrased for this review):
• initiate pilot projects using the vernacular language in places where the community suggests or supports such a program;
• extend the pilots, if successful;
• train teachers, using for the pilots resources, such as the Curriculum Development Unit, the Pacific Languages Unit, and the Summer Institute of Linguistics; and for extend programs the Vanuatu Institute of Education, the Institute of Education at the University of the South Pacific in Suva, and the New Zealand Ministry of Education;
• encourage development of written materials in as many vernaculars as possible in order to maintain literacy skills after primary education; and
• encourage the development of Bislama by
  • supporting with staff the "Komiti blong Bislama";
  • preparing a monolingual dictionary for Bislama;
  • teaching Bislama as a compulsory and examinable subject at the secondary level; and
  • preparing a grammar for Bislama.

The representatives urged that these steps be taken carefully and in consideration of public attitudes.

WESTERN SAMOA

Western Samoa has the least complex language situation of the four Pacific island countries. It has two official languages, Samoan and English. It is a country in category one, where there are few mother tongue speakers of the language of wider communication. The language in education policy is that of option three described in Part III, where the use of the mother tongue, Samoan, is the medium of instruction through the six years of primary school, switching to the language of wider communication, English, in secondary school. Outside of school, there is considerable support for the use of English: radio, television, and newspapers. There does not appear to be an organization which works specifically on Samoan language development.

Lo Bianco has written about the mixing approach used in Samoan classrooms, whereby in junior secondary schools the policy of English only, or Samoan only, was not upheld in practice. (Vernacular Languages in South Pacific Education, report on workshop held in Vanuatu in 1988). In a study in which the language of interaction was coded at five minute intervals, he observed considerable translating of material from one language to another, with Samoan predominating in all but the English language classes. This practice has had the following negative effects:
• Pupils tend to ignore the material presented in the less familiar language;
• Pupils and teachers do not make the effort necessary to communicate in the less familiar language; and
• Teachers are unable to monitor how much English or Samoan they use in their classes;

He cited the importance for both language and content learning of separating the languages according to specific domains, times or functions, as practiced in the Canadian immersion program.

He recommended:
• teacher training in bilingual methodology;
• possible language upgrading for English skills; and
• consideration of teaching some subjects in Samoan at the junior secondary level.
PRELIMINARY RECOMMENDATIONS

- Analyze the policy for language in education, and its implementation, to understand how it helps or hinders education;

- Evaluate graduates of both the primary and secondary cycles to assess adequacy of language skills in both the first and second language;

- Encourage the use of option three presented in Part III, the use of the first language throughout primary school, with introduction of the second language as a subject in the early grades;

In Fiji where there is a policy for mother tongue instruction in early primary school, consider extending the use of the mother tongue at least some of the time throughout primary school.

In Samoa where there is the policy of using the mother tongue throughout primary school, strengthen the use of Samoan throughout primary school. Consider the expansion of classes in Samoan during the secondary school years.

In the Solomon Islands and Vanuatu where there are many languages, develop and monitor pilot projects using the first language in communities where (1) literacy programs have already taken place in the first language and/or (2) the community is supportive. In those countries, where a lingua franca exists, such as Solomons Pijin and Vanuatu Bislama, develop pilot projects in the urban centers using the lingua franca as the medium of instruction;

- Train teachers in techniques of bilingual education, the use of the first language as a medium of instruction, and in the use, when indicated, of the lingua franca as the medium of instruction;

- Introduce the second language in the early years of primary school, preferably after the student has learned to read in the first language;

- Train teachers in techniques of teaching the second language and in competence and skills in that second language;

- Monitor and evaluate carefully, not only the children’s achievement and changes in repetition and dropout, but also development costs for the pilots; and

- Survey language attitudes before undertaking changes in language policy or practice. Develop strategies for communicating the reasons for changes when necessary.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Additive</td>
<td>Bilingual situation where individual's first language is a societally dominant and prestigious one, and in no danger of replacement when a second language is learned. (Term coined by Wallace Lambert, 1975)</td>
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<tr>
<td>Creole language</td>
<td>A language which has arisen as the result of contact between peoples of different languages, usually formed from mixing of the languages. Similar to a pidgin. Most linguists share Robert Hall's view (1966) that a creole is a pidgin which has become a language learned as a mother tongue.</td>
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<tr>
<td>First language</td>
<td>Language learned first, or mother tongue.</td>
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<tr>
<td>Immersion bilingual education program</td>
<td>Usually refers to Canadian bilingual education program where second language is used for everything for first two years, and then the first language is added and increased until roughly same amount of instruction time for each.</td>
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<tr>
<td>Indigenous</td>
<td>Language of the people considered to be the original inhabitants of an area.</td>
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<tr>
<td>Intellectualization</td>
<td>Development of a language so that it can express the world's knowledge. Includes expansion of the lexicon and use of new styles and forms of discourse.</td>
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<tr>
<td>Language of wider communication</td>
<td>A language which is widely used beyond the borders of the country. A world language. Examples in this paper are English, French, and Spanish.</td>
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<tr>
<td>Language shift</td>
<td>Bilingual situation for either individuals or groups when the use of one language has replaced or is replacing the use of the other (as in the subtractive situation above).</td>
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<tr>
<td>Lingua franca</td>
<td>Language used habitually by people whose mother tongues are different in order to facilitate communication between them. It may be a language of wider communication or it may be a pidgin or creole.</td>
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<tr>
<td>Maintenance</td>
<td>Bilingual education program which continues first language instruction after beginning instruction in the second language.Called in the U.S. Ramirez study “late-exit transitional”.</td>
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<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>Majority language</td>
<td>Socially prestigious language spoken by the prestigious group in the country, usually the majority.</td>
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<tr>
<td>Minority language</td>
<td>Socially less prestigious language spoken by a less prestigious group in the country, usually in the minority.</td>
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<tr>
<td>Mother tongue</td>
<td>Language which a person acquires in early years and which normally becomes his or her natural instrument of thought and communication. Language that the child is most comfortable with, and which he or she speaks at home.</td>
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<tr>
<td>National language</td>
<td>Language of a political, social and cultural entity.</td>
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<td>Official language</td>
<td>Language used in the business of government—legislative, executive and judicial.</td>
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<tr>
<td>Parallel</td>
<td>Bilingual education term used in Guatemala. Similar to a maintenance program.</td>
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<tr>
<td>Second language</td>
<td>Language learned after the first language.</td>
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<tr>
<td>Submersion</td>
<td>Bilingual program where no special help is given to the child who does not know the medium of instruction. Often called “sink-or-swim”.</td>
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<tr>
<td>Subtractive</td>
<td>Bilingual situation where individual’s first language is a minority, nonprestigious language such that the bilingual’s competence in his or her two languages is likely to reflect some stage in the subtraction of the first language and its replacement by the second, majority language. (Term coined by Wallace Lambert, 1975)</td>
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<tr>
<td>Transitional bilingual education program</td>
<td>Program which offers some first language instruction as a study “early-exit transitional”.</td>
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<tr>
<td>Vernacular</td>
<td>Language which is the mother tongue of a group which is socially or politically dominated by another group speaking a different language. The language of a minority in one country is not a vernacular if it is an official language in another country.</td>
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</tbody>
</table>
BIBLIOGRAPHY

Asterisk before an entry indicates that it is a Pacific reference.


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