Bilingual education programs which foster literacy first in the mother tongue and then in the second language, before the second language is used as a medium of instruction, are proving to be successful in a number of locations around the world. Several social, psychological, and pedagogical advantages result from this bilingual education strategy. Such programs encourage community understanding and support, minimize the culture shock for the child entering school, augment the child's sense of personal worth and identity, develop the child's habit of academic success, and utilize the child's fluency in his own language in learning the skills of reading and writing. Conscious control of one's own language facilitates the learning of a second language in the formal school setting. New ideas can be introduced in the mother tongue; reading ability facilitates the learning of a second language. In such bilingual programs, literacy in the mother tongue is followed immediately by learning to read and write in the second language. (VM)
LITERACY IN THE MOTHER TONGUE AND SECOND LANGUAGE LEARNING

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No discussion of child language is complete without a consideration of the special case of a second language acquired as a medium of instruction in the primary school. It is the thesis of this paper that children who are monolingual speakers of a minority language will, in general, learn a second language as a medium of instruction more readily and more effectively if they are taught to read and write their own language first. Several programs whose success support this point of view are described in section 1. Social, psychological, and pedagogical factors that might explain this success are discussed in section 2, as working hypotheses for further investigation.

1.1. Summary of bilingual programs

For some years the Summer Institute of Linguistics, Inc. has been involved in a practical way with literacy in the mother tongue as a tool for second language learning, in the context of bilingual primary schools. SIL has cooperated with the Peruvian Ministry of Education in the establishment of Bilingual Schools in the Peruvian Jungle. The Institute has also provided personnel for the development of a pilot program in Quechua in the Peruvian highlands. In Mexico, members of SIL have produced materials for some of the bilingual projects of the National Indian Institute and the Ministry of Education, and have had some share in the training of instructors (promotores'). In South Vietnam, SIL is under contract with the South Vietnamese Government.
and WADI to produce materials and train teachers for the Highlander Education Project. Elsewhere in the world, the Institute is participating in a number of other similar programs that are not yet far enough along for formal report.


Prior to 1953 there were few schools available to Indians in the Peruvian jungle, and those few had very poor results. It was difficult to staff such schools, isolated as they were from 'civilization'. The Spanish speaking teachers had difficulty communicating with their Indian pupils. And the pupils seldom learned more than a mechanical ability to sound out Spanish syllables and to write from dictation. They did not learn to speak Spanish, nor to read it with understanding.

In 1953, a bilingual education program was established for the jungle Indians. Teachers for the program were recruited from among the Indians themselves. In summer courses at Yarinacocha they were taught to read and write their own language, to speak Spanish, and the Spanish primary curriculum to Grade 2. When they reached Grade 2 standard, they were given further training in Spanish and pedagogy that prepared them to begin teaching. Over a period of six years they taught in their own villages during the school term, and attended further training sessions during the long summer vacation. In this fashion they complete their own primary education while in service.

In the village schools, the pupil spends his first two years becoming fluent in reading and writing his own language and in learning to speak Spanish. In his third year he completes the requirements of the Spanish school 'transition' year, which involves reading and writing Spanish. In his fourth
year he enters the Peruvian Grade 1. In Grades 1 and 2 he follows the regular Peruvian curriculum, but with diglot textbooks (with a vernacular translation of the Spanish material on each page.) In Grades 3-6 the jungle pupils follow the regular curriculum in Spanish only.

By 1969, 240 Indians of 20 different language groups, who had come through the bilingual program, were employed by the Ministry of Public Education as teachers in the jungle schools. Many Indian children from monolingual communities not only finished the Spanish primary school, but have gone on to secondary school, and in a few cases to university. Others have received vocational training that has fed back into economic improvements in their home villages.

A point of major interest is the success of the program in teaching Spanish. The children in this program enter Grade 3 (the first grade in which Spanish is the only medium of instruction) competitive with Spanish children at this level. It is of great significance that in most cases this competence in Spanish is gained in a non-Spanish speaking community, where the source of Spanish is the school teacher. (Now of course, bilingualism is increasing in the local communities. In many places the present generation of school children are the younger brothers and sisters, or the sons and daughters, of previous pupils who are bilingual through the school program.)

1.2. The Peruvian Quechua Program. (D. Burns 1968, N. Burns 1970)

In the highlands of Peru, where the Quechua Indians are located, there were many more government schools than in the lowlands. However, no more than 30% of the Quechua children of school age were normally enrolled
in school. And the academic record of those who did attend was very poor. 
monolingual
The Quechua children as a rule, learned little Spanish. They tended to 
repeat the transition year two or three times, and then to drop out in 
discouragement. The government, in 1965, provided for the development of a 
five year pilot project for the Quechua, similar to the bilingual program that 
had proved so successful in the jungle. In 1971 it has been decided to 
expand this project to the remaining Quechua communities.

The Quechua program is shorter than the program in the jungle. 
(Perhaps this is possible because the Quechua are more sophisticated, and 
have more contact with the Spanish speaking population.) The pupils have 
two years of 'transition'. In the first year they learn to read and write 
Quechua, and begin oral Spanish. In the second transition year they become 
independent and fluent readers of Quechua, and learn to read and write Spanish, 
completing the regular requirements of the transition curriculum. In the 
First Grade, all materials are diglot, Spanish and Quechua, but considerable 
attention is paid to the Spanish so that the child is ready for an all 
Spanish curriculum in Grade 2.

The success of this program can be seen in the reduction of 
dropouts, and in the fact that the children coming through the bilingual 
program are all doing work above the average of those in the Spanish schools 
who did not have bilingual education. The program has not been going long 
enough to follow any pupil beyond the end of primary school.

1.3. Mexican programs. (Vásquez-Barrera 1953, Castro de la Fuente 1961, 
Modiano 1968)

In Mexico, government schools taught in Spanish have been available 
to most of the Indian population for many years. These schools, however,
have not effectively taught either spoken Spanish or literacy in Spanish to monolingual Indians. In most Indian communities only a very small percentage of the school age children are actually enrolled in school. The usual pattern for those who do enroll is repetition of the preparatory grade for two or three years, and then drop out without having learned to read more than isolated syllables, and without having learned to speak Spanish. It has been my observation, although I have no statistical studies to prove it, that success in school usually depended on having learned Spanish outside of school—as a house servant in a Spanish home, for example.

The first bilingual program was established in the Tarascan group in 1939 under President Cardenas. It is reported to have been highly successful, but it was some time before a bilingual policy was spread to other Indian groups. At the present time there are bilingual schools being operated by both the National Indian Institute and the Ministry of Education. Both types of schools use bilingual Indians as the instructors or 'promotores'. The program is less extensive than its Peruvian counterpart. It consists of a single pre-year in which the Indian children learn to speak some Spanish and to read and write their own language before going on to the regular Spanish schools.

Nancy Modiano (1968) reports on the success of the Indian Institute schools in the Tzotzil and Tzeltal languages in Chiapas Mexico. She notes that a significantly greater proportion of students in the Bilingual Institute Schools read with significantly greater comprehension in the national language than pupils in the all Spanish schools.
1.4. **The Vietnam Highlander Education Program**

The Highlander Education Program in South Vietnam has not yet been reported in the literature, and the following summary is based on private communications from my colleagues who work in the program.

In 1967, USAID and the South Vietnamese Government contracted with the Summer Institute of Linguistics, Inc. to provide materials and teacher training in some of the Highland languages, in fulfillment of the government's agreement that the Highlanders were to have three years of education in their own languages. Previous to this project, the schools available to the Highlanders were taught in Vietnamese. Teachers who spoke the Highland languages were often assigned outside their home area so that only rarely did a monolingual child have a teacher that spoke his language. The performance of the monolingual Highland children followed the typical pattern, with low enrollment—especially of girls—repetition of the same grade, and early dropouts with little success in either literacy or language learning.

The Highlander Education Program provides for a pre-year for all Highland children, in which they learn to read and write their own language, to speak some Vietnamese, and to control in their own language some of the content material in arithmetic, hygiene, etc. When they enter first grade, they learn to read and write Vietnamese, they study the content subjects of the regular Vietnamese curriculum from textbooks in their own language, and they review some of the content material in oral Vietnamese lessons. In the second grade all textbooks are diglot, and education is bilingual. In the third grade the pupils move into a monolingual Vietnamese curriculum, except for continued classes in their own language and culture as subjects.
This program is still very new, and war conditions have prevented the careful evaluation of each classroom that would have been desirable. However, favorable results are already evident in increased enrollment, especially of girls, and in lowered repetition rates. Most of the children who enter complete the pre-year in a single year. There are scattered reports that children entering first grade from the pre-year already know more Vietnamese than is usual for children finishing first grade with Vietnamese as the medium of instruction. There are also by-products in community enthusiasm for the program, and a more favorable attitude toward the schools on the part of the monolingual parents.

2. Factors in the success of the bilingual programs.

It cannot be assumed, of course, that the high degree of success of the bilingual programs outlined here means that such a program is a panacea for every multilingual school situation. It should be possible, however, to make hypotheses as to the factors that explain that success, and to use these hypotheses for further observation and research. I would suggest the following as a first approximation of such a list. Social and psychological advantages of the bilingual programs include: 1) community understanding and support; 2) the minimization of culture shock for the child entering school; 3) augmentation of the child's sense of personal worth and identity; and 4) development of the child's habit of academic success. Pedagogical and linguistic advantages of literacy in both the mother tongue and the second language, before the second language is used as a medium of instruction, include: 5) full utilization of the child's fluency in his own language in learning the skills of reading and writing; 6) the contribution to second language learning of focus on the mother tongue (a by-product of literacy); 7) the development
of basic concepts for the content subjects, in the mother tongue; 8) the use of reading as a tool in second language learning.

2.1. Community understanding and support.

An outstanding characteristic of the bilingual programs described in this paper is community support for them. There may be several reasons for this. Since beginning instruction is in the language of the monolingual pupils and their monolingual parents, the parents know what the children are learning and can understand what is going on in school. At the same time, oral instruction in the second language pleases the parents that are anxious for their children to learn the prestige language. Furthermore, the instructors are drawn from the local community. In every case, the ideal bilingual teacher is considered to be one who speaks the vernacular as his own mother tongue. It is true that he must also know the second language—but often his bilingualism is via instruction in the second language as part of his teacher training. These people are at home in the community and its culture, and are able to reassure the parents and the community leaders as to the plans and purposes of the school.

2.2. Minimization of culture shock for the child entering school.

One factor in the success of individual children is the minimisation of culture shock at school entry. It is probable that most children experience some shock in the transition from the relatively free pre-school environment to the more rigid, formal, structured environment of the school. This shock is especially traumatic to children who are faced with a foreign language and foreign cultural values as well as the strangeness of the school environ-
ment. In the bilingual schools described here, the shock is limited to the transition to the school environment. The first classes are taught in the child's own language by teachers who share his cultural values and customs. His introduction to a new language, and to a new set of values, is gradual and is mediated constantly by a teacher who understands his struggle and is sympathetic.

2.3. Augmentation of the child's sense of personal worth and identity.

This point is closely related to the previous one, but is not identical with it. One important element in the failure of children of the ethnic minorities in the schools of the dominant culture is undoubtedly their loss of a sense of personal worth. A child who is punished for spitting on the floor or throwing stones may feel that he is being unjustly treated and rebel, or may learn to conform. But a child who is punished for speaking the only language he knows can only believe that he is inherently bad or inferior—for his language is an essential part of what he is. The teacher who does not speak the child's language has no choice but to insist that he use the dominant language—and so in some measure punishes him for using his own. This subtle alienation of the children does not happen in the bilingual programs which are built on a respect for the child's language and culture. The assurance of his own worth and identity provides a firm base from which he makes the transition into a new language and participation in a new culture.

2.4. Development of the child's habit of academic success.

School failures and dropouts are often blamed on a long history of failure which has led to an expectation of continued failure. The child who
fails completely in his early schoolwork is unlikely to become a great success later. Such early failure is nearly inevitable for a large percentage of children who enter a school taught in a language they do not know. In the bilingual schools, however, the child is conditioned to success not failure. Learning to read and write in his own language is relatively easy for him, and this early success leads him to expect—and to obtain—success in the more difficult transition to another language.

2.5. Full utilization of the child's fluency in his own language in learning the skills of reading and writing.

A person becomes literate only once in his lifetime. Learning to read additional languages and scripts after the first one is a matter of enlarging his inventory of symbols and using his literacy skills in the context of a new language structure. He can become literate, however, only in a language that he speaks, as seen in my definition of literacy: That person is literate who, in a language he speaks, can read and understand anything he would have understood if it had been spoken to him; and can write, so that it can be read, anything he can say. (Gudschinsky 1970)

Goodman (1968) has described the reading process in a way that emphasizes the role of the learner's oral language in reading. In his model, the beginning reader is seen as 1) taking an input of letter shapes, groups of letters, and word shapes, and 2) recoding them as phonemes, groups of phonemes, or word names, 3) mixing this with an aural input—his knowledge of the language and its patterns—to 4) further recode it as oral speech, which he then 5) decodes for meaning.
The child who learns to read first in his mother tongue can make full use of his competence in the language. He recodes letters and word shapes to the phonemes and words that he already knows and uses; his aural input comes from a native speaker's control of the patterns of the language; and his decoding process is in terms of familiar vocabulary and discourse structure. To extend this basic literacy to a second language is a relatively small task compared with the overwhelming difficulty of learning to read for the first time in an unknown language.

2.6. The contribution to second language learning of focus on the mother tongue.

Learning to read involves some conscious focus on the structure of the language to be read. Minimally, the child learns to focus on the phonemes represented by letters or letter patterns, and on the units represented by orthographic words. In the reading method that I have been developing, the reader is taught to recognize the phonemes of his speech, and the orthographic patterns of the written language, as contrastive substitutions within a pronounceable matrix (syllable or couplet). He uses this recognition for recoding (or decoding) content words. He is taught to recognize the functors (affixes, clitics, function words) at sight in the context of grammatical structures at word or phrase level. This means that the child develops considerable conscious control of the phonological and grammatical structures of his own language. It is my conviction that this conscious control of his own language is of value in learning a second language in the formal school setting.
Admittedly, this kind of control of a first language is not a prerequisite for learning a second language by free and friendly association with speakers of that second language. In the schools outlined here, however, there were no such normal contacts, and the second language was learned largely from the school teacher in formal classes. Where the teaching depended on conscious focus on features of the second language, practice in similar focus on the mother tongue facilitated the learning.

2.7. The development in the mother tongue of basic concepts for the content subjects.

Unfortunately, in the unnatural situation of the school, most learning is not by doing and experiencing, but by rote memory and verbalization. It is possible for an individual to do a great deal of verbal learning which is only a manipulating of word tokens without meaning. This is especially true in a language which the pupil does not know well. He may learn to parrot the appropriate collocations of words, and yet have no real notion of what is meant.

In the bilingual schools, the child is introduced to a wide range of new ideas in his own language, for which he has adequate real world referents. In most of the programs, he makes the transition to using the second language slowly, with diglot texts and instruction in both languages. By the time he is working monolingually in the second language, he has a fair understanding of what is being talked about, and a habit of expecting to understand the words he is manipulating.
2.8. The use of reading as a tool in second language learning.

When it is necessary to learn a second language from a single teacher, there is a serious limit on how much the language can be heard and practiced in normal speech contexts. The use of written material can substantially increase the child's exposure to the language, and enhances his chances of learning it. In the bilingual programs, literacy in the mother tongue is followed immediately by learning to read and write in the second (except in the Mexican programs) language. Thereafter the child has diglot materials, which help him in learning the second language—reinforcing and expanding what he learns orally.
3. Conclusion.

This paper, with its observational reporting and its preliminary hypotheses, can only be taken as a starting point for more rigorous research. There is a need for more studies like Modiano's (1968) to quantify and confirm the nature and degree of the success of the bilingual programs.

It has been said that nobody has ever taught a language to a small child. There is need, therefore, for a careful study of what happens in the bilingual schools—how do the children learn the second language? In this connection, there is need of specific studies of the role in language learning of conscious control of the structure of the mother tongue, and of the usefulness of reading. There is also need for research that compares the processes of learning language in terms of well known concepts, and of learning language and new concepts simultaneously.

It is hypothesized here that literacy in the mother tongue minimizes culture shock, and augments the child's sense of worth and his expectation of success. There is need for research into the relative usefulness of mother tongue literacy for this purpose, versus other less costly strategies.

Castro de la Rua, José. 1970. *La alfabetización en lenguas indígenas promotoras culturales.* Instituto Lingüístico de Verano, México D.F.


