Bilingualism and Second Language Learning

by

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Each language is unique and distinctive. But every language has the same basic components, namely sound, meaning, structure and vocabulary; thus what one has to learn to attain linguistic mastery, whether in his mother tongue or in a second language (S.L. hereafter) is the same. The difference lies in the how of it, both in the acquiring and the functioning. It is how the sound and structure have been used that makes one language different from another. Thus, the factors at work in the monolingual situation are different from those of the bilingual situation.

The present paper is an attempt to discuss the bilingual process (acquisition and usage), some of the factors affecting this process, and finally, the implications for the teaching of English as a Second Language in Sri Lanka.

We shall begin by clarifying the concept of bilingualism. Bilingualism is "having two symbols for the same referent." That is, the speaker has a concept (= referent), but uses two different words (= symbols) to identify it. If he is speaking English he uses the word "pencil," and if he is speaking Sinhala, the word "citha." But he is referring to, or speaking of, the very same thing. Diagrammatically:

\[
\text{Concept} \rightarrow \text{pencil} \rightarrow \text{citha}
\]

I. The March Toward Bilingualism

Lambert¹ (p. 119) points out three levels of progressive achievement in the acquisition of an S.L. The first level is a grasp of the phonological and grammatical patterns of the target language (T.L.). But a mere understanding and vocabulary (i.e., ability to produce sounds) of T.L. does not necessarily mean either an ability to respond automatically or to respond fast enough to be able to carry on a smooth conversation. Speed of response is a commonly accepted measure of habit strength, and this is what the S.L. learner has to achieve after mastering the basic grammatical (and phonological) system. In other words, not only should he know the T.L., but he should also make it a part of his system. Thus, at the second level of S.L. learning, he should achieve automatically.

The third level is the toughest barrier. And this is to react culturally. For example, the words "old man" mean "a man who is old." But in the

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local English sub-culture, it has another meaning, namely 'father'. Now, to be able to communicate effectively, the learner of English has to learn to use the particular words with this special meaning, too.

Once the bilingual achieves these three steps, he is close to the point of being in a state of "anomie", i.e., a feeling of belonging neither to his own culture, nor to the new culture; (to the sub-culture of the English-speaking class, in the case of Sri Lanka). Oddly enough, this is the "highest" state in bilingualism.

Code Switching and Types of Bilingualism

Having seen the steps in achieving bilingualism, let us now see the functioning of it.

Suppose that there are two people talking to each other. Both of them know (i.e., understand and speak) two mutually common languages, say Sinhala and English, and switch back and forth from one to the other, freely. What, in essence, is happening? They are switching codes and this they accomplish by doing three things: they (1) select words from two different lexicons (= vocabularies); (2) use different grammatical rules; and (3) use different distributions and combinations of sounds.

The next question is "How did they do this?" To answer this question, we have to examine the different types of bilinguals. Linguists and psychologists have identified at least two broad types — compound bilinguals and coordinate bilinguals. To understand these terms, let us look at the figure: on page 107.

The manner in which compound and co-ordinate bilinguals store information in their two (or more) languages is shown here by different arrangements of linguistic "tanks". According to the hypothesis, the compound bilingual stores information centrally, i.e., in one tank, and the co-ordinate type in separate tanks.

In this figure, the one on the left has only one tank and one tap, which indicates that the compound bilingual is using a common linguistic pool for speaking either language. Thus, if the meaning of a symbol (word, phrase, sentence, etc.) in English, say, for example, 'democracy', is reduced through overuse, the meaning of the Sinhala word, too, is accordingly reduced. Further, "compound bilinguals show a more general language deficit affecting their two languages when they become aphasic". (p. 119).

The co-ordinate bilingual, on the other hand, (the two tank model on the right) uses different taps to summon information. He switches a lever which checks the outflow from one tap while allowing the information to come through


3. To be aphasic is to be in "... that state in which one has difficulty in speech, comprehension of speech, naming, reading, and writing... It is associated with misuse and/or perseveration of words, but is not due to disturbance in the mechanism of articulation... not due to general mental insufficiency." Speech and Brain Mechanism, Penfield W. & Roberts, Lamar, Atheneum, NY 1966 (P & R). p. 92.
the other. Since the two taps complement each other, that is, are independent of each other, any overuse of a symbol in English would not affect the symbol in Sinhala. Similarly, aphasia is likely to result in the loss of only one of the two languages, rather than both, as would be in the case of a compound bilingual.

These two types of bilingualism, of course, are not mutually exclusive. Kohers (p. 79) found ".......... that the actual situation of a bilingual person combines parts of both hypotheses". This should not be surprising since both Kohers and Lambert have found that the learning context is significant in determining the bilingual situation; that is, the information is retrieved in the language (more broadly, the context) in which it was encoded. For example, if Geography were learned in Sinhala, and Philosophy in English, the bilingual would automatically switch on the Sinhala tap when discussing Geography and use English for Philosophy. Or again, if in a family of mixed marriage, the mother spoke to the child in Sinhala, and the father in Tamil, the child would use Sinhala with the mother and Tamil with the father, and use Sinhala or Tamil, depending on which is more dominantly used in the home, when talking to both parents together.

II. Factors Affecting Second Language Learning

If that is the process and functioning in bilingualism, we now turn to some of the factors that affect S.L. learning: age, intelligence, personality disposition and environment.

Age

Let us see what effects age has on S.L. learning. Linguists, with good support from psychologists, are agreed that a child is a linguistic adult in his mother tongue around age four. What we mean by this, of course, is that such a child can understand and produce the (meaningful) sound units of the language and their rule-governed combinations, which is what language is. It is not that his vocabulary is as extensive as that of an adult. Language is a complex system of systems and not a mere stringing together of words. Which is why we can speak of a "second stage of vocabulary expansion" (after four) in language learning. Now if we were exposed to a second or several languages before age four, he could master them easily, and just as easily keep each language apart.

By age eight, the average child "begins to hold on to linguistic patterns," and at nine to "fix these patterns". Consider that these ages fall within Piaget's "concrete operational" (third) stage of intellectual development. This means that a child under eight or nine can still master an S.L., with relative ease, though not as easily as when he is under age four.

There is some evidence to show that age nine (or twelve at a maximum) is crucial in first language learning. Penfield (p. 78) found that children,

...........under the age ten or twelve, [who] lose their power of speech recovery after a year of dumbness and aphasia. In time they spoke as well as ever......they began all over again and established a speech center located on the other side of the brain......[but] when the major speech center is severely injured in adult life, the adult cannot do what the child does. He may improve, but he is using the remaining uninjured cortex on the side of injury. He cannot establish a complete new center.....not because he is senile, but because he has by that time taken over the initially uncommitted convolutions of his brain for other uses.

The implications of this theory would have been clear if there were no other factors to be taken into consideration in adult S.L. learning. We must bear in mind that the two situations (child's first language learning and the adult's S.L. learning) are hardly comparable.

Thus Ausubel, Stern (p. 264), Saporta (V, pp 84-86) and others have pointed out some advantages which adults possess over children. Ausubel in arguing that "..........adults can acquire new languages more readily than can children...........", (p. 420), (with the possible exception of pronunciation) given the same conditions (i.e. same time, good material and good teachers, etc.), goes on to point out two of these advantages:

First, they [adults] have a much larger vocabulary than children, particularly with regard to abstract concepts. Hence in learning a foreign language, unlike children they need not acquire thousands of new concepts. Second, in learning the structure of a new language......they can make deliberate use of grammatical generalizations and can explicitly apply them to suitable exemplars. (Ibid, p. 421).

This latter relates to the inductive learning process of children as opposed to the deductive learning of adults.

9. Note, incidentally, the parallel situation of a rural and urban Lankian learning English. The urban child's task is, like that of the adult, only to attach new verbal symbols to the concepts already acquired, having lived in a city. But the "rural" learner has a prior task; to master the concepts before attaching symbols.
Another advantage that adults or grown-up children have is their ability to read and write. This means that they can use a bisensory media (hearing and seeing) instead of the young child's unisensory (aural) input. Saporta points out that writing sometimes gives more linguistic information than speech: “for example, capitalization........or the use and position of grammatical markings like the apostrophe in boys, boy’s, boys” (V., p. 85).

Thus there is evidence both for teaching an S.L. early and later in life; we can only conclude, with Stern (V., p. 265) that “........the current claim that the early years of schooling offer optimal conditions for language learning is open to question ”.

Intelligence

In a given culture, there are members whose measured I.Q. (assuming that this is a reasonable, although never comprehensive, index of one’s “intelligence”) ranges from very low to very high. If asked to read, add or do any other activity, the performance would very much depend, among other things, on a person’s general intelligence. But take language. Regardless of whether a person can add 2 + 2 or read a simple paragraph and understand it (all of which are essentially results of training), every one would speak his native tongue quite fluently, i.e. without offending the members of his speech community with regard to the linguistic patterns of the given language. This suggests that intelligence is not a factor in first language learning.

Yet measurement specialists tell us that there is a high (positive) correlation between intelligence and verbal learning. Really it is more appropriate to say that most intelligence tests are verbal, i.e. “word-tests”.

How do we reconcile this apparent contradiction? The clue lies in the word “verbal.” Earlier we referred to the “second stage of vocabulary expansion.” This is the process that goes on until one’s death, and since a child is a linguistic adult by age four, any learning after that age must be an extension of learning a language, and not learning the language itself.

While one may speak his mother tongue fluently, regardless of his intelligence, the richness of his discourse, i.e. choice of words, patterning of these words, etc., depends on his vocabulary and mental set. The more “intelligent” person is likely to have a larger stock of vocabulary items at his call than a “less intelligent” one.

Now, in the case of an S.L. learner, depending on the age he is introduced to the S.L., intelligence may play a part even in the “first stage learning” (i.e., the phonology, structure, etc.), in addition to, of course, in vocabulary learning. In his studies with English speaking Montreal students of French, Lambert (p. 115) found that “........aptitude and intelligence formed a factor that was independent of a second, comprising indices of motivation.” Gardner (as cited in Lambert) found the same two independent factors at work.

This finding is not surprising, since the S.L. learner has to learn at least a few hundred words to be able to use the target language. Language being a coordinated system of (phonological, morphological, syntactic, and semantic) systems, no one element can be learned to the exclusion of the others.

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Lambert’s finding would equally apply to an S.L. learner above age six, if we accept the premise that by that time a person is a linguistic adult, and is beginning to fix patterns. Dislodging the linguistic patterns registered in the speech cortex may be a function of intelligence, and the elder the S.L. learner is, the more it enters as a factor.

Bilingualism vs. Intelligence

A question that keeps coming up in the minds of parents, teachers and others interested in children is whether learning a second (third or fourth) language is harmful to the child; whether it leads to loss of intelligence. Since each utterance is associated with a conceptual counterpart, would not two different codes (languages) lead to confusion?

Opinion is divided on this question, although there is more and more evidence to show that learning more than one language does not hinder a person’s intellectual growth. On the contrary, this learning sharpens intelligence, if we are to agree with Lambert.

......our results clearly show that the bilingual students are far superior to monolinguals on both verbal and non-verbal tests of intelligence......

(L.p. 121)

Since this finding goes against findings of others, could it be that the different results came from different populations? Also, there are “good” bilinguals and “bad” bilinguals, meaning those who have equal mastery in both languages (i.e. bilingual balance) and those whose mastery in one language is more than in the other (i.e. linguistic dominance) respectively. These two variables provide four possible permutations and a statement cannot be made without first verifying whether or not Lambert’s sample came from the same population as the one from which other samples giving different results were drawn.

The evidence from neurophysiology, however, supports Lambert:

Does multilingualism decrease the eventual excellence of intellectual performance in any one culture?......does a second language started too soon confuse the child?......the answer......based on observations and psychological study, is no. Double learning may confuse the scientist who seeks to discover how it is done, but not the child. (p., 80).

Aptitude and Personality Disposition

Within the same age and intelligence level, there may still be variation in each individual’s aptitude to learn an SL. For example, some people have particular difficulty in imitating strange (stretches of) sounds or foreign accents, or in accurately doing so. The length of the “mimicry span” may, again, be shorter in some than in others. Phonetic discrimination, that is, discriminating between one sound and another, is yet another variable where individual differences are seen. Finally, not all possess equal ability to develop meanings inductively, and, neither are everyone flexible in adapting to a foreign language.
orthography. The above observation of linguists (see John B. Carrol: *The study of language*; Harvard University Press, 1959) tend to point to a factor in SL learning which is independent of age and intelligence.

For the variable of personality disposition, one can best quote Lambert (p. 115).

"...whereas aptitude and achievement were specially important for those (language)....skills stressed in school training, the acquisition of...... skills, whose development depends on the active use of the language in communicational settings, was solely determined by measures of an integrative motivation...."  

11 This [integrative motive]..... was the converse of an, authoritarian ideological syndrome, opening the possibility that basic personality dispositions may be involved in language learning efficiency.

Motivation and Environment

Age, intelligence, and personality are factors that relate specifically to the individual. There are other factors affecting an S.L. learning situation which relate more specifically to the environment. This includes motivation and the home.

A person's interest in learning a new language can be determined by many factors. But we can group all of them under two broad headings.

A student in the university may want to learn English to be able to read books relating to his subject. Certain US universities require their M.A. and Ph.D students to pass a reading (with comprehension) test in French or German. A Tamil government servant might learn Sinhala to qualify for his efficiency bar or in the hope of getting a promotion. Now, in all of the above cases, the learner is to use the second language as a means, a tool, an instrument. Thus, we say that such a motive as above is largely instrumental.

Now let's say that the person who is learning English to be able to read books might also be quietly aspiring to eventually being a member of the local English sub-culture. That is, not only would he be learning English, he would change his peer group (i.e. heave his Sinhala or Tamil-speaking friends and join a circle of English-speaking friends, too), and perhaps learn ballroom dancing, buy the latest Western hits, etc. What he is trying to do is to integrate into the local English sub-culture. Such a motivation we call integrative. Foreigners from all over the world come to Canada to settle down, and their interest is to feel comfortable as soon as possible in their new home. Thus they learn English (or French in French-speaking areas). Here, too, one finds the integrative motive.

Thus, we have two kinds of motivations: instrumental and integrative.

Associated with these factors is the additional consideration of whether a bilingual is going to try to retain an equal control of the two languages (i.e.

11. See p. 111 for a discussion of this concept.
12. It is recognised that both intelligence and personality disposition are determined environmentally as well as genetically.
III. Some implications for learning and teaching a second language in Sri Lanka

The preceding theoretical discussion leads to some very interesting practical questions in the light of the current interest in teaching English as a second language. My task here is merely to raise the questions.

Our entire discussion was based on ‘bilingualism’ (which term relates to the ability to speak (two) languages. But the very first question one could raise is: “What is our functional goal in teaching English in Sri Lanka? Is it to speak it? Or to be able to read (and understand)”?

This question naturally leads to a second question: “To what use are we going to put English?”? If the answer to this latter question is “To enable us to speak to English speakers in the world”, the answer to the former question “What is our functional goal?” is obvious: “To be able to speak the language”.

A lively discussion can ensue.

“To speak English”, the theoretician might argue, “is to be integratively motivated”, [if we recall the distinction between integrative and instrumental motivation.] “That is, to integrate with the local sub-culture (for, ability to speak the language is the first criteria for membership), or to integrate into a society which speaks English, such as say UK, US, Canada, Australia etc.”

“Which is another way of saying ‘to lead them out of the country in search of greener pasture’” joins in the nationalist.

“It is also to give our children a different cultural orientation”, the cultural anthropologist and the philosopher of language might add.

To get back to our original question “What is our functional goal?”, there can be a second answer: to be able to read (and understand) — an instrumental motivation.

Then a question arises: “Who is it that would want to read in English?” Assuming that by reading is meant reading material unavailable in the native language, but indispensable to the acquiring of a right view (knowledge), then the answer is “Those who pursue higher studies”.

Another discussion ensues.

“Why not everyone? Surely, is it not best if our children could read whatever they wanted in English at every level?”, the world-view-man could ask.

“At what cost?” joins in the economist (of education). “What national benefit would a scheme to teach everyone to speak English accrue?”

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14. In the literature on reading, the work ‘read’ is used to mean only “reading with understanding” and not merely producing the sounds.

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15. Spoken by the Frenchmen and the Canadians (not only of the Province of Quebec and in pockets all over the country, but by a fair number of English-speaking Canadians, too), in the former French colonies of Africa, in Mauritius and Madagascar, Vietnam and Cambodia and all over Europe, including East European countries.

16. Spoken not only in the Soviet Union, but in most, if not all, socialist countries of East Europe, too, (where it is compulsory in schools).

17. Spoken in Germany (West and East), all East European countries (more than even French), 200,000 in Toronto (Canada) alone, and more elsewhere in Canada, and in the US. (In the Soviet Union, too?)

18. 750 million of them in the People's Republic of China, 20 million more in Taiwan and some more in Hong Kong and some other Far-Eastern countries, and in the major cities of the world (where a ‘Chinatown’ symbolizes their existence).

19. In Spain, the entire South American continent and Mexico, and the Puerto Ricans in New York and the poor Americans in California?

20. In East Africa (e.g., Tanzania).

21. ‘Instrumental use’ here, with reference to languages like Swahili, Hindi and Spanish, could be to read the literature in original, or for foreign service.
study is extremely limited, then why, under these circumstances, study the entire system of the language.... ?”

To explain, based on this thinking, Artemov and his associates computed mathematically the frequency of English linguistic patterns in medical texts that students of medicine were required to read. This formed his micro-language (of English) which future students of medicine would be taught to be able to read research on the subject. Could similar research into material in different languages on the various topics be undertaken? Or, is this necessary? What would the costs and benefits of such a program be?

A related question stems from the hypothesis that not everyone may have the aptitude to learn a language. However, much money, time and effort is put into it, one may not be able to or find it difficult to teach music to a child who has no aptitude. Or may be the results are not worth the trouble. Similarly may be with language.

The next question, arising from the above (hypothetical) discussion is, “At what age should English be introduced”? Of course, learning theory relating to languages cannot help us here, since the discussion above tells us that there’s no one optimal age for learning a language. All it tells is that we have to use different methods for different ages and different purposes. One of the major contentions of Ausubel (p. 420) is that

......there is no good reason for believing that methods which yield satisfactory results with children must necessarily be appropriate for adults.

The same line of thinking underlies Saporta’s rejection (in V., p. 84) of the audio-lingual method (“requiring to relate a symbol directly with an environmental event rather than indirectly to the first language”) as the most efficient method under all circumstances. It was found that one method was relatively more efficient in one situation, while the same method produced poorer results under different conditions (p. 120).

What all this amounts to is simply this. It is not the age that matters really. It is the method. The best results are obtained only when due consideration is given to all the aspects of each learner’s situation, such as age, intelligence, language background, the goals of S.L. study, etc.

There is one final question: “What level proficiency should our students be required to achieve?” Assuming our goal to be speaking ability, is it necessary that they achieve “bilingual balance”, i.e., be equally proficient in speaking both the native tongue and the S.L.? Shouldn’t the student’s attempt be to retain “linguistic dominance” of his own mother tongue so that he may not be uprooted entirely from his soil (culture)? Again, need they reach the third and highest stage of “culturally reacting” to the new language? Or even reach the second stage (i.e. “automaticity”)? Isn’t “first stage” learning (i.e. learning the basic phonological and the grammatical system) not sufficient?