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AUTHOR Andersson, Theodore
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ABSTRACT

Educators are presently engaged in testing the hypothesis that under favorable conditions bilingual schooling will improve the education of both bilinguals and monolingual English-speaking children and at the same time contribute to a healthier society. These prerequisite favorable conditions are: a socio-economic-cultural survey of the community contemplating a bilingual program; participation by various sectors of the community in the planning and conduct of the program; clear-cut statements of philosophy, rationale, goals, and objectives; and adequate program design, including staff, curriculum, methods, materials, evaluation, provision for correction of program defects; provision for research; and description and publicizing of the program for the benefit of other interested communities. Each of these elements is elaborated in Part I. In Part II some of the findings of specialists in early childhood are considered together with their implications for bilingual education. Of special relevance are the development of the child's intellect, senses, memory, and imagination. His early language development and potential for bilingualism or multilingualism and early reading and writing suggest the conclusion that bilingual education between ages two and five opens vistas for innovative developments. (Author)

BILINGUAL EDUCATION AND EARLY CHILDHOOD

THEODORE ANDERSSON

THE UNIVERSITY OF TEXAS AT AUSTIN

A LECTURE

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PART I--BILINGUAL EDUCATION

Introduction

First a word of clarification concerning the title of my lecture. "Bilingual education"--or, more accurately, "bilingual schooling," when it takes place in school--is the most commonly used term for learning in and through two languages. Since language and culture are inseparable, some educators use the more explicit term "bilingual bicultural education," with or without a hyphen. Still others, realizing that language is only a part--though an important part--of culture, would like to use the inclusive term "bicultural education" but are deterred by the thought that not everyone would understand that language is an essential part of culture and so some would lose sight of language unless it is specifically included. A solution which I personally like is that of the Bicultural Bilingual Program of the University of Texas at San Antonio, which places the more important, the more inclusive term first but also maintains the term "bilingual." I shall myself use the short term "bilingual" to mean "bicultural bilingual."

Educators are presently engaged in testing the hypothesis that under favorable conditions bilingual schooling will improve the education of both bilinguals and monolingual English-speaking children and at the same time will contribute to a healthier society.

What are the conditions needed to assure programs of such quality that this hypothesis is confirmed?

There is general agreement on most of these prerequisite conditions: a socio-economic-cultural survey of the community contemplating a bilingual program; participation by various sectors of the community in the planning and conduct of the program; clear-cut statements of philosophy, rationale, goals, and objectives; an adequate program design, including staff, curriculum, methods, materials, evaluation, provision for correction of program defects; provision for research; and description and publicizing of the program for the benefit of other interested communities.

Let me briefly consider some of these elements.

Need of Realistic Societal Information[1]

The use of a socio-economic-cultural survey serves a double purpose. Not only does it provide societal information which is essential for realistic educational planning; it also serves to make the community conscious of issues which need to be understood before a bilingual program is undertaken.

An example or two may help to show the educational value of such a survey. Take the simplistic and false notions concerning 'real' English and 'real' Spanish which are so widespread. A planning committee must provide a simple but scientific explanation of the nature of language and of its varieties if it is to avoid a harvest of false assumptions and prejudices. Or take the popular misconceptions that the learning of more than one language places an intolerable burden on a child or that

learning to read first in the non-English home language may delay the learning of reading in English. If such misapprehensions are not dispelled by a few well chosen examples, the results of the survey may well be totally misleading. I don't mean to say that a citizen does not have a right to his prejudices, but he should at least have to vote his prejudices after being exposed to the best available information.

Community Participation

Let us now assume that the study committee has found good reasons--positive support by both the community and the educational staff, willingness by the taxpayers to shoulder the extra financial burden, availability of specialized staff personnel and other resources--to recommend a program[2] and that the school board has voted its approval. At this point the board would be well advised to convert the study committee into an advisory committee or to designate a new committee to advise the board, the superintendent, the director of instruction, and the director of the bilingual program, who ought now to be appointed as soon as possible along with bilingual teachers and other bilingual specialists.

This is a critical moment. If the study committee has done its work well, that is, has calculated accurately what it will take in money and other resources to launch and maintain a quality program, the advisory committee now inherits the same responsibility and must spare no effort or expense to assure the appointment of qualified personnel capable of planning, launching, and maintaining a model program.[3] One weak link in the chain may be enough to spell failure. There is no room in such an operation for self-promotion or conflict; support of each by

all is indispensable; nor can anyone lose sight for a moment of the basic program goals: the best possible education for each individual child and the enhancement of the general good of the community.

The advisory committee may wish to divide the labor. Each member can become a kind of specialist but without losing touch with the other committee members, the bilingual program director, other school administrators, and the school board. In serving as an advisory liaison agent between the school and the community, the committee may wish to designate one member to specialize in public relations, another in identifying resource persons in the community--story-tellers, musicians, artists, magicians, poets, orators, politicians, scientists, carpenters, classroom aides, etc.--another in visiting other programs in search of useful ideas, another in visiting mothers and helping them with the informal education of preschool children, another in dealing with nutritional problems, another in helping non-English-speaking families to build a better self-concept, another in combing the research literature for useful suggestions, another in designing research problems, another in carrying on a good natured running conversation with one or more arch critics of the program, another as legman for the bilingual director, another as hunter of good materials. The tasks sound interminable, and indeed they are. If they all fall on the bilingual director, he will soon be overwhelmed. By sharing them with his staff and the members of the advisory committee he makes them more nearly tolerable. There is more to do than even the advisory committee can hope to do on a part-time basis. Hence the desirability of finding in the community men and women and boys and girls willing to share the tasks.

In this way it is possible to shorten the distance between the home and the school, to extend the school into the community, to reduce the intolerable burden on the teachers and school administrators, to give some reality to the principle that "public schools should belong to parents, to pupils, to communities," and to create a feeling of satisfaction in the community over a community job well done.

Philosophy, Rationale, Goals, and Objectives

Statements concerning these basic subjects will necessarily differ from project to project, but they normally reflect the viewpoint of the program director, who works under the constraints inherent in the local situation.

The statement of philosophy will reflect the director's self-concept, which in turn will affect his conception of the situation in which he finds himself. Self-confidence is likely to beget a bold and imaginative view of his mission. Self-respect leads to a generous regard for others. Knowing that he himself is the product of a particular ancestry and environment, that parents, family, teachers, friends, and others have had a hand in molding his character and personality, he realizes that he in turn has the great opportunity of guiding a generation of youngsters to realize their potential. His success will be compounded of love, respect--even reverence--understanding, imagination, hard work, and humor, all of which will directly or indirectly contribute to his statement of the program philosophy.

In establishing a rationale for bilingual education, one must ask whether bilingualism is desirable or undesirable for the nation and for

the individual child.

As Mildred Boyer and I remarked in our monograph on Bilingual Schooling in the United States,[4] "For the United States of America in this latter half of the twentieth century the question of the desirability of bilingualism for the nation seems almost rhetorical. America's relations, official and unofficial, with almost every country in the world, involving diplomacy, trade, security, technical assistance, health, education, religion, and the arts, are steadily increasing. The success of these international relations often depends on the bilingual skills and cultural sensitiveness of the American representatives both here and abroad. In our country, as in every important nation, educated bilingualism is an accepted mark of the elite, a key which opens doors far and wide. It seems clear...that bilingualism is highly desirable for the nation.

"Is bilingualism desirable or undesirable for the individual child?" If the individual child belongs to a high socioeconomic class, the answer is obvious. As in other countries, the elite considers knowledge of other languages essential for participation in international affairs. To argue that children of lower socioeconomic classes will never need to use other languages is in effect to deprive them of the opportunity to become eligible for such participation. In the case of American children who are born into a non-English language, not to give them the education needed to perfect their first language to the point of usefulness amounts to a virtual betrayal of the children's potential. As Bruce Gaarder has said,[5]

"The most obvious anomaly--or absurdity--of our educational policy regarding foreign language learning is the fact that we spend perhaps a

billion dollars a year to teach languages--in the schools, the colleges and universities, the Foreign Service Institute, the Department of Defense, AID, USIA, CIA, etc. (and to a large extent to adults who are too old ever to master a new tongue)--yet virtually no part of the effort goes to maintain and to develop the competence of American children who speak the same languages natively....'"

For the individual child, of whatever socioeconomic class, bilingualism is clearly desirable, just as it is for the nation.

In addition to reflecting the enlightened point of view of the community the statement of rationale should deal with such topics as the development of the children's self-concept, the best medium for learning, the best order for learning language skills, the relation of language and culture, the factor of age, etc.

Each of these topics deserves full treatment, but to save time let me instead list ten propositions, taken largely from our monograph on bilingual schooling, which suggest the possible content of a statement of rationale.

1. American schooling has not met the needs of children coming from homes where non-English languages are spoken; a radical improvement is therefore urgently needed.

2. Such improvement must first of all maintain and strengthen the sense of identity of children coming from such homes and the sense of dignity of their families.

3. The child's mother tongue is not only an essential part of his sense of identity; it is also his best instrument for learning, especially in the early stages.

4. Preliminary evidence indicates that initial learning through the child's non-English home language does not hinder learning in English or in other school subjects.

5. Differences among first, second, and foreign languages need to be understood if learning through them is to be sequenced effectively. Under favorable conditions the second language can serve satisfactorily as the primary medium of instruction, as has been demonstrated in the St. Lambert Experiment outside of Montreal, where English-speaking children beginning in the kindergarten learn almost completely in and through French.[6]

6. The best order for learning the basic skills in a language--whether first or second--needs to be understood and respected if best results are to be obtained; this order is normally, especially for children: listening comprehension, speaking, reading, and writing. It should be understood, however, that effective teaching calls for considerable overlapping, especially between listening comprehension and speaking and between reading and writing. And all four skills are mutually reinforcing.

7. Young preschool children have an impressive learning capacity, especially for learning language or languages. Young children apparently learn more easily and better than adolescents or adults the sound system, the basic structure, and vocabulary of a language, and even the basic skills of reading.[7]

8. Bilingual schooling is not only the learning of two languages; it is using two languages as mediums for learning the full range of school subjects.

9. Just as language is only a part, although an important part, of culture, so bilingual education should be thought of as only a part of bicultural education.

10. Bilingual education holds the promise of helping to harmonize the various ethnic elements in a community by fusing them into a mutually supportive and creative pluralistic society.

Like the statements of philosophy and rationale, the statement of goals and objectives must be in accord with the informed and conscious desires of a particular community. Within these limits, then, the goals of a bilingual program might be these four:

1. To so use two languages as to achieve the most satisfying learning by all children in any part of the curriculum.

2. To encourage all children, each at his own best rate, to cultivate their first language fully: to develop skill in all the language arts--listening comprehension of several varieties of the language, speaking in several registers, memorizing--which has unhappily gone out of style, thus contributing to our intellectual impoverishment--reading (both aloud and silently), and writing (including handwriting, typing, spelling, punctuating, and composing).

3. To encourage all children to develop fully their second language, each at his own best rate of learning.

4. To enable all children to gain a sympathetic understanding of their own ethnic history and culture and of the history and culture of other ethnic groups.

In summary, to give all children the opportunity to become sensitive

to two cultures and fully articulate and literate and broadly educated in two languages.

There has developed a lively controversy over so-called behavioral or performance objectives, much of it due in my opinion to a misunderstanding of the principle or to a too mechanistic implementation of the principle. To me it seems reasonable for a teacher to describe in advance and in considerable detail expected results of instruction, in terms of student behavior or performance, broadly interpreted to include, most importantly, joy in learning. To the extent possible, students themselves should be involved in this as in other aspects of the preplanning. A useful procedure would be for the teacher to show a class at the beginning of the year a videotape of the previous class, showing typical performances at the end of the year. It is also essential that the teacher explain the proper use of tests, as ways of measuring the effectiveness of the group planning and performance, not merely as a way for the teacher to assess, somewhat punitively, undefined student performance.

Program

An adequate bilingual program, designed to reflect a philosophy and rationale endorsed by the community and to implement the adopted goals and objectives, must be planned, conducted, and evaluated cooperatively by teachers, other staff, and students; must have a competent and committed staff; should have provision for correcting program defects as soon as they are detected; should have one or more research projects in progress; and should have available a written description of the program

for the benefit of other interested communities.

For suggestions concerning the curriculum I shall for lack of time refer you to Chapter VI of our Bilingual Schooling in the United States and to the very useful Handbook on Bilingual Education by Muriel Saville and Rudolph Troike.[8]

Concerning methods I believe we still have much to learn. Judging by some of the classes I have seen, our teaching on the one hand is not yet imaginative or interesting enough and on the other not challenging enough. Teachers, especially of young children, need to have and to show a zest for living and learning and imagination enough to understand what interests children. As the Soviet poet of childhood, Kornei Chukovsky, has remarked, "It is not hard to become an idiot when one has been robbed of one's childhood!"[9] And we need to understand that certain forms of learning which seem difficult to us grown-ups--like languages, for example--can be easy and pleasurable for children. We also need to realize how much can be taught and learned indirectly. Language or number concepts embedded in songs or games are more digestible than they would be in drills.

As with methods so with materials we are as yet badly underdeveloped, but thanks to the work of the Materials Acquisition Project of San Diego and its three partners in Stockton, Austin, and Miami, and thanks also to the increased activities of publishers, bilingual programs will soon have an increasingly wide choice of materials.

Provision for Research and Program Description

The relative lack of research in bilingual programs is a serious

shortcoming, which results in duplication and waste of effort. If a hypothesis is tested at all, it may not be adequately formulated. The variables may not be adequately controlled. And results, even if significant, may not be adequately reported. School boards and administrators tend to consider only the cost of research and not the benefits. The result is that teachers, required to work full time or overtime on the routine aspects of their work, have no time or energy left to think about how to improve the quality of education. If we are ever to make bilingual education really professional, we must reserve a significant place in our programs for carefully conducted research.

And finally, significant features and results of all bilingual programs should, for the benefit of other workers in the field, be recorded promptly in ERIC, now transferred from the Modern Languages Association in New York to the Center for Applied Linguistics in Arlington, Virginia.

PART II--EARLY CHILDHOOD

Introduction

I have up to this point sketched some of the salient features of a good conventional bilingual program. Now I should like to consider some of the findings of specialists in early childhood and the possible implications of these findings for bilingual education.

I make no pretense to competence in this field, for I am neither a linguist, nor a psychologist, nor an anthropologist, nor a specialist in early childhood. I am merely a language educator who has become fascinated with my desultory reading in this field and been made conscious of the fact that my field touches other fields. Let us consider a few of the features of early childhood development which appear to have a bearing on bilingualism and biculturalism.

The Child's Early Intellectual Development

According to Benjamin Bloom, 20% of a person's intellectual development takes place by age 1, 50% of a child's total capacity to develop its I.Q. is realized by age four. By age eight a child is said to have activated 80% of his total capability to self-improve. By age thirteen, 92% of this capability is self-started into usability, and by age seventeen the final 8% of the total capacity to apprehend, coordinate, comprehend, and use information has become operative.[10]

Buckminster Fuller writes, "The child is not in fact taught and cannot be taught by others to inaugurate these capabilities. He teaches himself--if given the chance--at the right time. This provision of environmental experience conducive to the child's intellectual development has been termed the 'problem of the match' by J. McV. Hunt, in his Intelligence and Experience .... If not properly attended to and given a chance to function...the brain mechanisms can be frustrated and can shut off the valves of specific capacities...to learn, then or later on, in the specific areas."[11]

Early Development of the Senses

Montessori too discovered what she called "sensitive periods" in a child, times of special receptivity to certain learnings. "Thus, in the early acquisition of sense impressions...there are periods in childhood which, if they pass without bearing fruit, can never be replaced in their effects."[12] According to Montessori, the child has a long sensitive period, lasting "almost to the age of five," during which he has "a truly prodigious capacity" for "possessing itself of the images of the environment."[13] His sensitivity during this period "leads him to absorb everything about him."[14]

Memory

Related to this extraordinary development of the senses is an equally amazing memory. "...all children appear to have special powers of memory and though the exact nature of these powers is not known, in general it seems that infants manifest a type of 'inventory memory.' This faculty has been called 'eidetic imagery' by the psychologists who

have studied it.[15] Even though the function of this special memory aptitude in babies is not completely understood, it is clearly related to the child's language faculty and like that faculty tends to diminish after five years of age."[16]

The implications are clear: During this early period a child should have a wealth of sensory experience, visual, audial, tactile. This is the golden opportunity for the child to hear many forms of music and memorable language. The memorizing of poetry at this stage serves not only to store the memory with passages that the adult can later recall with pleasure or use with special effect, it triggers the memorizing faculty, which if maintained can serve the individual permanently.

Imagination

Another precious gift of childhood is imagination, and for one of the best treatments of this gift we turn to the late Kornei Chukovsky, an observer of children, and the most loved author of books for children in the Soviet Union, who died in 1969, at the age of eighty-seven. His masterly little paperback entitled From Two to Five[9] is full of the charm and the wisdom of childhood. The title of the book marks Chukovsky as one of the small band of devotees to young children. He writes, "Although the child does not exist who, between the ages of two and five, does not reveal a predilection for poetry, this area of his intellectual activity and tastes has so far remained unexplored." (p. xvi) "'The Sense of Nonsense Verse' is the title of a chapter dedicated to that very curious genre of children's folk rhymes which he called 'topsy-turvies.'" (p. xvi)

Let me give a few of his examples of children's inventions, cleverly

reinvented in English by the translator, Miriam Morton:

> When Lialia was two and a half years old, a man whom she did not know asked her:
>
> "Would you like to be my little daughter?"
>
> She answered haughtily: "I'm mother's and no other's." (p. 1)

> It cheered me up, writes Chukovsky, to hear a three-year-old little girl mutter in her sleep: "Mom, cover my hind leg!" (pp. 1-2)

> "How dare you pick a fight?" the mother scolded.
>
> "Oh, Mommie, what can I do when the fight just crawls out of me?" (p. 3)

> When it is day here, it is night in America.
>
> Serves them right, those capitalists! (p. 54)

And, finally, another brief quote from Chukovsky: It took hundreds of years for grownups to realize that children have the right to be children. (p. 111)

Early Language Development

"It is generally acknowledged that between birth and about five years of age, every normal child will learn to speak the native language or languages in the environment. By the age of five, authorities agree, this child will have substantially mastered the basic patterns of his

language. Within the limits of his experience he will understand and express basic ideas in his native tongue, and his grammatical expression will be functionally correct."[17] Montessori remarks that "the mind during this period is in a phase of activity regarding everything that has to do with words."[18]

Take the matter of speech sounds. After studying the recorded vocalizations of an infant in the first year of life, Charles Osgood asserts that "The first observation of note was that within the data for the first two months of life may be found all of the speech sounds that the human vocal system can produce."[19]

Or consider the subject of children's passive vocabulary. The rate of a child's vocabulary acquisition is a constant source of amazement to grownups, whose learning of words has by comparison almost come to a halt. For example, Mary Katherine Smith, using the Seashore-Eckerson English Recognition Vocabulary Test,[20] found that for grade one, the average number of basic words known was 16,900, with a range from 5,500 to 32,800.... For grade one the average number of words in the total vocabulary (basic plus derivative words) was 23,700, with a range from 6,000 to 48,800."[21] In a study of children's active vocabulary Rinsland used written sources supplemented by children's conversation to count 5,099 different words used by first graders out of 353,874 running words.[22]

Early Bilingualism and Multilingualism

Apparently children also have a remarkable ability to learn more than one language. For example, Montessori declares that "Only a child

under three can construct the mechanism of language, and he can speak any number of languages, if they are in his environment at birth."[23]

Almost everyone has had personal experience or has known someone who has had personal experience with children in a plurilingual setting who have apparently without effort acquired more than one language. Many such cases have also been recorded or described.[24]

An oft-cited case of multilingualism is the one described by the British psychologist J. W. Tomb,[25] who writes:

"It is a common experience in the district in Bengal in which the writer resided to hear English children three or four years old who have been born in the country conversing freely at different times with their parents in English, with their ayahs (nurses) in Bengali, with the garden-coolies in Santali, and with the house-servents in Hindustani, while their parents have learnt with the aid of a munshi (teacher) and much laborious effort just sufficient Hindustani to comprehend what the house-servants are saying (provided they do not speak too quickly) and to issue simple orders to them connected with domestic affairs. It is even not unusual to see English parents in India unable to understand what their servants are saying to them in Hindustani and being driven in consequence to bring along an English child of four or five years old, if available, to act as interpreter."

Early Reading and Writing

Fuller writes in his prologue to The Case for Early Reading, by Stevens and Orem, that "the authors have assembled considerable and convincing evidence that the preschool child (Why not call him the

'school-at-home' child?) wants to and will learn to read at home given the opportunity."

"Their argument that the 'before age six' period is the naturally optimum time for language learning--reading included--is increasingly supported by recent research disclosures in diverse disciplines which, coupled with the historical evidence cited, merits the closest consideration."[26]

Montessori observes that "Children who are able to commence writing at the proper age (i.e., four and a half or five years of age) reach a perfection in writing which you will not find in children who have begun to write at six or seven; but especially you will not find in this later stage that enthusiasm and the richness of production."[27]

It was Glenn Doman who first made me aware of the young child's reading capacity. In his book on How to Teach Your Baby to Read: The Gentle Revolution, he writes: "Children can read words when they are one year old, sentences when they are two, and whole books when they are three years old--and they love it."[28] And in a paper prepared for the Conference on Child Language held in Chicago in November 1971 he describes how he and his colleagues came to make this discovery while working with brain-damaged children. I'll read his first three short paragraphs. He writes:

"When you are confronted with a brain-injured two-year-old who is no further advanced than a newborn babe--who gives no evidence of being able to see or hear, let alone crawl or raise his head--teaching him to read isn't the first thing you think about; what you think about is how to get through to him, by any method, on any level.

"Young Tommy was such a child. His eyes wouldn't follow you, or follow a light, or work together. A loud noise wouldn't make him start. You could pinch him and get no reaction. In fact, the first time we ever got a reaction out of Tommy was when we stuck pins in him: he smiled. It was a great moment, for us and for him. We had established contact.

"That was when Tommy was two. By the time he was four he was reading, and thereby hangs a tale. Let me tell it to you just as it happened, because we didn't set out to teach him to read; it just happened along the way, as part of our overall problem of establishing communication."[29]

Shortly after discovering Glenn Doman's book, I received a letter from Professor Ragnhild Söderbergh, a linguist in the University of Stockholm, telling me that she was teaching her two-year-old daughter to read, using the Doman method. Later she reported her success in accomplishing this in a fourteen-month period, starting when her daughter was two years four months old and ending when the girl was three years six months old. The story is related in English in her book entitled Reading in Early Childhood.[30]

Judging by Stevens and Orem's The Case for Early Reading, children's ability to learn to read between ages two and five is common knowledge to those "in the know." Gradually this knowledge is penetrating official circles.[31]

Educational Changes

Assuming (1) that a community wishes to maintain its home language and its cultural heritage and (2) that it is persuaded by such evidence as we have sampled that ages two to five are indeed most propitious for

various forms of learning--two languages and culture, art, music, literature, numbers, nature study, human relations--and (3) that the benefits of the indicated educational changes exceed the costs, what would be some of the best ways to approach such changes?

A Home-Oriented Preschool Educational Model

One suggestive model is that described by Roy Alford of the Appalachia Educational Laboratory, Inc., at the Conference on Child Language held in Chicago in November 1971.

This program "is predicated on the assumption that there is a high positive correlation between formalized preschool training and later performance in school and in society..... This strategy for the achievement of the objectives of the Appalachia Preschool Education Programs has been the development of a child-centered, home-oriented program to be delivered by means of television broadcasts, home visits, mobile classrooms, and other media. It has involved building a curriculum based on behavioral objectives and preparing materials and methods particularly appropriate for children of three, four, and five years of age living in rural Appalachia."[32]

The second year's summative evaluation "indicated that children who experienced the program have increased language development and cognitive learning, greater psychomotor and social skills development, and that the parents have a favorable attitude toward the ECE intervention. The cost of the program was found to be approximately one-half that for the standard kindergarten program."[33]

Conclusions

It is time to draw our conclusions.

In Part I of my paper I considered what might be called conventional bilingual programs. Even in this type of program there is much room for improvement. The planning of a soundly based high quality program requires adequate societal information; a clear understanding between school, home, and community; a satisfactory statement of basic program philosophy, rationale, goals, and objectives; a sound program design; provision for research; and a clear description and evaluation of the program at each stage for the benefit of other interested communities.

In Part II I have explored, albeit superficially, the field of early childhood, especially ages two to five, and found implications for innovative bilingual education.

There is extensive evidence that in these early years children have a great though often untapped potential for learning in such areas as language, culture, art, music, literature, numbers, nature study, and human relations.

It appears that during this favorable learning period children respond not so much to teaching as they do to stimulating learning situations. There is evidence that areas of learning which are initiated at this early age may in a favorable environment continue. Thus, for example, early reading and writing may well result in permanent gains. A stimulating environment may also enable children to develop a lasting taste for art, music, and literature.

To what extent such early bilingual education should be

institutionalized is an open question. Nursery schools might well be bilingualized and biculturated, provided this can be well done. I see even greater prospects for upgrading bilingual education by extending it into the home, provided families are receptive and able to cooperate. We might well explore a system of play-tutoring of younger siblings by older children and elaborate the suggestions contained in the Appalachia Early Childhood Education Program: developing television programs--or utilizing those already in existence ~~like Carrascolendas~~--conducting home visits, and using mobile classrooms. The experience of the Appalachia Educational Laboratory indicates that these developments may not be prohibitively expensive. In any case they hold out the prospect of benefits greatly exceeding the costs.

My conclusion then is that the best way to achieve a significant advance in bilingual education is to take full advantage of the prodigious learning potential of children between birth and age five.

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