ABSTRACT: The concept of bilingualism as applied to individual children and to educational programs is discussed, and the history of research on bilingual children and bilingual education programs in the United States is reviewed. Bilingualism has been defined predominantly in linguistic dimensions despite the fact that bilingualism is correlated with a number of nonlinguistic social parameters. The linguistic handle has served policymakers well in focusing on an educationally vulnerable population of students, but the handle is inadequate as the single focus of educational intervention. Future research will have to be directed toward a multifaceted vision of bilingualism as a phenomenon embedded in society.

Bilingualism is a term that has been used to describe an attribute of individual children as well as social institutions. At both levels, the topic has been dominated by controversy. On the individual level, debate has centered on the possible costs and benefits of bilingualism in young children. On the societal level, fiery argument can be witnessed in the United States about the wisdom of bilingual education and the official support of languages other than English in public institutions. Particularly in the latter case, emotions run hot because of the symbolism contained in language and its correlation with ethnic group membership.

The controversy surrounding bilingualism is magnified by a sense of urgency generated by the changing demographic picture. In the United States, there are over 30 million individuals for whom English is not the primary language of the home. Of those, 2.5 million are children in the school age range, with this number expected to double by the year 2000. There are now many states in which the linguistic-minority school population is approaching 25% or more (Arizona, California, Colorado, Florida, New Mexico, New York, and Texas), and in many large urban school districts throughout the United States, 50% of the students may come from non-English-speaking homes.

Whether the debate is over the merits of bilingualism in individuals or institutions, there is considerable confusion over a basic definitional issue. The problem can be succinctly stated as follows: Is bilingualism strictly the knowledge and usage of two linguistic systems, or does it involve the social dimensions encompassed by the languages? Oscillation between these linguistic and social perspectives on bilingualism has frequently led to misconceptions about the development of bilingual children as well as misunderstanding in educational initiatives to serve linguistic-minority populations.

As a case in point, consider the linguistic and social complexities contained in the following statement about school experiences by a ninth-grade Mexican-born boy who had immigrated from Mexico six months earlier:

There is so much discrimination and hate. Even from other kids from Mexico who have been here longer. They don't treat us like brothers. They hate even more. It makes them feel more like natives. They want to be American. They don't want to speak Spanish to us, they already know English and how to act.

If they're with us, other people will treat them more like wetbacks, so they try to avoid us. (Olsen, 1988, p. 36)

Bilingualism, thought of simply as a bivariate function of linguistic proficiency in two languages, underrepresents the intricacies of the social setting. The history of research on bilingual children contains many false inferences about the effects of bilingualism based on a miscalculation of the complexity of the phenomenon. Similarly, current research to evaluate bilingual education programs takes an extremely narrow definition of bilingualism, that is, as the usage of two languages in instruction.

The importance of language in helping us understand the phenomenon is obvious. Nevertheless, language's accessibility to scientists must not be confused with its role in either the cause of problems or solutions to them. Wage distribution can be useful in telling us about the structure of racial discrimination, but changing wage distribution may not help solve the root causes of the problem. In a similar way, looking at language, we realize, only helps to facilitate the identification of problems and potential solutions, but additional steps are needed to provide adequate education to linguistic-minority students.

In this article we argue that although language provides an important empirical handle on the problems associated with bilingualism, one must be careful not to overattribute the causes of those problems to linguistic parameters. We provide brief overviews of the knowledge of bilingual children and bilingual education programs that has been gained through reliance on narrow linguistic definitions, bearing in mind its heuristic value. We then offer future directions for research.

The Bilingual Child

In the calculus of mental energy, what are the costs of bilingualism? Early research on the effects of bilingualism on immigrant children, conducted primarily at the turn of the century, painted a bleak picture. As Thompson
(1952) wrote in summarizing this body of literature, "There can be no doubt that the child reared in a bilingual environment is handicapped in his language growth. One can debate the issue as to whether speech facility in two languages is worth the consequent retardation in the common language of the realm" (p. 367).

Much of this early work on bilingualism in children can be interpreted within the context of the social history surrounding the debate over the changing nature of immigration in the early 1900s. The basic data to be explained were bilingual children's poor performances on various standardized tests of intelligence. From the empiricist point of view, the bilingualism of the children was thought to be a mental burden that caused lower levels of intelligence. This viewpoint was offered as an alternative to the hereditarian position, argued forcefully by prominent nativists such as Carl Brigham, Lewis Terman, and Florence Goodenough, that the new immigrants were simply from inferior genetic stock (Hakuta, 1986). Subscribers to the latter viewpoint sounded the social alarm that "these immigrants are beaten men from beaten races, representing the worst failures in the struggle for existence. . . . Europe is allowing its slums and its most stagnant reservoirs of degraded peasantry to be drained off upon our soil" (Francis Walker, quoted in Ayres, 1909, p. 103).

What is interesting about this early literature is its definition of bilingualism. The bilingual children included in these studies were not chosen on the basis of their linguistic abilities in the two languages. Rather, societal level criteria having to do with immigrant status were used, such as having a foreign last name (see Diaz, 1983). It is not clear whether the "bilingual" children in these studies were at all bilingual in their home language and English. Yet, on the basis of such studies using social rather than linguistic criteria, conclusions were drawn as to the effects of linguistic variables on intelligence. The point here is that language is a salient characteristic of children from immigrant and minority backgrounds that provides an opportune dumping ground for developmental problems that may or may not be related to language.

Research in the last few decades, fortunately, has developed considerable sophistication in understanding second-language acquisition and the nature of bilingualism. What has emerged is a relatively consistent set of answers to some fundamental questions about the linguistic and cognitive development of bilingual children. These answers argue against the early view—still held to be fact by some laypersons and educators—that bilingualism could be harmful to the child's mental development and that the native language should be eliminated as quickly as possible if these effects are to be avoided.

Indeed, more recent studies suggest that all other things being equal, higher degrees of bilingualism are associated with higher levels of cognitive attainment (Diaz, 1983). Measures have included cognitive flexibility, metalinguistic awareness, concept formation, and creativity. These findings are based primarily on research with children in additive bilingual settings, that is, in settings where the second language is added as an enrichment to the native language and not at the expense of the native language. Causal relationships have been difficult to establish, but in general, positive outcomes have been noted, particularly in situations where bilingualism is not a socially stigmatized trait but rather a symbol of membership in a social elite.

Second-Language Acquisition

An important theoretical justification for the early view about the compensatory relationship between the two languages can be found in behaviorist accounts of language acquisition. If first-language acquisition consists of the establishment of stimulus-response connections between objects and words and the formation of generalizations made on the basis of the frequency patterns of words into sentences, then second-language acquisition must encounter interference from the old set of connections to the extent that they are different. The two languages were seen, in this empiricist account, as two sets of stimuli competing for a limited number of connections. This provided justification for the advice given to immigrant parents to try and use English at home so as not to confuse the children.

This empiricist account of language acquisition was strongly rejected in the late 1950s and 1960s on both theoretical (Chomsky, 1957) and empirical grounds (Brown & Bellugi, 1964). As with most revolutionary changes in the empirical disciplines, the nature of the questions about language acquisition changed in a qualitative manner. The new metaphor for the acquisition of language was the unfolding of innate capacities, and the goal of research became to delineate the exact nature of the unfolding process. If language acquisition was not the forging of connections between the stimuli of the outside world, then one would no longer have to see the learning of a second language as involving a "dog-eat-dog" competition with the first language. To borrow James Fallows's (1986) recent metaphor, having two languages is more like having two children than like having two wives.

There is considerable research support for this more recent view. For example, in the process of second-language acquisition, the native language does not interfere in any significant way with the development of the second language. Second-language acquisition and first-language acquisition are apparently guided by common principles across languages and are part of the human cognitive system (McLaughlin, 1987). From this structural point of view, the learning of a second language is not hampered by the first. Furthermore, the rate of acquisition of a second language is highly related to the proficiency level in the native language, which suggests that the two capacities share and build upon a common underlying base rather than competing for limited resources (Cummins, 1984).

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important problems faced by linguistic-minority students throughout the socialization process. How else are we to capture, understand, and respond to the sentiments of many immigrants, so eloquently expressed by this 10th-grade Chinese-born girl who had immigrated at age 12?

I don't know who I am. Am I the good Chinese daughter? Am I an American teenager? I always feel I am letting my parents down when I am with my friends because I act so American, but I also feel that I will never really be an American. I never feel really comfortable with myself anymore. (Olsen, 1988, p. 30)

There is, indeed, more to issues confronting the bilingual individual than can be summarized by language proficiency measurements. As social scientists and educators, it is our obligation to capture the complexity of the situation and in the process to enrich our own science and practice.

REFERENCES


