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ABSTRACT

A study undertaken by the Southwest Educational Development Laboratory (SEDL) to assess the bilingual language and literacy education services made available by the school district to a group of Chinese American elementary school children in Seattle is the focus of a discussion on bilingual program policy formation. The role of theory in the policy-making process is considered, and it is concluded that part of the controversy and confusion about bilingual education comes from educators' and policy-makers' leap directly from research findings to policy implications without the intermediate step of theoretical interpretation of the findings. The major findings of the SEDL study are reviewed and related to previous research and theory concerning linguistic mismatch occurring when instruction is in a language not fully understood, the maximum exposure hypothesis of language learning, and the interdependence of first- and second-language skills. It is concluded that rational policy in regard to the education of minority students must abandon simplistic conventional wisdoms and acknowledge what is known and what is not yet known about second language learning and linguistic factors in academic learning. (MSE)



SUMMARY

POLICY REPORT: LANGUAGE & LITERACY LEARNING IN BILINGUAL INSTRUCTION

Jim Cummins

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A Policy Review of the Southwest Educational Development Laboratory Study submitted to the National Institute of Education, September 1983

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The SEDL analytic study of language and literacy learning in bilingual education involved a relatively small number (N=112) of grades 4-6 elementary school students, from one ethnic group (Chinese) in a particular urban center (Seattle). The central issue for this policy report is whether it is possible to draw any conclusions from this study which are relevant not just to Chinese students in Seattle and to the particular type of bilingual program model they experienced, but which are generalizable to other language minority contexts and have implications for U.S. bilingual policy as a whole. This issue requires consideration of the role of theory in the policy-making process.

Research, Theory and Policy

Two immediate issues must be addressed by educators and politicians in assessing the policy implications of any study: first, to what extent are the research findings and interpretation of those findings valid? Second, to what extent do the findings have any broader application or generalizability beyond the specific context in which the research was carried out?

Within the context of U.S. bilingual education policy, the first issue has been extremely controversial since the publication of the Baker and de Kanter (1981) report. Baker and de Kanter disputed the interpretation of many studies that previously had been viewed as supportive of bilingual education policy, and debate has since continued on the appropriate criteria of methodological adequacy in assessing bilingual education evaluations.

Although it is clearly crucial to assess the methodological adequacy of the research design and consequent validity of the results, meaningful interpretation of those results requires consideration of the theoretical principles which permit explanation and generalizability to other contexts. The omission of any coherent examination of theory in bilingual education is a major flaw which limits the usefulness of the Baker and de Kanter literature review. Methodological adequacy is a necessary condition for research to become relevant to educational policy; however, contrary to the implicit assumption of many commentators, it is not a sufficient condition. Policy-making requires that research findings, often



from very different contexts, be related to one another and integrated into a coherent theory. Individual findings or sets of findings are useless in isolation since they cannot be generalized across contexts. Thus, for example, the results of the Chinese bilingual program in Seattle, evaluated in the SEDL study, cannot be directly generalized to programs for Puerto Rican students in New York. However, the theoretical principles underlying the success of these two programs are, almost by definition, generalizable across contexts. If a particular theoretical hypothesis cannot account for a set of research findings, then the hypothesis is inadequate and requires revision.

In short, part of the controversy and confusion in regard to the evidence for and against bilingual education derives from the fact that educators and policy-makers have tried to go directly from research findings to policy implications, without the intermediate step of theoretical interpretation of the findings. Elucidation of the explanatory principles that underlie the research findings in very different contexts is necessary before any policy implications can be drawn from the findings. This becomes clear in examining the policy implications of the SEDL study.

Major Findings of the SEDL Study

The SEDL study used regression analysis to examine the influence on English proficiency of variables such as length of residence in the U.S., amount of bilingual or mother tongue (L1) instruction received, current and preschool exposure to English, L1 academic proficiency, etc. The study is exceptional in the range of both academic and oral communicative measures of English proficiency it included. It also differs from many previous evaluations in defining bilingual instruction as a continuous variable (i.e. number of semesters) rather than as a discrete program. This is largely a function of the particular conditions prevailing in the Seattle site, but it has the advantage of largely (but not entirely) avoiding thorny problems of control group comparability. Thus, in terms of research design, the SEDL study compares well with most previous studies in regard to conceptualization and operationalization of independent and dependent variables. In addition, its pseudo-longitudinal design and range of subjects (U.S. first-schooled and those first-schooled abroad) provides an exceptionally rich data base.



The major policy-related findings are as follows:

- 1. For both U.S. first-schooled and foreign first-schooled, length of residence (LOR) in the U.S. is strong predictor of English proficiency.
- 2. For the U.S. first-schooled students, the amount of bilingual education received was significantly related, in a positive direction, to the development of English academic skills, but not to English conversational skills. In other words, a moderate improvement in students' English academic achievement was noted as a result of bilingual education.
- For the foreign-first schooled students, when LOR was held constant, the extent to which Cantonese literacy skills had been promoted prior to immigration to the U.S. was significantly related to the development of English literacy skills.
- 4. As a group, the Chinese students were performing exceptionally well in math (approximately 80th percentile) and adequately in English literacy skills. Those first-schooled in the U.S. appeared to be above grade norms in English reading skills and those first-schooled abroad slightly below grade norms.

Relationship of SEDL Findings to Previous Research

The SEDL findings appear quite consistent with trends that have emerged in previous studies. These trends can be summarized as follows:

- 1. Minority students instructed bilingually tend to perform at least as well, or better, than comparable students instructed in monolingual English programs (Baker and de Kanter, 1981; Cummins, 1983).
- 2. Among immigrant students, LOR or amount of exposure to L2, has generally been strongly related to academic and especially conversational L2 skills.



- 3. Among immigrant students, the extent to which L1 cognitive/academic skills have been promoted has generally been moderately related to the acquisition of L2 cognitive/academic skills.
- 4. Asian students have tended to show adequate academic achievement, whether in bilingual or English monolingual programs (e.g. Vernon, 1983).

Relationship of SEDL Findings to Theory

Three psychoeducational hypotheses are currently prominent in the research and policy debate regarding bilingual education. First, the <u>linguistic mismatch hypothesis</u> suggests that minority students' academic failure is caused by instruction through a language they do not understand; the hypothesis would predict that home-school language switching will lead to academic retardation. This hypothesis has usually been advanced as a justification for transitional bilingual education.

The second hypothesis is termed the <u>maximum exposure</u> hypothesis and argues that if minority students are deficient in English then they need as much exposure to English as they can get; consequently, diluting this exposure by means of bilingual education appears counter productive.

These two hypotheses represent intuitively-appealing conventional wisdoms. Despite their intuitive appeal and prominence in the policy debate each hypothesis is refuted by a vast amount of data. In other words, as theoretical principles or generalizations they have little validity. The <u>linguistic mismatch</u> hypothesis is refuted by the data from French immersion programs, showing that majority language children can be successfully instructed through a second language, and by the success of many groups of minority students under homeschool language switch conditions (see Cummins, 1981a). The <u>maximum exposure</u> hypothesis is similarly refuted by the results of virtually every bilingual program ever evaluated (including French immersion programs) which show that students taught for all or part of the school day through a minority language suffer no detrimental consequences for the development of academic skills in the majority language.



The research data are fully consistent with the <u>interdependence hypothesis</u> which is more limited in its predictions than the linguistic mismatch hypothesis. The Interdependence hypothesis argues that L1 and L2 academic skills are Interdependent, or manifestations of a common underlying proficiency. This permits considerable transfer of academic skills from one language to another, given sufficient exposure and motivation to learn each. Thus, the hypothesis predicts that minority students taught through L1 will not lose out in the development of L2 academic skills (given exposure and motivation) despite considerably less time through L2.

The positive relationships between L1 promotion and English academic proficiency among both the U.S.A. first-schooled and foreign first-schooled groups in the SEDL study support the interdependence hypothesis. The other studies reviewed from both bilingual education and immigrant language learning situations also support the interdependence hypothesis.

Thus, the SEDL findings assume considerable importance for U.S. educational policy because they add to the evidence that the interdependence hypothesis is generalizable to an extremely large number of contexts. Considerable confidence can therefore be placed by policy-makers in predictions derived from this hypothesis regarding the outcomes of bilingual education programs.

The SEDL data are also consistent with the linguistic mismatch hypothesis in showing a positive relationship between bilingual instruction and achievement. However, unlike the interdependence hypothesis, the linguistic mismatch hypothesis is refuted by other data and consequently does not provide a basis for policy decisions.

This analysis is clearly not means to imply that linguistic mismatch and L2 exposure play no role in accounting for student achievement. It is very likely more difficult to learn through L2 (other things being equal) and, as the SEDL study and many others demonstrate, exposure to L2 is important. What is being implied, rather, is that linguistic mismatch does not always result in academic retardation and is certainly not the only, or even the major cause of minority student underachievement. Similarly, although a second language clearly cannot be acquired in the absence of exposure to that language, much more than just



exposure is required to promote L2 academic proficiency. In this regard, the data strongly suggest that students' L1 academic proficiency (among other factors) plays an important role in making L2 academic proficiency comprehensible (see California State Department of Education, 1982). This "linguistic interdependence" factor helps account for the fact that minority students with less exposure to English often perform better in English academic skills.

In short, rational policy in regard to the education of minority students must abandon simplistic conventional wisdoms and acknowledge both what is known and what is not yet known. We know (i.e. we can predict with confidence), for example, that promotion of minority children's L1 in school will not in any way inhibit the development of English academic skills, despite the fact that less instructional time is spent through English. However, we do not, as yet, fully understand the causes of academic underachievement by some groups of minority students; bilingual programs appear to be effective, in many cases, in ameliorating this underachievement, but again we do not yet fully understand exactly how nor under what conditions bilingual programs achieve this positive effect. However, a considerable amount of research is being carried out internationally in this area and further empirical investigation and theoretical integration will doubtless continue to advance our understanding and ability to plan rationally for excellence in educating minority and majority children.

