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THEORY AND POLICY IN BILINGUAL EDUCATION*

1. Introduction

1.1. Goals of the Paper

This paper addresses the issue of what policy-makers need to know in order to institute educational programs that promote high levels of academic achievement and a secure cultural identity for students in multi-ethnic societies. Specifically, what cognitive, academic and personal consequences can be expected from various forms of bilingual education instituted in different sociopolitical contexts? These contexts vary enormously and thus the language planning issues are highly complex. As pointed out in the Introductory Document to this National Seminar,

"There is no consensus among scientists, educators, government officials and politicians, or in the eyes of public opinion, concerning the new directions to be adopted. These divergencies are hardly surprising. The social, historical, cultural and institutional contexts vary so greatly that differences of opinion are inevitable" (OECD, 1985, p.2).

In a paper prepared earlier for the OECD, Glazer (1985) makes a similar point with respect to the debate in the United States regarding the effectiveness of bilingual education in promoting academic achievement for linguistic minority groups. He notes that there is no consensus among policy-makers, educators, or the general public regarding the educational validity of bilingual programs. Because there is no decisive answer in the research, he argues, "political and social judgements, which will in any case tend to prevail, should prevail" (p.31). The final conclusion of Glazer's paper is worth quoting because it is diametrically opposed to the conclusion in the present paper:

"In the middle 1970's national policy [in the United States] favored the use of native languages and even of distinctive approaches making use of the distinctive culture of each group. But the results of our efforts to overcome differences in educational achievement using such approaches are not encouraging. Majority and minority alike, in part for different reasons, in part for the same reasons, now come together in agreement on traditional approaches to education as the most effective means of raising the educational achievement of minority groups of different language and cultural background" (p.38).

* Original: English

In other words, because both minority and majority groups now agree that improved academic achievement should be the primary educational goal for minority groups, traditional instructional approaches using the majority language (English) are favoured over those that make use of the minority group's language and culture.

A major goal of this paper is to argue, contrary to public opinion in many countries and to Glazer's analysis, that there is an empirical and theoretical basis for educational policy-decisions in this area. In other words, a psycho-educational knowledge base exists whereby policy-makers can predict, with considerable accuracy, at least some of the outcomes of different types of bilingual education programs in a wide variety of contexts. The present paper will make this psycho-educational knowledge base explicit and will also examine the sociological conditions under which different outcomes can be predicted.

1.2. Organization of the Paper

It is first necessary to clarify the role of theory in the policy-making process. In the United States, for example, the wide-spread confusion about the effects of bilingual education programs for minority students is largely due to an almost total absence of concern for theory in the formation of educational policy. Political and social judgements prevail not, as Glazer suggests, because there is little consistent research evidence, but because the relationship between research, theory and policy has been ignored.

This is followed by a brief outline of a logical sequence that might be followed in the planning and implementation of bilingual programs. The importance of both theory and research in addition to political considerations is emphasized.

Three psycho-educational principles, for which there is considerable evidence, are then reviewed and their implications for bilingual education policy discussed. These principles appear applicable to virtually all forms of bilingual education including programs aimed at reversing educational failure among minority students (e.g. home language programs for Finns in Sweden) as well as programs that are intended to enrich students whose educational development is not in jeopardy (e.g. middle-class students in second language (L2) immersion programs).

However, in order to understand the causes of school failure for many minority students, much more than just linguistic factors must be taken into account. The sociological context of dominant-dominated group relationships must be examined in relation to the educational program (Mullard, 1985). It will be argued that in order to promote academic and personal development for minority students, the patterns of interaction between educators and students in the school must reverse the established pattern of dominant-dominated group relations in the society at large. Active incorporation of the language and culture of the minority within the school program is just one of a number of interventions that are required to empower rather than to disable minority students within the school context.

2. Research, Theory and Policy in Bilingual Education

2.1. The Relation Between Theory and Policy

A major reason why many policy-makers and educators regard the research basis for bilingual education as minimal or even non-existent is that they have failed to realize that data or "facts" from bilingual programs become interpretable for policy purposes only within the context of a coherent theory. It is the theory rather than the individual research findings that permits predictions about program outcomes under different conditions to be generated. Research findings themselves cannot be directly applied across contexts. For example, the fact that kindergarten and grade 1 Punjabi-background students in a bilingual program in Bradford, England, learned English just as successfully as a control group in a traditional English-only program (Rees, 1981) tells us very little about what might happen in the case of Greek-background students in Bradford or Hispanic students in the United States. Similarly, the findings of French immersion programs for majority students in Canada cannot be directly applied to policy-decisions regarding programs for minority students in the United States. Yet clearly the accumulation of research findings does have relevance for policy. This relevance is achieved by means of the integration of the findings within a coherent theory from which predictions regarding program outcomes under different conditions can be generated.

In short, although research findings cannot be applied directly across contexts, theories are almost by definition applicable across contexts in that the validity of any theoretical principle is assessed precisely by how well it can account for the research findings in a variety of contexts. If a theory cannot account for a particular set of research findings, then it is an inadequate or incomplete theory.

2.2. Theory and the U.S. Bilingual Education Policy Debate

Two opposing theoretical assumptions have dominated the U.S. policy debate regarding the effectiveness of bilingual education in promoting minority students' academic achievement. These assumptions are essentially hypotheses regarding the causes of minority students' academic failure and each is associated with a particular form of educational intervention designed to reverse this failure. In support of transitional bilingual education where some initial instruction is given in students' first language (L1), it is argued that students cannot learn in a language they do not understand; thus, a home-school language switch will almost inevitably result in academic retardation unless initial content is taught through L1 while students are acquiring English. In other words, minority students' academic difficulties are attributed to a "linguistic mismatch" between home and school.

The opposing argument is that if minority students are deficient in English, then they need as much exposure to English as possible. Students' academic difficulties are attributed to insufficient exposure to English in the home and environment.

Thus, bilingual programs which reduce this exposure to English even further appear illogical and counterproductive in that they seem to imply that less exposure to English will lead to more English achievement. The following passage from a New York Times editorial (October 10, 1981) is typical:

"The Department of Education is analyzing new evidence that expensive bilingual education programs don't work.... Teaching non-English speaking children in their native language during much of their school day constructs a roadblock on their journey into English. A language is best learned through immersion in it, particularly by children....Neither society nor its children will be well served if bilingualism continues to be used to keep thousands of children from quickly learning the one language needed to succeed in America."

Viewed as theoretical principles from which predictions regarding program outcomes can be derived, the "linguistic mismatch" and "insufficient exposure" hypotheses are each patently inadequate. The former is refuted by the French immersion data which clearly demonstrate that for English-background students in Canada a home-school language switch results in no academic retardation. The success of a considerable number of minority students under home-school language switch conditions similarly refutes the linguistic mismatch hypothesis.

The "insufficient exposure" hypothesis fares no better. Virtually every bilingual program that has ever been evaluated (including French immersion programs) shows that students instructed through a minority language for all or part of the school day perform, over time, at least as well in the majority language (e.g. English in North America) as students instructed exclusively through the majority language. The fact that two such patently inadequate theoretical assumptions have dominated the bilingual education policy debate in the United States illustrates the power of politics over logic. It also shows the necessity of integrating theory explicitly into the decision-making process. One possible decision-making sequence or "flow-chart" with respect to bilingual education policy in different contexts is presented in the next section.

2.3. A Framework for Theoretically-Based Decision-Making in Bilingual Education

Any language planning process will first identify a particular problem (e.g. the underachievement of certain groups of minority students) and then focus upon solutions to this problem. These solutions will involve either explicit or implicit hypotheses about the causes of the problem (e.g. "linguistic mismatch" or "insufficient exposure" to the school language) followed by the identification of alternative goals and means to resolve the problem. An idealized (and undoubtedly over-simplified) sequence for this type of decision-making is presented in Figure 1.

The decision-making process can be illustrated by comparing the highly successful implementation of French immersion programs in Canada during the late 1960's and 1970's with the generally much less successful implementation of bilingual programs for

linguistic minority students in the United States during the same period. (Recent implementation of bilingual programs in California represents an exception to the general picture of U.S. bilingual programs described here in that it conforms to the sequence outlined in Figure 1.) In both situations the general perceived problem was similar, namely, lack of student proficiency in a socially-valued language (French in Canada and English in the United States). A major difference, however, was that in the United States situation, a poor academic achievement in English was the major identified problem.

FIGURE 1

SEQUENCE FOR ANALYSING LANGUAGE PROBLEMS IN EDUCATION

1. EXAMINE PERCEIVED PROBLEMS
 2. GENERATE HYPOTHESES ABOUT CAUSES IN LIGHT OF THEORY AND RESEARCH
 3. PLAN SOLUTIONS TO PROBLEMS; IDENTIFY GOALS AND MEANS
 4. IMPLEMENT INTERVENTIONS TO RESOLVE PROBLEM
 5. MONITOR (OR INITIATE) RESEARCH RELEVANT TO THEORY ABOUT CAUSES OF PROBLEM
 6. EVALUATE SUCCESS OR FAILURE OF INTERVENTION
 7. COMMUNICATE INTERVENTION RESULTS TO POLICY-MAKERS, EDUCATORS AND PUBLIC
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With respect to causes of the problem, sociopolitical considerations have been largely ignored in the policy debates. However, as Paulston (1985) has frequently pointed out, the major causes of the most language planning problems are sociopolitical in nature with psychoeducational and linguistic factors acting as intervening variables. By the same token, the effects of educational interventions aimed at resolving such problems can usually be understood only in terms of their interaction with sociopolitical factors. In other words, interventions based on linguistic or psychoeducational hypotheses in isolation from the context of inter-ethnic group relations will frequently fail to produce the predicted outcomes. This issue is considered in a later section. Here we are primarily concerned with the policy-making process as it has evolved in the Canadian and United States situations.

In the Canadian situation, the writings of the Montreal neurosurgeon Wilbur Penfield were influential. Penfield (1965) had speculated (partly on the basis of neuropsychological evidence) that there is an optimal prepubertal period for acquiring an L2 and our language learning capacity declines after this period; he also suggested that second languages should be taught by what he called "the mother's method" by which he meant used as a medium of communication in the classroom to permit children to acquire their L2 in much the same way as they acquired their L1. It is not difficult to see how these hypotheses gave rise to early French immersion programs.

In the United States situation, as discussed previously, linguistic hypotheses ("linguistic mismatch" and "insufficient exposure") have tended to dominate the debate regarding causes of linguistic minority students' underachievement. The linguistic mismatch hypothesis tends to give rise to "quick-exit" transitional bilingual programs, whereas the insufficient exposure hypothesis justified English-only programs, often with some English-as-a-second-language (ESL) instruction. It is at this point that the planning process begins to break down in the United States context since neither of these hypotheses is consistent with the research data. Thus, it is not surprising that programs implemented on the basis of these hypotheses have not been particularly successful.

At the third stage, the goals and means of immersion programs were clearly defined and non-problematic. This, however, was not the case with bilingual education in the United States. All parties agreed with the goal of improved English academic skills but many minority advocates also desired bilingual programs to further the development of a pluralistic society through an emphasis on native culture and language maintenance. This goal was vehemently resisted by many "mainstream" educators and policy-makers. During the late 1970's, the suspicion grew that bilingual programs were in reality intended only to promote Hispanic political and economic goals (even Hispanic separatism à la Quebec) under the guise of developing students' English language skills. Thus, lack of consensus on goals and means compounded difficulties created by questionable psychoeducational assumptions used to justify bilingual education.

Problems of implementation followed naturally from the confused psychoeducational rationale and disputed goals of bilingual education in the United States. An enormous variety of programs resulted, ranging from considerable use of L1 in the early grades to virtually no use of L1. Some programs appeared to work extremely well, others much less so. By contrast, immersion programs started off on a very small scale with the St. Lambert program in the Montreal area (Lambert & Tucker, 1972) and a team of researchers monitored the progress of students through the grades. No further implementation was carried out until the initial results of this evaluation were available.

In both the United States and Canadian contexts, a considerable amount of evaluative research was carried out to assess the effects of the bilingual programs. In the case of the immersion programs, the initial St. Lambert program was thoroughly evaluated over a period of seven years and students were also followed through high school and beyond. As the immersion program spread to other areas, large-scale evaluations were also carried out to assess the consistency of findings with those of the St. Lambert program (e.g. Swain & Lapkin, 1982). One of the reasons for this was continued doubts among educators and parents that children could spend so much instructional time through French with no negative consequences for their English academic skills. Although some problematic issues have emerged (Cummins, 1984), the weight of research evidence has overwhelmingly confirmed the initial St. Lambert findings. Over time, theoretical principles emerged which could account for the absence of negative effects on English academic skills (Cummins, 1984 and below). It is

interesting to note that, with respect to the initial theoretical assumptions underlying immersion, the research has refuted Penfield's hypothesis of an optimal age for language learning in that students in late immersion programs (usually beginning at grade 7 - age 12-13) also succeed very well.

The story has been very different in the evaluations of bilingual programs in the United States. Much of the research carried out was poorly designed (Baker & de Kanter, 1981), in part because of the much more complicated sociopolitical and educational context. For example, students were frequently exited from bilingual programs at very early stages (e.g. after one year) with the result that if students continued to perform poorly in English academic skills it was unclear whether this was due to premature exit to an all-English program or to the lack of effectiveness of bilingual education.

Evaluations also tended to be atheoretical in that theory-based predictions regarding outcomes were seldom generated and tested. Thus, evaluators attempted to assess the "effectiveness" of bilingual education without any well-articulated hypotheses regarding how long it would take minority students to acquire age-appropriate levels of English academic skills and under what sociopolitical and instructional conditions - e.g. length and intensity of L1 instruction. (One consistent finding of the research is worth noting, namely that, on average, students' L1 tended to be used for considerably less time - approximately 5%-25% - than most media and political commentators believed [Tikunoff, 1983]).

The overall conclusion of immersion program evaluations is that the programs have been a resounding success and this has been effectively communicated to policy-makers, parents and educators. The result has been a huge increase in parental demand for French immersion programs which now have an enrolment of more than 120,000 students and are offered in every Canadian province. Sociopolitical and administrative problems have emerged as a result of the increased demand for immersion programs (e.g., concerns by minority francophones of increased competition for bilingual jobs, layoff of teachers who do not speak French, etc.). However, these problems have not slowed the momentum of immersion.

By contrast, as Glazer (1985) indicates, bilingual programs in the United States are perceived much more equivocally by policy-makers and educators. This perception was reinforced by the research review conducted by Baker and de Kanter (1981) which concluded that transitional bilingual programs overall were not much more successful than English-only programs in promoting minority students' achievement. This review reflects the major problems of transitional bilingual education in that it is almost completely atheoretical and consequently ignores the consistent patterns that do emerge in the research data (see below).

In summary, a framework has been presented for policy-making in the area of bilingual education (and other areas of educational language planning). The importance of generating and evaluating predictions from a coherent theory has been emphasized as a central, but frequently neglected, aspect of rational policy-

making. Particularly in the case of academic difficulties involving minority groups, sociopolitical rather than psychoeducational influences is unlikely to result in effective educational policy or intervention.

With respect to the effects of bilingual education on students' cognitive and academic development, some consistent theoretical principles do emerge from the research and these are considered in the next section.

3. Principles of Bilingual Academic Development

3.1. The Effects of Bilingualism on Intellectual and Academic Development

In the past many students from minority backgrounds have experienced difficulties in school and have performed worse than monolingual children on verbal I.Q. tests and on measures of literacy development. These findings led researchers in the period between 1920 and 1960 to speculate that bilingualism caused language handicaps and cognitive confusion among children. Some research studies also reported that bilingual children suffered emotional conflicts more frequently than monolingual children. Thus, in the early part of this century bilingualism acquired a doubtful reputation among educators, and many schools redoubled their efforts to eradicate minority children's first language on the grounds that this language was the source of children's academic difficulties.

However, virtually all of the early research involved minority students who were in the process of replacing their L1 with the majority language, usually with strong encouragement from the school. Many minority students in North America were physically punished for speaking their L1 in school. Thus, these students usually failed to develop adequate literacy skills in this language and many also experienced academic and emotional difficulty in school. This, however, was not because of bilingualism but rather because of the treatment they received in schools which essentially amounted to an assault on their personal identities.

More recent studies suggest that far from being a negative force in children's personal and academic development, bilingualism can positively affect both intellectual and linguistic progress. A large number of studies have reported that bilingual children exhibit a greater sensitivity to linguistic meanings and may be more flexible in their thinking than are monolingual children (Cummins, 1984a).

Most of these studies have investigated aspects of children's metalinguistic development; in other words, children's explicit knowledge about the structure and functions of language itself. A problem in interpreting these studies is that the notion of "metalinguistic development" is not yet clearly defined in the literature. Bialystok and Ryan (1985) have recently attempted to clarify this notion in terms of two underlying dimensions: namely, children's analysed knowledge of language and their

control over language. They predicted that bilingualism would enhance children's control over and ability to manipulate language but not their analysed knowledge of language. These predictions regarding the likely consequences of bilingualism for metalinguistic development have generally been borne out in a number of studies (Bialystok, 1984).

In general, it is not surprising that bilingual children should be more adept at certain aspects of linguistic processing. In gaining control over two language systems, the bilingual child has had to decipher much more language input than the monolingual child who has been exposed to only one language system. Thus, the bilingual child has had considerably more practice in analysing meanings than the monolingual child.

The evidence is not conclusive as to whether this linguistic advantage transfers to more general cognitive skills; McLaughlin's review of the literature, for example, concludes that:

"It seems clear that the child who has mastered two languages has a linguistic advantage over the monolingual child. Bilingual children become aware that there are two ways of saying the same thing. But does this sensitivity to the lexical and formal aspects of language generalize to cognitive functioning? There is no conclusive answer to this question - mainly because it has proven so difficult to apply the necessary controls in research" (1984, p.44).

Hakuta and Diaz (1985) and Diaz (in press) have recently reported evidence that bilingualism may positively affect general cognitive abilities in addition to metalinguistic skills. Rather than examining bilingual-monolingual differences, Hakuta and Diaz employed a longitudinal within-group design in which Hispanic primary school children's developing L2 (English) skills were related to cognitive abilities with the effect of L1 abilities controlled. The sample was relatively homogeneous both with respect to socio-economic status (SES) and educational experience (all were in bilingual programs). L2 skills were found to be significantly related to cognitive and metalinguistic abilities. The positive relationship was particularly strong for Raven's Progressive Matrices - a non-verbal intelligence test; further analyses suggested that if bilingualism and intelligence are causally related, bilingualism is most likely the causal factor.

An important characteristic of the bilingual children in the more recent studies (conducted since the early 1960's) is that, for the most part, they were developing what has been termed an additive form bilingualism (Lambert, 1975); in other words, they were adding a second language to their repertory of skills at no cost to the development of their first language. Consequently, these children were in the process of attaining a relatively high level of both fluency and literacy in their two languages. The children in these studies tended to come either from majority language groups whose first language was strongly reinforced in the society (e.g. English-speakers in French immersion programs) or from minority groups whose first languages were reinforced by bilingual programs in the school. Minority children who lack this educational support for literacy development in L1 frequently

develop a subtractive form of bilingualism in which L1 skills are replaced by L2. Under certain sociopolitical conditions (see below) these children fail to develop adequate levels of literacy in either language.

This pattern of findings suggested that the level of proficiency attained by bilingual students in their two languages may be an important influence on their academic and intellectual development (Cummins, 1979). Specifically, there may be a threshold level of proficiency in both languages which students must attain in order to avoid any negative academic consequences and a second, higher, threshold necessary to reap the linguistic and intellectual benefits of bilingualism and biliteracy.

Diaz (in press) has questioned the threshold hypothesis on the grounds that the effects of bilingualism on cognitive abilities in his data were stronger for children of relatively low L2 proficiency (non-balanced bilinguals). This suggests that the positive effects are related to the initial struggles and experiences of the beginning second-language learner. This interpretation does not appear to be incompatible with the threshold hypothesis since the major point of this hypothesis is that for positive effects to manifest themselves, children must be in the process of developing high levels of bilingual skills. If beginning L2 learners do not continue to develop both their languages, any initial positive effects are likely to be counteracted by the negative consequences of subtractive bilingualism.

In summary, the conclusion that emerges from the research on the academic, linguistic and intellectual effects of bilingualism can be stated thus: the development of additive bilingual and biliteracy skills entails no negative consequences for children's academic, linguistic, or intellectual development. On the contrary, although not conclusive, the evidence points in the direction of subtle metalinguistic, academic and intellectual benefits for bilingual children.

3.2. The Linguistic Interdependence Principle

The fact that there is little relationship between amount of instructional time through the majority language and academic achievement in that language strongly suggests that first and second language academic skills are interdependent, i.e., manifestations of a common underlying proficiency. The interdependence principle has been stated formally as follows (Cummins, 1984a, p.143):

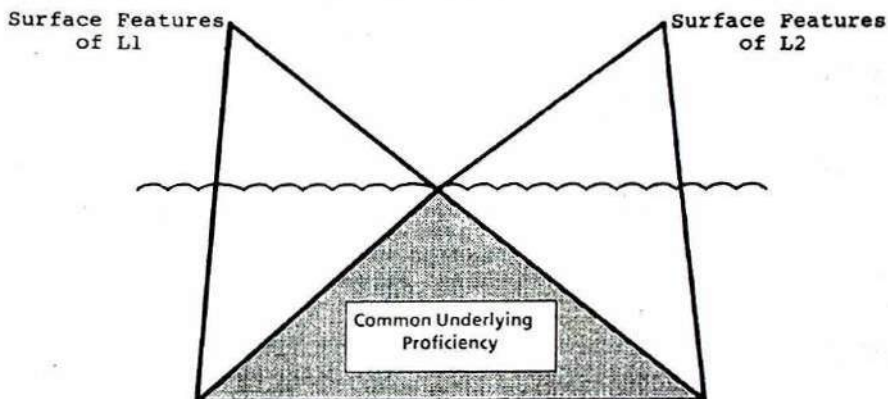
"To the extent that instruction in Lx is effective in promoting proficiency in Lx, transfer of this proficiency to Ly will occur provided there is adequate exposure to Ly (either in school or environment) and adequate motivation to learn Ly."

In concrete terms, what this principle means is that in, for example, a Gaelic-English bilingual program in Ireland, Gaelic instruction which develops Gaelic reading and writing skills (for either Gaelic L1 or L2 speakers) is not just developing Gaelic skills, it is also developing a deeper conceptual and linguistic

proficiency which is strongly related to the development of literacy in the majority language (English). In other words, although the surface aspects (e.g. pronunciation, fluency, etc.) of different languages are clearly separate, there is an underlying cognitive/academic proficiency which is common across languages. This "common underlying proficiency" makes possible the transfer of cognitive/academic or literacy-related skills across languages. Transfer is much more likely to occur from minority to majority language because of the greater exposure to literacy in the majority language outside of school and the strong social pressure to learn it. The interdependence principle is depicted in Figure 2.

FIGURE 2

THE LINGUISTIC INTERDEPENDENCE MODEL



A considerable amount of evidence supporting the interdependence principle has been reviewed by Cummins (1983, 1984a) and Cummins and Swain (in press). The results of virtually all evaluations of bilingual programs for both majority and minority students are consistent with predictions derived from the interdependence principle (see Cummins, 1983). The interdependence principle is also capable of accounting for data on immigrant students' L2 acquisition (e.g. Cummins, 1981); Hoover, Matluck & Dominguez, 1981) as well as from studies of bilingual language use in the home (e.g. Bhatnagar, 1980; Dolson, 1985). Correlational studies also consistently reveal a strong degree of cognitive/academic interdependence across languages.

Recent studies continue to support the interdependence principle. Kemp (1984), for example, reported that Hebrew (L1) cognitive/academic abilities accounted for 48% of the variance in

English (L2) academic skills among 196 seventh grade Israeli students. Treger and Wong (1984) reported significant positive relationships between L1 and English reading abilities (measured by cloze tests) among both Hispanic and Chinese-background elementary school students in Boston. In other words, students above grade level in their first language reading also tended to be above grade level for English reading.

Two longitudinal studies also provide strong support for the notion of linguistic interdependence. Ramirez (1985) followed 75 Hispanic elementary school students in Newark, New Jersey, enrolled in bilingual programs for three years. It was found that Spanish and English academic language scores loaded on one single factor over the three years of data collection. Hakuta and Diaz (1985) with a similar sample of Hispanic students found an increasing correlation between English and Spanish academic skills over time. Between Kindergarten and third grade the correlation between English and Spanish went from 0 to .68. The low cross-lingual relationship at the Kindergarten level is likely due to the varied length of residence of the students and their parents in the United States which would result in varying levels of English proficiency at the start of school.

An on-going study of five schools attempting to implement the Theoretical Framework developed by the California State Department of Education (1981) showed consistently higher correlations between English and Spanish reading skills (range $r = .60-.74$) than between English reading and oral language skills (range $r = .36-.59$) (California State Department of Education, 1985). In these analyses scores were broken down by months in the program (1-12 months through 73-84). It was also found that the relation between L1 and L2 reading became stronger as English oral communicative skills grew stronger ($r = .71$, $N = 190$ for students in the highest category of English oral skills).

Finally, Cummins, Allen, Harley and Swain (1985) have reported highly significant correlations for written grammatical, discourse and sociolinguistic skills in Portuguese (L1) and English (L2) among Portuguese grade 7 students in Toronto. Cross-language correlations for oral skills were generally not significant. The same pattern of linguistic interdependence has also been reported in other recent studies (e.g. Goldman, 1984; Guerra, 1984; Katsaiti, 1983).

In conclusion, the research evidence shows consistent support for the principle of linguistic interdependence in studies investigating a variety of issues (e.g. bilingual education, memory functioning of bilinguals, age and second language learning, bilingual reading skills, etc.) and using different methodologies. The research has also been carried out in a wide variety of sociopolitical contexts. The consistency and strength of support indicates that highly reliable policy predictions can be made on the basis of this principle.

3.3. The Sufficient Comprehensible Input Principle

Most second language theorists (e.g. Krashen, 1981; Long, 1983; Schacter, 1983; Wong Fillmore, 1983) currently endorse some form

of the "input" hypothesis which essentially states that acquisition of a second language depends not just on exposure to the language but on access to second language input which is modified in various ways to make it comprehensible. Underlying the principle of comprehensible input is the obvious fact that a central function of language use is meaningful communication; when this central function of language is ignored in classroom instruction, learning is likely to be rote and supported only by extrinsic motivation. Wong Fillmore (1983) has clearly expressed this point:

"Wherever it is felt that points of language need to be imparted for their own sake, teachers are likely to make use of drills and exercises where these linguistic points are emphasized and repeated. And when this happens the language on which students have to base their learning of English is separated from its potential functions, namely those that allow language learners to make the appropriate connections between form and communicative functions. Without such connections language is simply not learnable" (1983, p.170).

It is important to note that the principle of comprehensible input also characterizes first language acquisition. Young children rarely focus on language itself in the process of acquisition; instead, they focus on the meaning that is being communicated and use of language for a variety of functions, such as finding out about things, maintaining contact with others, etc. In Gordon Wells' (1982) phrase, children are active "negotiators of meaning" and they acquire language almost as a by-product of this meaningful interaction with adults. As Swain (1984) has pointed out, the term "negotiation of meaning" (Wells, 1982) is preferable in many ways to "comprehensible input" since meaningful use of language (comprehensible output) is also critical for L2 acquisition (and L2 literacy acquisition).

One important link between the principles of sufficient comprehensible input and the common underlying proficiency is that knowledge (e.g. subject matter content, literacy skills, etc.) acquired in one language plays a major role in making input in the other language comprehensible (Cummins, 1984a; Krashen, 1981). For example, an immigrant student who already has the concept of "justice" in his or her first language will require considerably less input in the second language containing the term to acquire its meaning than will a student who does not already know the concept. In the same way the first language conceptual knowledge developed in bilingual programs for minority students greatly facilitates the acquisition of L2 literacy and subject matter content.

3.4. Conclusion

This review of psychoeducational data regarding bilingual academic development shows that, contrary to the opinions of some researchers and educators, a theoretical basis for at least some policy decisions does exist. In other words, policy-makers can predict with considerable reliability the probable effects of bilingual programs implemented in very different sociopolitical contexts.

First, they can be confident that if the program is effective in continuing to develop students' academic skills in both languages, no cognitive confusion or handicap will result, in fact, students may benefit in subtle ways from access to two linguistic systems.

Second, they can be confident that spending instructional time through the minority language will not result in lower levels of academic performance in the majority language provided, of course, that the instructional program is effective in developing academic skills in the minority language. This is because at deeper levels of conceptual and academic functioning, there is considerable overlap or interdependence across languages. Conceptual knowledge developed in one language helps to make input in the other language comprehensible.

Both these principles involve conditions with respect to the effectiveness of the instruction in developing language skills. The third psychoeducational principle addresses this issue. Specifically, policy-makers need to realize that modifications to the input are necessary for effective second language learning. Students need to have sufficient input that they can make sense of in both languages. If one language is used predominantly outside school, then instruction can be delivered primarily in the other language.

Three psychoeducational principles open up significant possibilities for the planning of bilingual programs by showing that, when programs are well-implemented, students will not suffer academically either as a result of bilingualism per se or as a result of spending less instructional time through one of their two (or more) languages. In sociopolitical situations which are not characterized by persistent school failure by certain minority groups, these principles by themselves provide a reliable basis for the prediction of program outcomes (e.g. immersion programs for majority students). However, these principles do not attempt to account for the variability in academic performance among minority groups exposed to similar educational programs (see for example Ogbu, 1978) and thus, do not constitute a fully adequate basis for policy and planning in the case of minority students experiencing persistent academic difficulties.

In order to generate accurate predictions regarding the probable outcomes of school programs for such students, the psychoeducational principles must be placed in the context of a broader theoretical framework that incorporates interactions between sociopolitical and psychoeducational factors. This framework is outlined in the next section.

4. Empowering Minority Students: A Theoretical Framework

A major issue for theory and policy is to explain the variability in the pattern of school success and failure among minority students. As outlined earlier, the two conventional wisdoms (the linguistic mismatch and insufficient exposure hypotheses) that currently dominate the policy debate in the United States are

each patently inadequate to account for the research data. It is hardly surprising that this should be so since each of these conventional wisdoms involves only a unidimensional linguistic explanation. Consideration of the variability of minority students' academic performance under different social and educational conditions (see Ogbu, 1978; Wong Fillmore, 1983) indicates that multidimensional and interactive causal factors are at work. In particular, sociological and anthropological research (for example, Fishman, 1976; Ogbu, 1978; Paulston, 1980) suggests that factors related to status and power relations between groups must be invoked as part of any comprehensive account of minority students' school failure. However, a variety of factors related to educational quality and cultural mismatch also appear to be important in mediating minority students' academic progress (see for example, Cummins, 1984; Wong fillmore, 1983). The framework outlined below attempts to integrate these hypothesized explanatory factors in such a way that the changes required to reverse minority student failure are clearly indicated.

The proposed theoretical framework incorporates sets of constructs that operate at three levels: (a) the societal context of inter-group power relations, (b) the context of the school as an institution reflecting the values and priorities of the dominant societal group in its interactions with minority communities, and (c) the context of classroom interactions between teachers and minority students which represent the immediate determinants of students' success or failure.

As outlined in Figure 3, the central tenet of the framework is that students from what Mullan (1985) has termed "dominated" societal groups are "empowered" or alternately, "disabled" as a direct result of their interactions with educators in the school context. Students who are empowered by their schooling experiences develop the ability, confidence and motivation to succeed academically. They participate competently in instruction (Cummins, 1983b; Tikunoff, 1983) as a result of having developed a confident cultural identity as well as appropriate school-based knowledge and interactional structures. Students who are disempowered or "disabled" by their school experiences do not develop this type of cognitive/academic and social/emotional foundation. Thus, student empowerment is regarded as both a mediating construct influencing academic performance and also as an outcome variable itself.

These student-educator interactions are mediated by the implicit (or explicit) role definitions that educators assume in relation to four institutional characteristics of schools. These characteristics reflect

- the extent to which minority students' language and culture is incorporated within the school program;

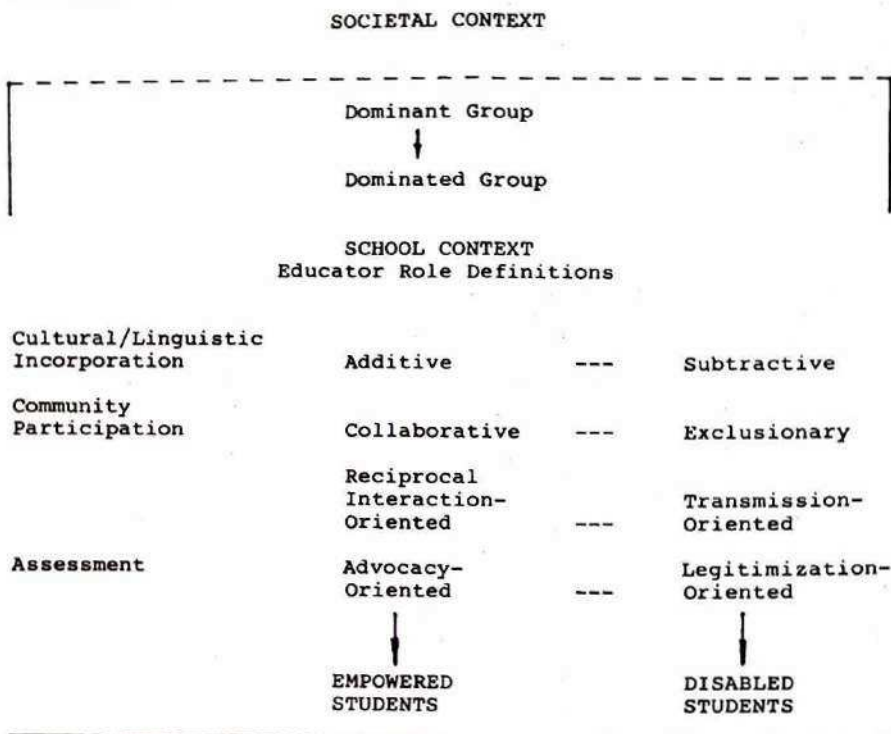
-the extent to which minority community participation is encouraged as an integral component of children's education;

-the extent to which the pedagogy promotes intrinsic motivation on the part of students to use language actively in order to generate their own knowledge;

-and finally, the extent to which professionals involved in assessment become advocates for minority students as opposed to legitimizing the location of the "problem" within the student.

FIGURE 3

EMPOWERMENT OF MINORITY STUDENTS: A THEORETICAL FRAMEWORK



For each of these dimensions of school organization, the role definitions of educators can be described in terms of a continuum with one end of the continuum promoting the empowerment of students while the other contributes to the disabling of students.

The three levels analysed in the present framework (i.e. majority-minority societal group relations, school-minority community relations, educator-minority student relations) are clearly not the only ones that could be discussed. The choice of these levels, however, is dictated by hypotheses regarding the relative ineffectiveness of previous educational reforms, and directions required to reverse minority students' school failure.

The relative ineffectiveness of previous attempts at reform (e.g. "compensatory education" and "bilingual education" in the United States) is attributed largely to the fact that the individual role definitions of educators and the institutional role definitions of schools have remained largely unchanged despite "new and improved" programs and policies. The framework outlined in Figure 3 sketches the individual and institutional redefinitions required to reverse that pattern.

4.1. Inter-Group Power Relations

When the patterns of minority student school failure are examined within an international perspective, it becomes evident that power and status relations between minority and majority groups exert a major influence. Examples frequently given are the failure of Finnish students in Sweden (where they are a low status group) compared to their academic success in Australia where Finns are regarded as high status (see Troike, 1978); similarly, Ogbu (1978) reports that low status Buraku outcasts perform poorly in Japan but as well as any other Japanese students in the United States.

In accounting for the empirical data, theorists have employed several related constructs to describe characteristics of minority groups that tend to experience school failure. Cummins (1984), for example, discusses the "bicultural ambivalence" (or lack of cultural identification) of students in relation to both the home and school cultures; similarly, Ogbu (1978) discusses the "caste" status of minorities with the internalization of the inferior status attributed to them by the dominant group. Feuerstein (1979) attributes academic failure to the disruption of intergenerational transmission processes caused by the alienation of a group from its own culture. In all three conceptions, minority groups that are positively oriented towards their own and the dominant culture (Cummins), have not internalized the dominant group attribution of inferiority (Ogbu) and are not alienated from their own cultural values (Feuerstein) tend to achieve academic success despite a home-school language switch.

Extensive analyses of inter-groups relations and their consequences for minority students' educational development have been carried out (e.g. Mullard, 1985; Ogbu & Matute-Bianchi, in press; Paulston, 1980, 1985; Skutnabb-Kangas, 1984, 1985). These analyses go beyond the scope of this paper. It is sufficient to note that there is general agreement with respect to the importance of status and power relations in determining minority students' success in school. However, few analyses have examined closely the interactions between sociopolitical and psychoeducational factors. The four structural elements in the organization of schooling that contribute to the extent to which minority students are empowered or disabled are described below.

4.2. Cultural/Linguistic Incorporation

Considerable research data suggest that for dominated minorities the extent to which students' language and culture is incorporated into the school program constitutes a significant

predictor of academic success (for example, Campos & Keatinge, 1983; Cummins, 1983; Rosier & Holm, 1980). As outlined earlier, students' school success appears to reflect both the more solid cognitive/academic foundation developed through intensive L1 instruction and also the reinforcement of their cultural identity.

Included under incorporation of minority group cultural features is the adjustment of instructional patterns to take account of culturally-conditioned learning styles. The Kamehameha Early Education Program in Hawaii provides strong evidence of the importance of this type of cultural incorporation (see e.g. Au & Jordan, 1981).

With respect to the incorporation of minority students' language and culture, educators' role definitions can be characterized along an "additive-subtractive" dimension. Educators who see their role as adding as second language and cultural affiliation to students' repertoire are likely to empower students more than those who see their role as replacing or subtracting students' primary language and culture in the process of assimilating them to the dominant culture.

It should be noted that an additive orientation is not dependent upon actual teaching of the minority language. In many cases this may not be possible for a variety of reasons (e.g. low concentration of particular groups of minority students). However, educators communicate to students and parents in a variety of ways the extent to which students' language and culture is valued within the context of the school. Even within a monolingual school context, powerful messages can be communicated to students regarding the validity and advantages of language development.

4.3. Community Participation

Students from dominated communities will be empowered in the school context to the extent that the communities themselves are empowered through their interactions with the school. When educators involve minority parents as partners in their children's education, parents appear to develop a sense of efficacy that communicates itself to children with positive academic consequences (see for example the "Haringey Project" in Britain [Tizard, Hewison and Schoefield, 1983]).

The teacher role definitions associated with community participation can be characterized along a collaborative-exclusionary dimension. Teachers operating at the collaborative end of the continuum actively encourage minority parents to participate in promoting their children's academic progress both in the home and through involvement in classroom activities. A collaborative orientation may require a willingness on the part of the teacher to work closely with mother tongue teachers or aides in order to communicate effectively and in a non-condescending way with minority parents. Teachers with an exclusionary orientation, on the other hand, tend to regard teaching as their job and are likely to view collaboration with minority parents as either irrelevant or actually detrimental to children's progress.

Clearly, initiatives for collaboration or for a shared decision-making process can come from the community as well as from the school. Under these conditions, maintenance of an exclusionary orientation by the school can lead communities to directly challenge the institutional power structure. This was the case with the school strike organized by Finnish parents and their children at Bredby school in Rinkeby, Sweden. In response to a plan by the headmistress to reduce the amount of Finnish instruction in the school, the Finnish community withdrew their children from the school. Eventually (after eight weeks) most of their demands were met. According to Skutnabb-Kangas (1985), the strike had the effect of generating a new sense of efficacy among the community and making them more aware of the role of dominant-group controlled (i.e. exclusionary) education in reproducing the powerless status of minority groups. A hypothesis that the present framework generates is that this renewed sense of efficacy would lead to higher levels of academic achievement among minority students in this type of situation.

4.4. Pedagogy

Several investigators have suggested that the learning difficulties of minority students are often pedagogically-induced in that children designated "at risk" frequently receive intensive instruction that confines them to a passive role and induces a form of "learned helplessness" (e.g. Beers & Beers, 1980; Coles, 1978; Cummins, 1984). Instruction that empowers students, on the other hand, will aim to liberate students from dependence on instruction in the sense of encouraging them to become active generators of their own knowledge.

Two major orientations can be distinguished with respect to pedagogy. These differ in the extent to which the teacher retains exclusive control over classroom interaction as opposed to sharing some of this control with the students. The dominant instructional model in most Western industrial societies has been termed a "transmission" model (Barnes, 1976; Wells, 1982); this will be contrasted with a "reciprocal interaction" model of pedagogy.

The basic premise of the transmission model is that the teacher's task is to impart knowledge or skills that she/he possesses to students who do not yet have these skills. This implies that the teacher initiates and controls the interaction, constantly orienting it towards the achievement of instructional objectives. The instructional content in this type of program derives primarily from the internal structure of the language or subject matter; consequently, it frequently involves a predominant focus on surface features of language or literacy (e.g. handwriting, spelling, decoding, etc.) and emphasizes correct recall of content taught. Content is usually transmitted by means of highly structured drills and workbook exercises, although in many cases the drills are disguised in order to make them more attractive and motivating to students.

It has been argued that a transmission model of teaching contravenes central principles of language and literacy acquisition and that a model allowing for reciprocal interaction

between teachers and students represents a more appropriate alternative (Cummins, 1984; Wells, 1982). This "reciprocal interaction" model incorporates proposals about the relation between language and learning made by a variety of investigators, most notably in the Bullock Report (1975), and by Barnes (1976), Lindfors (1981) and Wells (1982). Its applications with respect to the promotion of literacy conform closely to psycholinguistic approaches to reading (e.g. Goodman & Goodman, 1977; Holdaway, 1979; Smith, 1978) and to the recent emphasis on encouraging expressive writing from the earliest grades (e.g. Chomsky, 1981; Giacobbe, 1982; Graves, 1983; Temple, Nathan & Burris, 1982).

A central tenet of the reciprocal interaction model is that "talking and writing are means to learning" (Bullock Report, 1975, p.50). Its major characteristics in comparison to a transmission model are as follows:

- genuine dialogue between student and teacher in both oral and written modalities;
- guidance and facilitation rather than control of student learning by the teacher;
- encouragement of student-student talk in a collaborative learning context;
- encouragement of meaningful language use by students rather than correctness of surface forms;
- conscious integration of language use and development with all curricular content rather than teaching language and other content as isolated subjects;
- a focus on developing higher level cognitive skills rather than factual recall;
- task presentation that generates intrinsic rather than extrinsic motivation.

In short, pedagogical approaches that empower students encourage them to assume greater control over setting their own learning goals and to collaborate actively with each other in achieving these goals. The development of a sense of efficacy and inner-direction in the classroom is especially important for students from dominated groups whose experiences so often orient them in the opposite direction. In support of this, Wong Fillmore (1983) has reported that Hispanic students learned considerably more English in classrooms that provided opportunities for reciprocal interaction with teachers and peers.

4.5. Assessment

Historically, assessment has played the role of legitimizing the previous disabling of minority students. In some cases, assessment itself may play the primary role but usually its role has been to locate the "problem" within the minority student thereby screening from critical scrutiny the subtractive nature of the school program, the exclusionary orientation of teachers towards minority communities, and transmission models of teaching that inhibit students from active participation in learning.

This process is virtually inevitable when the conceptual base for the assessment process is purely psycho-educational. If the psychologist's task (or role definition) is to discover the causes of a minority student's academic difficulties and the only tools at her disposal are psychological tests (in either L1 or L2), then it is hardly surprising that the child's difficulties will be attributed to psychological dysfunctions. The myth of bilingual handicaps that still influences educational policy was generated in exactly this way during the 1920's and 1930's.

Recent studies suggest that despite the appearance of change with respect to nondiscriminatory assessment, the underlying structure has remained essentially intact. Mehan, Hertweck and Meihls (in press), for example, report that psychologists continued to test children until they "found" the disability that could be invoked to "explain" the student's apparent academic difficulties. A similar conclusion emerged from the analysis of more than 400 psychological assessments of minority students conducted by Cummins (1984). Although no diagnostic conclusions were logically possible in the majority of assessments, psychologists were most reluctant to admit this fact to teachers and parents. In short, the data suggest that the structure within which psychological assessment takes place orients the psychologist to locate the cause of the academic problem within the minority student herself.

The alternative role definition that is required to reverse the traditional "legitimizing" function of assessment can be termed an "advocacy" or "delegitimization" role (see Mullard, 1985, for discussion of delegitimization strategies in anti-racist education). The psychologist's or special educator's task must be to "delegitimize" the traditional function of psychological assessment in the educational disabling of minority students; in other words, they must be prepared to become advocates for the child (Cazden, 1985) in critically scrutinizing the societal and educational context within which the child has developed. This involves locating the pathology within the societal power relations between dominant and dominated groups, in the reflection of these power relations between school and communities, and in the mental and cultural disabling of minority students that takes place in classrooms. These conditions are the cause of the 300% overrepresentation of Texas Hispanic students in the "learning disabled" category (Oriz & Yates, 1983) rather than any intrinsic processing deficit unique to Hispanic children.

Clearly, and for obvious reasons, the training of psychologists and special educators does not prepare them for this advocacy or delegitimization role. However, from the present perspective, it must be emphasized that discriminatory assessment is carried out by (well-intentioned) individuals. Rather than challenging a socio-educational system that tends to disable minority students, these individuals have accepted a role definition and an educational structure that makes discriminatory assessment virtually inevitable.

5. Conclusion

I have suggested that in most Western industrialized countries

the planning of educational interventions to promote academic success for minority students has not been characterized by a particularly rational process. Two major reasons can be suggested for this. First, sociopolitical considerations have often been rationalized in psychoeducational terms, and second, the crucial role of theory in the policy-making process has been ignored. Consequently, there is considerable confusion among policy-makers about appropriate educational options for minority students under different sociopolitical conditions. A recent example is the characterization of bilingual education in the United States as "a failed path" by the U.S. Secretary of Education, William Bennett (see *Time*, October 7, 1985). As has been suggested, the failure in the United States context is not the path of bilingual education which has scarcely been tried, but rather the path of a policy-making process that has failed to take account of the theoretical basis that exists for predicting minority student outcomes under different educational and social conditions.

In this regard, certain psychoeducational principles appear to have considerable predictive power with respect to student outcomes. We can be confident, for example, that bilingualism in itself will not impede students' academic development and may, in fact, enhance academic and linguistic growth when both languages continue to develop throughout schooling. It is also clear that academic skills and knowledge are interdependent in that effective instruction through a minority language will not result in any educational deficits in the majority language, given adequate motivation and exposure to the majority language. A major reason for this is that the development of conceptual skills in one language helps to make input in the other language comprehensible. Sufficient comprehensible input in both languages also appears to be necessary for adequate academic development; however, input involves more than just exposure and students' L1 abilities are a major factor in helping students assimilate academic input in the L2.

Thus, there is a psychoeducational basis for policy in the area of bilingual education. However, these psychoeducational factors do not address all the questions of policy-makers concerned with the educational difficulties of some minority groups. For example, they do not account for the variability in academic performance among different groups nor do they adequately explain why certain forms of bilingual education appear particularly effective in reversing these difficulties (see e.g. Campos & Keatinge, 1984).

In order to address these issues, a theoretical framework was proposed for analysing minority students' academic failure and for predicting the effects of educational interventions. Educational failure among minority students was analysed as a function of the extent to which schools reflect, or alternatively, counteract the power relations that exist within the broader society. Specifically, language minority students' educational progress will be strongly influenced by the extent to which individual educators become advocates for the promotion of students' linguistic talents, actively encourage community participation in developing students' academic and cultural resources, and implement pedagogical approaches that succeed in liberating students from instructional dependence.

The educator-student interactions characteristic of the disabling end of the proposed continua reflect the typical patterns of interaction that dominated societal groups have experienced in relation to dominant groups. Students' language and cultural values are denied, their communities are excluded from participation in educational decisions and activities and they are confined to passive roles within the classroom. The failure of minority students under these conditions is frequently attributed on the basis of "objective" test scores to deficient cognitive or linguistic abilities.

In order to reverse the pattern of minority group educational failure, educators and policy-makers are faced with both a personal and a political challenge. Personally, they must redefine their roles within the classroom, the community and the broader society so that these role definitions result in interactions that empower rather than disable students. Politically, they must attempt to persuade colleagues and decision-makers (e.g. school boards and the public that elects them) that the school should redefine its own institutional foundations so that rather than reflecting society by disabling minority students it begins to transform society by empowering them.

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