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## ABSTRACT

This study examines the relationship between proficient bilingualism or biliteracy (proficiency in reading and writing in both Spanish and English) and the self-esteem of Mexican American students. The concept of proficient bilingualism has not been widely used to examine bilingual education's noncognitive functions, in particular its effect on the self-esteem of Mexican American students. This study analyzed data from the 1988 National Education Longitudinal Survey. The sample included 1,034 Mexican, Mexican American, and Chicano eighth graders with a Spanish-English bilingual background. Based on self-report, students were categorized as either biliterate, English monoliterate, Spanish monoliterate, or oral bilingual. A set of 13 questions that measured self-esteem were factor analyzed, generating three subdimensions (self-deprecation, self-confidence, and fatalism). Controlling for students' sociodemographic background, school experience, academic performance, and status among peers, analysis revealed: (1) Mexican American children who saw themselves as biliterates had the highest self-confidence as compared to monoliterates and oral bilinguals; (2) English monoliterate children had lower fatalistic attitudes than other children; (3) self-reported Spanish monoliterates seemed disadvantaged in the three measures of self esteem; and (4) there was a strong interactive effect between parents' education and children's birth place (U.S. or foreign) on biliteracy identity. This paper includes data tables. Contains 40 references. (LP)

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Self-Reported Biliteracy and Self-Esteem  
A Study of Mexican American 8th Graders

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## Self-Reported Biliteracy and Self-Esteem

### A Study of Mexican American 8th Graders

#### Abstract

Proficient bilingualism or biliteracy (proficiency in reading and writing in both Spanish and English) as a conceptual tool is used in research of linguistic and academic processes among Mexican American children, but has been rarely examined in study of noncognitive outcomes among this population. Biliteracy, a quality that strengthens cultural identity and facilitates adaptation to the mainstream society, hypothetically contributes to the growth of self-esteem among Mexican Americans. Relative to Spanish proficiency or a general notion of bilingualism, biliteracy as the child's self-identity is a concept arguably more relevant to the development of self-concept among Mexican American children.

Drawing on data from the 1988 National Education Longitudinal Survey (NELS:88), this paper examines the above hypothesis. The analysis compares self-deprecation, self-confidence, and fatalistic belief among Mexican American 8th graders who were identified by their self-perception as biliterate, English monoliterate, Spanish monoliterate, and oral bilingual. Controlling for the effects of sociodemographic background and school experience, ordinary least square regression analysis generated supportive results. Mexican American children who saw themselves as biliterates had highest self-confidence as compared to monoliterates and oral bilinguals. Logistic regression analysis was run to account for the odds of biliteracy self-identity. A strong interaction effect was found between the birth place (U.S. or foreign) and parents' education: Among the U.S. born, parents' education is related to a low rate of biliteracy identity; whereas among the foreign-born, parents' education is associated with a high rate of biliteracy identity. Educational implications are suggested.

Self-Reported Biliteracy and Self-Esteem  
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Introduction

The dualism of "proficient bilingualism" versus "limited bilingualism" (Cummins, 1981; Lambert, 1984) differentiates educational approaches to bilingualism by their social and cognitive consequences. Proficient bilingualism (also termed additive bilingualism or biliteracy) attempts to maintain the native language for cultural identity while learning a second language for instrumental achievement. Limited bilingualism (also termed subtractive bilingualism) involves learning a second language that is socially prestigious relative to the native language, at the cost of undermining the native language proficiency and related cultural identity. Cognitively, a key distinction of the two bilingual processes is that proficient bilingualism develops high skills in both oral and literate communication with the two languages; whereas limited bilingualism commands capabilities only in oral bilingual communication. Thus, an indication of proficient bilingualism is not oral fluency in two languages, but proficiency in reading and writing in both languages.

The concept has been applied to studying the relationships between Spanish maintenance and English acquisition (e.g., Ramirez, Yuen, Ramey & Pasta, 1991; Ramirez, Pasta, Yuen, Ramey & Billings, 1991; Medina & Escamilla, 1992) or between language learning and academic performance (e.g., Ramirez et al, 1991; Ramirez et al, 1991; Cummins, 1981). It has not been, however, widely used in research of noncognitive outcomes such as empowerment, cultural identity, and self-esteem among language-minority children. A lack of research attention to such connections is striking, since the notion has implications of equal, if not

greater, importance for linking linguistic processes to psychosocial processes among language-minority children.

Self-esteem, as a dimension of self-concept, is "universally and characteristically a dominant motive" (Kaplan, 1975, p.16). The link between proficient bilingualism and self-esteem is interesting both theoretically and practically. A pivotal assumption of the social psychology of self-concept shared by psychology and sociology is that self-concept is shaped and modified during social interaction (Rosenberg & Kaplan, 1982). Bilingual proficiency for a language-minority children is a personal quality that enhances social interaction and intellectual communication. It also helps sustain a sense of identity and strengthen self-conception in the dominate society. It is reasonable to assume that proficient bilingualism would contribute to strengthening self-esteem among language-minority children.

In practice, self-esteem is an important noncognitive education outcome on its own right (Branden, 1990; Felice, 1981). As a basic human need, positive self-concept is a key component of the sense of well-being; and high self-esteem is an important life achievement (Branden, 1990). Practitioners constantly search for ways, including language education, to help promote children's self-esteem. Further, high self-esteem may be channelled into active learning and consequently generates good school performance (Coleman, 1966; Coopersmith, 1967); whereas low self-esteem leads to low academic achievement and deviant behavior (Higgins, 1987; Steffenhagen, 1987; Simons & Robertson, 1989). Bilingual education studies, however, are often limited within a cognitive framework. In this framework, bilingual education is directly linked to cognitive or academic outcomes (e.g., Cummins, 1981). Social or emotional factors, such as self-esteem--a motivational process that is likely to mediate the linkage between bilingual development and cognitive outcomes--are poorly conceived in theorizing. In empirical studies of

bilingual education, these social factors often have been ignored, remaining to be merely advocates' rhetoric.<sup>1</sup>

Self-esteem related to proficient bilingualism is also relevant to education policies. Bilingual education is an institutionalized system in the U.S. It is based on a belief that developing literate skills in both the home language and English helps language-minority children strengthen self-esteem and empower them to participate in schooling (e.g., Congress of the U.S., 1992; U.S. Commission on Civil Rights, 1975; Ramirez & Castaneda, 1974). However, some observers (e.g., Porter, 1990) question whether or not such a costly endeavor--for school and perhaps for the child as well--actually advances the growth of self-esteem among disadvantaged children, for empirical evidence for such an effect is scant.

Drawing on data from a national sample of Mexican American high school students, this study examines the relationship between bilingualism and self-esteem. Two questions are attempted: (1) how self-esteem measures differ among children who identified themselves as proficient bilingual (English-Spanish

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<sup>1</sup>The cognitive impact of bilingualism often requires important social processes that link bilingualism to cognitive or school performance. For instance, a hypothetical cognitive mechanism whereby bilingualism leads to academic strength is that native language instruction in early schooling of minority children allows them to participate in class on a more complex level. Though still lacking empirical evidence (Rossell, 1992), such reasoning implies a crucial role of social interaction, i.e., participation in class. Cummins' (1986) Carpinteria study also reported that the experimental bilingual program encouraged parents and community involvement, which contributed to the students' academic success. Bilingual translation is said to help Hispanic children gain metalinguistic understanding (Malakoff & Hakuta, 1991). The experience, however, also involves complex social interaction (e.g., a motivation for facilitating the parents' communication with others, linguistic and social feedback from the parents and others). The social aspect of bilingual experience, though mentioned in the literature, has not been well incorporated into the cognition-focused study. It is promising to explore psychosocial effects connecting bilingual experience with cognitive and academic outcomes. That self-concept intermediates the effect of bilingualism on cognition--a "conventional" theoretical approach (Baral, 1983)--has never been thoroughly examined with aggregated data.

biliterate) and children who identified themselves as Spanish monoliterate (literate only in Spanish), English monoliterate (literate only in English), and oral bilingual? and (2) what factors account for the likelihood of perceiving self as proficient bilingual among Mexican American children?

#### Prior Research

With a controversial reputation (for critical reviews, see Lam, 1992; Baker, 1992; for a personal account, see Porter, 1990), the vast literature of bilingual education research contains limited information about empirical inquiry of self-concept related to bilingualism. As an observer noted (Baral, 1983), in spite of the prominence of affective factors in bilingual policy and practice, it was surprising to see how few studies of bilingual education in the U.S. actually investigated these factors. Ten years later, while the connection between minority children' self-concept and bilingualism remains empirically elusive, research effort focused on the issue seems decreasing. A search of the ERIC 1982-1993 file generates far fewer relevant records than that of the file of 1966-1981. Dissertation studies in the last decade rarely addressed non-cognitive outcomes of bilingual education. The literature largely consists of program evaluation studies, with very limited amount of systematic research. I will pose questions for research after a brief discussion of a few relatively recent works that reported the connection between self-esteem and biliterate education.

Evaluation studies of bilingual education programs sometimes looked at the impact of the program on self-esteem, but often resulted in contradictory findings. Some evaluation studies did report positive results. For instance, a 3-year bilingual-bicultural program at Bronx, New York, was reported to have had positive affective outcomes (New York City Board of Education, 1981). The program offered bilingual instruction and supportive services to more than 200 Hispanic

students with limited English skills from grades 9 through 12. The evaluators observed that, through the program, the participants felt secure, showed increasing self-esteem, and expressed enthusiasm about the program. Low rates of attrition and suspension, value for achievement, and aspiration for post-secondary education are also reported as the indication of resulting positive self-concept. This program, perhaps distinct from many others, provided a range of cultural opportunities to sensitize children to their own cultural heritages (e.g., Dominican Republic Independence Day, Puerto Rican Discovery Day, and Bilingual Awards) as well as intensive supportive services to enhance children's instrumental competence (e.g., academic counselling and occupational advice). Providing balanced social and academic services for language-minority children probably contributed to the success of the bilingual program.

Another study of bilingual program in New York also reported positive results in promoting self-esteem among the students (Cochran & Schulman, 1984). This program, worked for more than 300 foreign born, newly arrived, low-income children, explicitly targeted at strengthening children's self-concept in addition to academic achievement. Observation and anecdotal evidence suggest that students felt good about themselves and the program as a result of the program participation.

Likewise, a report on a bilingual education program for Haitian adults reaches a conclusion that the bilingual instruction was effective in lifting participants' self-confidence and motivation (Burtoff, 1985). The Haitians, living in New York, spoke only Haitian Creole before participating the program. Relative to a control group with English-only instruction, participants of the Haitian-English biliteracy programs were said to have gained not only in literate skills, but also in self-esteem. Though the comparisons in self confidence and



motivation did not generate statistically significant results, anecdotal evidence suggests a substantial difference.

Different conclusions, however, were reported in the evaluation literature. Evaluation findings frequently indicate either no effect or even negative effect of bilingual experience on self-esteem (e.g., Lee, 1975, 1975). Development Associates, Inc. (1977) found in its evaluation of a 5-year comprehensive program involving bilingual education in a Texas school district reported no changes in student self-esteem and academic achievement.

Relevant to bilingual education, a non-evaluation literature contains research that examined the impact of Spanish usage and skills on self-esteem among Mexican Americans. The findings on the connection are also inconsistent. The positive association was reported, for instance, by Firme (1969) and Del Buono (1971). They both found higher self-esteem of Mexican American students as a result of their Spanish learning entailed in bilingual instruction. Long and Padilla (1971) found that Chicano college students from homes where Spanish was frequently spoken had higher self-esteem than those from less Spanish-speaking homes. Inconclusive or negative findings on this connection were also reported. In a classic study, Coleman and his colleagues (1966) found that, among a national sample of Mexican Americans, Spanish maintenance was associated with poor psychological attributes, including lower self-esteem and motivation. Based on his survey data, Garcia (1981) suggested that the effect of Spanish speaking on self confidence among Mexican American college students was complex and that the positive effect he found in his analysis was inconclusive. In another study, taking Spanish speaking as a negative indicator of Mexican American acculturation, Ortiz and Arce (1984) reported an inverse relationship between Spanish use and self-esteem among a sample of Mexican Americans from the Southwest U.S. The negative relationship holds regardless of sex, educational attainment, and income.

Baral's (1983) literature review highlights the inconsistent findings on the effect of bilingual education and self-concept development. The inconsistency, of course, can be attributed to discrepancy in program operation. Under the rubric of program conditions (e.g., the philosophy and policies, administration, school and community contexts, and available resources), detailed analysis is needed but often missing due to statistical control or total neglect. Despite the contradictory reports, the literature seems to imply the importance of targeting at biliteracy and incorporating social and academic services for improving students' self-concept and social motivational conditions.

In addition to oversimplistic or flawed designs and methodology (see Lam, 1992), bilingual evaluation studies seem to have suffered more critically from lacking the guidance of thoughtful theorization. Preoccupied with interprogram comparisons in effectiveness, the existing research has seldom analyzed intraprogram or individual variation in program outcomes, particularly in noncognitive outcomes. Such a preoccupation limits the understanding of the bilingual processes. Few sound concepts such as proficient bilingualism are used to examine the bilingual effects on self-conception. It is compelling to ask, for example, under similar program conditions, how it comes that some children benefit from bilingual education more than others do? What are the factors other than programs that are responsible for improving academic performance and gaining self-esteem? What is the nature of bilingual learning and expression that influence children's social and intellectual development? Do Spanish and English have differential roles in language-minority children's learning and socialization? What is the connection of student self-perceived bilingual achievement to the growth of self-esteem? What is the effect of actual acquisition of bilingual skills on self-esteem? If thoughtfully framed, these questions would, instead of

lead to individual idiosyncracies, address fundamental mechanism whereby bilingualism links to cognitive and social motivational development.

The question whether or not bilingualism promotes language-minority children's social wellness is far from being settled down. Recent critics on bilingual education argue that, though ethnic identity and cultural pride may be promoted via bilingual education, language separation also "reinforces the feelings of being different, of being a perpetual outsider" (Porter, 1990, p.35). The implication is that native language proficiency without corresponding English proficiency has a negative impact on self-conception among minority children. A generic notion of bilingualism is thus problematic in linking to the desired social and emotional growth of children.

In brief, the concept of proficient bilingualism has not been widely used to examine bilingual education's noncognitive function; and the hypothetical role of proficient bilingualism in affecting self-esteem among Mexican Americans has not been empirically studied. The available research findings on the relationship between Spanish proficiency and self-esteem among Mexican Americans are inconsistent. To move forward this line of research, the conceptual model needs to be refined to focus on the effect of biliteracy (as objective measure of test or as subjective perception of the child) and the multifaceted construct of self-esteem.

#### Conceptual Framework

Proficient bilingualism as reported by children themselves, multifaceted self-esteem, and a host of sociodemographic background and school experience variables are considered in the theorizing. Hypothetically, self-claimed biliteracy--as opposed to self-reported monoliterate proficiency (either English or Spanish) and oral bilingual--is positively associated with Mexican American

children's self-esteem, given similar conditions in sociodemographic background and schooling. The hypothesis entails clarification of two focal concepts, i.e., proficient bilingualism and self-esteem.

#### Proficient Bilingualism as Self-claimed Biliteracy

In predicting self-esteem among Mexican American children, self-identified biliteracy is a more relevant concept than Spanish usage, Spanish proficiency, a generic notion of bilingualism, or perhaps even actual bilingual skills. I shall address these alternative notions separately.

First, Spanish usage or Spanish proficiency are conceptually slippery in relating to self-esteem. Spanish usage and skills among immigrants or Hispanic Americans have been seen as either a positive indicator of value for native culture (e.g., Garcia, 1981) or an inverse indicator of acculturation (e.g. Ortiz & Arce, 1984). Reflecting the value for native culture, Spanish proficiency is associated with group identity and pride, and thus, arguably works to elevate the speaker's self-esteem. On the other hand, as an inverse variable of acculturation for a disadvantaged group, Spanish usage and preference may be seen as reflecting impotency of participating in the mainstream society, and hence, hypothetically undermines the sense of control and self-esteem. So, Spanish usage and skills alone are conceptually dubious in relating to self-esteem among Mexican Americans.

Second, a general notion of bilingualism lacks differentiation to explain cognitive and noncognitive outcomes. As documented, oral proficiency without corresponding literate skills in a language often masks the individual's severe handicaps in learning and socialization (Cummins, 1978). Literate proficiency is significant for both second language learning and home language maintenance. Cummins (1978, 1981) hypothesizes that native language learning facilitates second language learning only when a threshold level of native language literacy is achieved. Further, it is literate proficiency in the native language that enables the individual to grasp the essential elements in his own cultural heritages.

Native literate learning fosters profound appreciation of the native culture and generates an affective attachment to the origin. The resulting sense of cultural identity and group affiliation, distinct from an intuitively rooted identity among the illiterate, is supported by strong moral and rational justification. Such a sense of identity serves to lift one's self-esteem. It is necessary to distinguish literate Spanish proficiency from the general Spanish proficiency in examining the connection between language acquisition and self-esteem.

Further, without considering the skills for mainstream communication, it makes little sense to link the isolated effect of Spanish proficiency to social and psychological factors such as self-esteem. Home language proficiency, a symbol expressing character of language-minority children, offers limited redeeming resources for instrumental gains in the dominant society. Home language proficiency is likely to improve language-minority children's social and psychological conditions only when their skills of the dominant language matches that of home language. Without practical language skills to deal with the dominant society, the high value for and good skills of home language are of little use in instrumental gains, perhaps even promote a sense of alienation.

Literate proficiency in both home language and English entails extensive learning and socialization. Such experience may enable children to go beyond the vernacular skills acquisition and to achieve abstract thinking capabilities (Cummins, 1981). In-depth socialization also generates positive psychosocial effects on students. A recent theoretical effort is the assertion on the empowerment effect of bilingualism for minority children (Cummins, 1986). Social/emotional benefits (e.g., cultural identity and empowerment) from "enriched" (as oppose to subtracted) bilingualism are an important educational outcome. Academic advancement would be propelled by such motivational forces in the long run. This line of thinking, however, still awaits conceptual elaboration and empirical test. As equally important as it is in cognitive processes,

proficient bilingualism makes "additive acculturation" (Gibson, 1992) possible. Only with biliterate sophistication, it is possible for one to reconcile cultural differences, manage identity tensions, and cultivate an in-depth understanding of both the minority and mainstream cultures. A positive self-regard of capacities and virtues is nurtured during the additive acculturation process. The concept bilingualism should be elaborated into two different domains, i.e., bilingual literate proficiency versus oral proficiency. It is biliteracy that contributes to the growth of self-esteem among minority children.

Hypothetically, self-perceived proficient bilingualism should be more significant than actual bilingual skills in relating to self-esteem. Perception and actuality are related but different entities. Perception of one's own biliterate competence, distinct from the cognitive measure of actual skills, is a result of social interaction processes. During social interaction, information about one's actual biliteracy skills is organized under such complex influences as the valuation of the skills, sentiments attached to the languages, judgements of significant others, and the experience in formal schooling. Self-concept is "an unequivocally subjective phenomenon, a component of the individual's phenomenological field" (Rosenberg & Kaplan, 1982, p. xii). Self-esteem as a subjective construct about one's own capacities and worthiness should be sensitive to the self-evaluation of biliteracy, if biliteracy is valued at all. In predicting self-esteem, actual bilingual skills have little value if they do not even come into the individual's awareness. Accordingly, in this study, children's self-reported, rather than tested, biliteracy will be the focal predictor of self-esteem.

It is interesting to identify factors that contribute to the self-perception of proficient bilingualism. Self-perceived biliteracy can be seen as a product of

joint effects among actual bilingual skills<sup>2</sup>, sociodemographic background (e.g., birth place [in U.S. versus in Mexico], sex, and parents' socioeconomic status), and social interaction factors (e.g., school experience pertaining to children's native culture, frequency of speaking Spanish with family members and friends, and the actual English skills). These antecedent factors and their interactions are explored to predict self-identified biliteracy.

### Self-esteem

Self-esteem of Mexican Americans also needs conceptual specification. It has been conceptualized in various ways as a multi-dimensional construct. An ongoing study (National Center for Research on Cultural Diversity and Second Language Learning, via telecommunication, 1992), for example, is testing a measurement of self-concept relating to the mathematic motivation among Mexican American children. To tap a more global notion of self-esteem in this population, constructs based on prior crosscultural studies are most referable. Drawing on data from a series of crosscultural studies of class and self-esteem, Melvin Kohn (e.g., 1977) suggests five subdimensions of self-esteem, including self-confidence, self-deprecation, attribution of responsibility, anxiety, and idea-conformity. Compatible to Kohn's model, this study examines three dimensions derived from the data, namely, self-confidence, self-deprecation, and the fatalistic belief (corresponding to Kohn's attribution to responsibility).<sup>3</sup>

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<sup>2</sup>Unfortunately, NELS:88 data do not contain information about children's actual Spanish skills. The absence of this measure, however, did not prevent the analysis from establishing adequately fitted predictive models (see Table 4).

<sup>3</sup>Some theorists differentiate self-confidence from self-esteem, taking the two as distinctive dimensions of self-concept (e.g., Rosenberg & Kaplan, 1982). In such categorizing, self-confidence is a measure of one's own capabilities that make things happen in accord with one's will; whereas self-esteem refers to the notion of self-worthiness, the extent to which one accepts oneself and respects oneself. If framed in this conception, the first and third factor yielded from the NELS:88 data may represent self-confidence (inversely scaled) and the second factor indicates self-esteem (see Appendix 2 for questionnaires).

Self-confidence refers to the individual's evaluation of self worthiness. It is "the positive component of self-esteem: the degree to which men are confident of their own capacities" (Kohn, 1977, p81). Self-deprecation refers to self-critical part of self-esteem, "the degree to which men self disparage themselves" (Kohn, 1977, p82). Fatalistic belief refers to an attitude that attributes events to sheer chance or luck, not to personal responsibility.

#### Other Factors

Bilingualism is, of course, only one of many factors influential to self-esteem. To identify its effect, a set of factors are to be examined and controlled for in the analysis. These include students' sociodemographic background, school experience, academic performance, and status among peers.

### Data Source and Analytic Approach

#### Sample

The study used data from the National Education longitudinal Study of 1988 (NELS:88) conducted by the National Opinion Research Center under contract with the National Center for Educational Statistics (1990). NELS:88 was the first wave of a longitudinal questionnaire survey of the 1988 eighth grader cohort in the U.S. The sample of 24,599 students was drawn by a 2-stage stratified probability design. The sample excluded specific types of students, such as those who were mentally handicapped and who were not minimally competent in English for responding to the questionnaire.

I first extracted from the student total sample a subsample of respondents who were identified as Hispanic Americans attending public schools in the U.S. To obtain information on birth place (in U.S. or foreign) and years of staying in U.S., the parent file with the corresponding subsample was merged into this file.



To test possible bias due to unmatched cases<sup>4</sup>, frequency distributions of demographic variables (birth place, years of residence in U.S., schooling outside U.S., sex, Hispanic subgroups, and parent education) were compared across the merged file (with unmatched cases dropped) and the original student and parent files. The results suggested no systematic bias introduced during the merging process (see Appendix 1). The final sample included 1034 Mexican, Mexican American, and Chicano eighth graders with a Spanish-English bilingual background (those who reported to speak a language other than English at home and to use Spanish most often as the language other than English). Because of the homogeneity of this group, the unweighted data were used for analysis.

### Measurement

The self-reported biliteracy measure was derived from students' responses to two sets of four questions asking about how well the students speak, understand in conversation, read, and write in Spanish and in English, respectively (a 5-level scale from "very well" to "not at all"). Those who said that they read or wrote "very well" in both Spanish and English were considered to be proficient bilingual, otherwise were not. Spanish monoliterates were children who said that they did "very well" in writing or reading in Spanish but who did not said so in English; and vice versa for English monoliterates. With the three dummy variables, the sample was categorized into four mutually exclusive groups: biliteracy, Spanish monoliteracy, English monoliteracy, and the others (respondents who did not identify themselves as proficient in either of the two languages).

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<sup>4</sup>The merging process resulted 345 cases with missing values on variables in the student file and 327 cases with missing values on variables in the parent file.

Oral bilingual children were identified if the respondents reported that they did very well in speaking or in conversational understanding with both languages, but did not say so in reading or writing in both languages. Accordingly, a dummy variable was constructed. The two dummy variables, oral bilingual and biliteracy, categorized the whole sample into three groups, the oral bilingual, the biliteracy (including children who identified themselves as literately proficient but not necessarily orally proficient and children who identified themselves as both literately and orally proficient bilingual), and the others who did not reported to be bilingually proficient either orally or literately.

To examine the internal validity of self-reported language proficiency, the two sets of four language proficiency items were crosstabulated separately for Spanish and English. For both languages, the results suggest a clear pattern whereby oral skills relate to literate skills in a sensible way, since: (1) there are more respondents reported to be orally proficient than those who reported to be literately proficient, (2) oral skills are positively correlated with literate skills, and (3) no respondent reported to have very low oral skills ("not at all") but high literate skills. Thus, the self-reported proficient measures were taken as reasonable, though subjective, identification of English-Hispanic biliteracy.

A set of 13 questions about self-esteem were asked to students, each with a 4-level scale (strongly agree through strongly disagree). After inverse recoding of the items to make scores representing the low-high continuum of the subdimensions of self-esteem, principal components analyses were conducted. Three resulting factors are robust with both orthogonal and obliminal rotations (for the solution and specific items, see Appendix 2). The three factors, labeled as self-deprecation, self-confidence, and fatalistic belief, are conceptually compatible to Kohn's factoring results. The factors scores (see Table 1 for descriptive

statistics) were used in the analysis as the dependent variables, reflecting the three subdimensions of self-esteem.

Two sets of covariates were statistically controlled for in analysis because, theoretically related to self-esteem, they might confound the effect of proficient bilingualism. The first set of the controlled variables reflects students' sociodemographic background, including sex, parents' educational attainment (high school graduation or not), and birth place (in U.S. or foreign). The second group indicates students' school experiences, including self-reported average grades on English, mathematics, science, and social studies; problems at school (cases with none of such problems as misbehavior, poor school work, poor attendance were assigned the value of one, otherwise zero); prestigious status in peers (cases self-identified to be athletic, popular, good student, important were coded one, otherwise zero); and self-reported "trouble maker." Reading test scores were used to reflect students' actual English skills.

To account for the odds of self-perceiving as biliteracy, the same background variables were used (i.e., sex, birth place, and parents' educational attainment). Significant "process" variables were included into the model, namely, taking courses about one's native culture, frequency of speaking Spanish (the average of frequencies of speaking Spanish with parents, grand parents, siblings, and peers), and the English reading test scores.

#### Analytic Approach

The analysis involved two comparisons, with one dealing with the biliteracy versus monoliteracy, the other dealing with the biliteracy versus oral bilingual, both with covariates of sociodemographic background and school experience. First, I compared self-esteem scores of the biliterate, English monoliterate, and Spanish monoliterate groups against the "others" group (those who were identified to be not literately proficient in either English or Spanish). Taking the "others"

group as the reference, this comparison was intended to show how the self-esteem measures of the three groups of different literate skills differed from that of the "other" group, holding background and schooling conditions constant. Three ordinary least square (OLS) regression models were tested. Dependent variables were the factor scores labeled as self-deprecation, self-confidence, and fatalistic belief, respectively. Variables of sociodemographic background and school experience were entered into the equation, and the three dummy variables of self-reported literacy is entered thereafter.

Second, I compared self-esteem scores of the biliteracy group and oral bilingual group against the "others" group (those who did not reported to be orally bilingual or literately bilingual). With such a contrast, three OLS regression models were tested, taking the self-esteem scores as dependent variables and controlling for background and schooling variables.

To predict the likelihood of self-reporting biliteracy--a dichotomous variable--logistic regression was used to examine the effects of sociodemographic background factors and factors of linguistic processes. Moreover, three interaction effects were tested, i.e., birth place by parents' education, frequency of speaking Spanish by English reading scores, and taking home culture courses by English reading scores.

### Results

Descriptive statistics for the variable of self-esteem, proficient bilingualism, and other independent variables are presented in Table 1. The small number of cases identified as Spanish monoliterate (n=34) produced small standard deviation for this dummy variable (e.g., see Cohen & Cohen, 1975, p.177). This makes the interpretation difficult. So, when necessary, I did bivariate comparisons of the self-esteem scores to give additional information about the substantive difference across the groups (presented in narratives).

Table 1. Descriptive statistics of variables.

<u>Continuous variables</u>	Mean	Std Dev	Minimum	Maximum	N <sup>a</sup>
Self-deprecation	.01	1.00	-2.97	2.80	959
Self-confidence	.01	.99	-4.13	2.59	959
Fatalistic belief	.00	.99	-3.26	2.61	959
Self-reported grades	2.76	.72	.50	4.00	1034
English reading score	.21	11.22	-37.53	49.6	989
Frequency of Spanish speaking	1.65	.74	.00	3.89	1047

<u>Categorical variables</u>	coding	Frequency	Percent
Self-reported biliterate			
no	0	892	85.2
yes	1	155	14.8
Self-reported English monoliterate			
no	0	397	37.9
yes	1	650	62.1
Self-reported Spanish monoliterate			
no	0	34	3.2
yes	1	1013	96.8
Self-reported oral bilingual			
no	0	791	75.5
yes	1	256	24.5
Birth place			
foreign	0	201	19.2
U.S.	1	846	80.8
Sex			
female	0	585	55.9
male	1	462	44.1
Parents' education			
less than high school	0	497	47.5
high school or more	1	550	52.5
Trouble maker			
no	0	912	87.1
yes	1	70	6.7
missing	.	65	6.2
School problems			
one or more problems	0	681	65.0
no problem	1	366	35.0
Taking home culture courses			
no	0	930	88.8
yes	1	117	11.2
Prestigious peer status			
no prestigious status	0	501	47.9
one or more status	1	546	52.1

<sup>a</sup> Missing cases on the self-esteem measures and English reading score do not significantly differ from the non-missing cases in sex, parents' education, birth place, and self-reported biliteracy. But missing cases on self-esteem measures have lower average test scores than the non-missing cases.

### Self-esteem: Biliteracy versus monoliteracy

The differences in self-esteem among children of self-identified biliterate and monoliterate (English or Spanish) are shown in Table 2.

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**Table 2. Coefficients of OLS regression of the three dimensions of self-esteem on self-claimed biliteracy, English monoliteracy, and Spanish monoliteracy, controlling for effects of sociodemographic background and school experience (numbers in parentheses are standardized regression coefficients).**

Independent Variable	Self-deprecation	Self-confidence	Fatalistic belief
-----			
Sociodemographic background			
Born in US	-.029(-.011)	-.009(-.003)	.000(.000)
Male	-.298(-.148)**	.217(.108)**	.071(.035)
Parent h.s. educ	-.067(-.033)	.099(.049)	-.083(-.042)
School experience			
Grades	-.167(-.120)**	.239(.174)**	-.272(-.197)**
Peer status	-.117(-.058)	.324(.163)**	.095(.048)
No school problem	-.250(-.119)**	.068(.033)	-.114(-.055)
Trouble maker	.254(.065)*	-.230(-.059)	.363(.094)**
Self-claimed literacy			
Biliteracy	.075(.026)	.534(.191)**	-.158(-.056)
English monoliteracy	.037(.018)	.116(.056)	-.333(-.163)**
Spanish monoliteracy	.144(.025)	-.082(-.014)	.240(.042)
Adjusted R <sup>2</sup>	.063**	.122**	.094**
-----			
* P<.05    ** p<.01			
-----			

On the dimension of self-deprecation, the three groups do not differ from the reference group (those who were identified to be neither biliterate nor monoliterate), as none of the three dummy variables' regression coefficients are statistically significant. Bivariate comparison of the self-deprecation scores also shows little difference across the groups.

On the dimension of self-confidence, however, biliteracy has a positive coefficient that is both statistically significant and considerably large in magnitude ( $b=.534$ ,  $p=.000$ ). Given the similar socioeconomic background and school experience, Mexican American children who think themselves as Spanish-English biliterate tend to have higher self-confidence than those who do not see themselves as either biliterate or monoliterate. In addition, the two monoliterate groups do not differ from the reference group in self-confidence, as the corresponding variables' coefficients are not statistically significant. Children who identify themselves as either Spanish monoliterate or English monoliterate tend to have similar level of self-confidence as those who do not at all think themselves as literate in either language.

The results from bivariate comparison of self-confidence scores is consistent with the regression results. The biliterate group has a much higher average score than the reference group does (.41 versus -.21); whereas the Spanish monoliterate group has a lower average score (-.30). English-monoliterates have a mean very close to the grand mean (.00). Clearly, biliteracy as reported by Mexican American children themselves is an important factor relating to high level of self-confidence. Self-perceived Spanish or English literate proficiency alone does not contribute to Mexican children self-confidence and Spanish monoliteracy is even negatively associated with self-confidence.

In terms of fatalistic belief, the biliterate group does not differ from the reference group as the effect is not statistically significant. The Spanish monoliterate group does not significantly differ in fatalism from the reference group either, but the positive coefficient ( $b=.240$ ,  $p=.205$ ) suggests that Spanish monoliterates seem to hold a more fatalistic belief than the reference group. English monoliterates, however, have a lower average score in fatalism than the reference group, as shown by the corresponding variable's statistically significant negative coefficient ( $b=-.333$ ,  $p=.000$ ).

Bivariate comparison generates a compatible, but clearer result. Against the reference group's average .28 in fatalism, the biliterate group's is slightly lower (.08); the English monoliterate group's is much lower (-.13); but the Spanish monoliterates' is considerably higher (.51). The findings suggests that Mexican American children who thought themselves as monoliterate in English tend to hold a less fatalistic attitude than other children; whereas those who saw themselves as Spanish-only literate tend to be more fatalistic than other children. Biliteracy has virtually no effect on this dimension of self-esteem.

Self-esteem: Biliteracy versus oral bilingualism

The results of comparison of self-esteem measures between the biliterate and the oral bilingual are presented in Table 3.

Table 3. Coefficients of OLS regression of the three dimensions of self-esteem on self-claimed biliteracy and oral bilingual, controlling for effects of sociodemographic background and school experience (numbers in parentheses are standardized regression coefficients).

Independent Variable	Self-deprecation	Self-confidence	Fatalistic belief
Sociodemographic background			
Born in US	-.029(-.012)	.027( .010)	-.107(-.042)
Male	-.302(-.150)**	.212( .106)**	.086( .043)
Parent h.s. educ	-.070(-.035)	.119( .059)	-.136(-.068)*
School experience			
Grades	-.166(-.119)**	.244( .177)**	-.285(-.207)**
Peer status	-.113(-.056)	.328( .165)**	.079( .039)
No school problem	-.248(-.118)**	.064( .031)	-.108(-.052)
Trouble maker	.254( .065)*	-.228(-.059)	.353( .091)**
Self-reported biliteracy	.014( .005)	.488( .174)**	.027( .009)
Self-reported oral bilingual	-.094(-.040)	.104( .045)	-.117(-.051)
Adjusted R <sup>2</sup>	.065**	.123**	.076**

\* P<.05    \*\* p<.01



In self-deprecation, neither biliterates or oral bilinguals differ significantly from the reference group (those who did not think of themselves as literately proficient or orally proficient in both languages), as reflected by the two dummy variables' small and insignificant coefficients. In other words, identifying themselves as biliterate or oral bilingual does not make difference in the tendency of self-rejection among Mexican American children.

Self-confidence is differentiated by the self-identity of biliteracy, but not by that of oral bilingualism. The variable biliteracy has a coefficient quite large in magnitude and highly significant statistically ( $b=.488$ ,  $p=.000$ ). This suggests that Mexican children who claimed themselves as biliterate tend to have higher self-confidence than children who do not see themselves as either biliterate or oral bilingual. Self-claimed oral bilinguals, on the other hand, do not differ in self-confidence from those who do not see themselves as either biliterate or oral bilingual.

Little difference in fatalism is revealed in comparing the biliterate and oral bilingual groups against the reference group. The small and insignificant regression coefficients associated with the two dummy variables suggest that children who hold self-identities of biliterate or oral bilingual do not differ in fatalistic attitude from children who do not have the two identities.

#### Accounting for Self-reported Biliteracy

To find variables that account for the odds of self-reporting proficient bilingualism, logistic regression was conducted with independent variables of sociodemographic background and language process factors. In addition, the model included three interaction effects (birth place by parents' education, taking native-culture courses by English reading scores, and frequency of speaking Spanish by English reading scores). To demonstrate the differential effect of the

three groups of predictors, results from the three equations are presented (see Table 4).

Table 4. Logistic coefficients for regression of self-claimed biliteracy on sociodemographic background, language process factors, and interaction effects (numbers in parentheses are standard errors).

Independent variables	Model 1	Model 2	Model 3
Sociodemographic background			
Born In US	-.476(.212)*	-.270(.218)	.182( .271)
Male	-.193(.182)	-.226(.185)	-.232( .187)
Parents h.s. education	-.462(.185)*	-.140(.198)	.923( .377)*
Language factors			
Home culture courses	-	.083(.263)	.3390(.730)
Frequency of speaking Spanish	-	.627(.142)**	.040 (.356)
English reading score	-	-.262(.480)	-2.266(1.362)
Interaction effects <sup>a</sup>			
Interaction 1	-	-	-1.340( .433)**
Interaction 2	-	-	-.828(1.472)
Interaction 3	-	-	1.219( .712)
Constant	-1.042**	-2.329**	-1.666*
-2 log-likelihood/df	826.381/985	805.292/982	792.102/979
Model X <sup>2</sup>	15.440**	21.089**	13.190**

\* p<.05 \*\* p<.01

<sup>a</sup> Interaction terms are: Interaction 1, birth place by parents' education; Interaction 2, home culture course by English reading score; and Interaction 3, frequency of speaking Spanish by English reading score.

In equation 1, only sociodemographic background factors were entered. The result suggests that students born in the U.S. and students whose parents had

finished high school or more education are less likely to report themselves as bilingually proficient. In equation 2, language factors were entered, resulting in a single significant effect of frequency of speaking Spanish. The negative effects of birth place and parents' education were rendered insignificant. This change suggests that when language factors are considered, the effects of birth place and parents' education are either spurious, or, more likely, confounded by some combined effects of the independent variables. The latter possibility entails the test of interaction effects.

Equation 3 incorporated three interaction terms, i.e., birth place by parents' education, taking native-culture courses by English reading scores, and frequency of speaking Spanish by English reading score. Only the interaction between the birth place and parents' education is evidenced. This strong interaction effect indicates that students who were born in the U.S. and whose parents had high school or more education are less likely to self-claim as biliterate than are other students (see Table 4).

To clarify this interpretation, a three-way cross-tabulation was conducted (see Table 5). Among students who were born outside of the U.S., parents' better education is associated with greater likelihood of self-perceived biliteracy; whereas among those who were born in the U.S., parents' better education is associated with smaller likelihood of self-reported biliteracy. This interaction suggests a differential influence upon children's biliterate identity by parents who were similarly well-educated but whose attachment to the native language vary. Parents with good education but a shorter immigration experience (as indicated by their foreign-born child) probably desire both mainstream adaptation and native language attachment, and hence, may encourage children to identify themselves as biliterate. Similarly well-educated but with longer residential history in the U.S. (indicated by their U.S. born child), parents are more detached from the

native culture, and hence, have a negative influence upon children's biliterate identity. This finding offers support to the results from studies of parents' attitudes on bilingual education conducted at local levels. Pease-Alvarez's field research (1993), for example, revealed that the decrease of Hispanic parents' support to bilingualism is associated with their immigration history. The U.S. born parents are more skeptical about bilingualism than are the Mexico-born.

Table 5. Interaction between birth place and parents education on self-claimed biliteracy (numbers are column percentages).

Born outside U.S. (n=201)

	Parents' education	
	< h.s.	h.s. or more
Self-claimed biliteracy	-----	
no	82.1	69.6
yes	17.9	30.4
Column total %	72.1	27.9
Cases	145	56

Likelihood Ratio  $X^2 = 3.709$ ;  $df=1$ ;  $p=.054$

Born in U.S. (n=846)

	Parents' education	
	< h.s.	h.s. or more
Self-claimed biliteracy	-----	
no	81.5	90.5
yes	18.5	9.5
Column total %	41.6	58.4
Cases	352	494

Likelihood Ratio  $X^2 = 14.339$ ;  $df= 1$ ;  $p=.000$

Across the three models, the direct effect of parents' education becomes progressively positive after the language factors and interaction terms are added into the model (see Table 4). This pattern suggests that, over and above the combined effect of being born in the U.S. and parents' better education, parents' better education in general increases the probability of self-reporting as proficient bilingual. In other words, for students other than those who were born in the U.S. and whose parents had high school or more education, parents' better education is associated with greater likelihood of self-identifying as biliterate, if the language process factors are similar.

Out of conventional expectation, the results suggest that, taking courses on native culture, frequency of speaking Spanish, and English reading scores are not influential to biliterate self-perception. In fact, once other factors are controlled for, English reading scores seem to be negatively associated with self-claimed biliteracy ( $b=-2.266$ ,  $p=.09$ ). This negative association, more pronounced in a bivariate analysis, demonstrates that self-perceived biliteracy indeed is not identical to actual biliteracy. The large standard error of this effect hints that perhaps more complex interaction effects exists.

#### Summary

Proficient bilingualism is thought as a process in which students learn the second language (English) as a practical resource additional to their native language as a cultural identity. This notion implies a process whereby learning of the two languages produces sociopsychological consequences that are qualitatively different from that resulting from monolingual learning. Mexican American children who command the literate skills of the two languages are supposed to do better both socially and cognitively, relative to their peers who do not command the skills.

With survey data from a representative national sample of Mexican American eighth graders, the analysis provides some support for the notion. With three subdimensions of self-esteem (self-deprecation, self-confidence, and fatalism) as the criteria, self-identified biliterates were compared with other children. A clear pattern emerged is that, compared to children in all the other linguistic-skill categories, biliterate children are better off in self-confidence development. Second, relative to children who do not think of themselves as oral or literate bilingual, oral bilingual children do not have significant advantages in self-esteem. Third, English monoliterate children have lower fatalistic tendency than other children, though they do not differ in other dimensions of self-esteem. Finally and more suggestively, children who reported themselves as Spanish monoliterate seem disadvantaged in the three measures of self-esteem, for they have lower scores in self-confidence, but higher scores in fatalism.

An implication of the analysis is that bilingual education, in helping students achieve biliteracy to an extent that they can self-claim so, has a potential for facilitate the growth of self-confidence among Mexican American children. Self-perceived biliteracy and self-confidence--both as subjective constructs--are admittedly related in a reciprocal way. The link revealed in the analysis points to the importance of cultivating a self-identity of proficient bilingualism in the empowering process of bilingual education. For empowerment has much to do with the individual's own perception about the self and the environment. It is likely that language-minority children's self awareness of biliteracy links to empowerment more directly than does the actual acquisition of the linguistic skills.

On the other hand, precisely because of the crucial role of identity and self-perception in bilingual learning, bilingual education should be an experience chosen by children and their parents, rather than a mandated route for every

Hispanic child. Recruitment of bilingual students should carefully consult the child and parents. The process should involve informing prospective participants about possible advantages and costs resulting from the participation, considering the families' sociodemographic background and immigration history, and encouraging them to make a voluntary choice. Such a process may not only help save resources, but also increase the chance of positive outcomes of the programs.

Holding other things equal, self-admitted Spanish monoliteracy seems independent of, if not detrimental to, Mexican American children's self-esteem on all the three dimensions. Self-aware English monoliteracy, in contrast, is related to reduced fatalistic attitude. This pattern implies that possessing Spanish skills without equivalent proficiency in English is not to the benefit of Mexican American children's self conception. Spanish proficiency alone does not serve Mexican American children's social and psychological wellness. The presumed symbolic function for cultural identity and empowerment of Spanish proficiency works only when English proficiency is added onto it. Without the latter, Spanish proficiency is rendered irrelevant to the child's self development. In other words, there is little independent or unique role for Spanish monoliteracy to play in empowering Mexican American children. Proficient bilingualism or biliteracy seem to be a necessary way in which Spanish proficiency positively contributes to Mexican American children's self conception.

# Appendix 1

Frequency percentage of sociodemographic background variables across the merged file, the student file, and the parent file of Hispanic students in public schools (the empty cells reflect the absence of the variables in a given file).

Variables	Merged file (N=2294)	Student file (N=2736)	Parent file (N=2736)
Birth place			
U.S.	82.3%	-	83.2
Puerto Rico	2.5		2.3
Others	15.2		14.5
Sex			
Female	52.1	51.2	-
Male	47.9	48.8	
Number of years in U.S.			
< 1	1.8	-	2.0
1-2	4.1		3.8
3-5	14.1		14.3
6-8	26.7		27.4
9-11	25.9		25.8
>12	26.9		26.2
temporary	.5		.4
Attend high school outside U.S.			
yes	11.6	-	11.4
no	88.4		88.6
Hispanic subgroup			
Mexican	67.4	67.5	-
Cuban	2.9	3.0	
Puerto Rican	10.3	10.7	
Others	19.4	18.8	
parents' education			
<high school	34.1	34.2	-
high school/GED	17.4	17.9	
>h.s.&< 4 yr degree	38.6	34.8	
college graduate	5.4	5.4	
M.A. level	3.4	3.5	
Ph.D level	.9	1.1	
don't know	.1	3.2	

Note: The comparisons (with  $X^2$  estimates in crosstabulation) resulted no statistically significant difference.



## Appendix 2.

Rotated Factor Matrix of the 13 self-esteem items with principle components extraction and varimax rotation (factor loadings greater than .40 on the labeled factors are signified with ]).

	Self- deprecation	Self- confidence	Fatalistic belief
BYS44A	.32446	.65191]	-.17197
BYS44B	.36550	.21278	.44401]
BYS44C	.05840	.08166	.81977]
BYS44D	-.00289	.72872]	.19303
BYS44E	.07757	.71659]	.09113
BYS44F	.55266]	.15166	.32575
BYS44G	.54960]	.22320	.32463
BYS44H	.26852	.69247]	.07771
BYS44I	.79287]	.08225	.03704
BYS44J	.81453]	.13623	-.04237
BYS44K	.17570	.58593]	.08058
BYS44L	.58908]	.25593	.21953
BYS44M	.12822	.00260	.69933]
Eigenvalue	4.091	1.506	1.233
percent of Variance	31.5	11.6	9.5

Note: Oblimin rotation generates a virtually identical factor pattern.

Item	Question
BYS44A	I feel good about myself.
BYS44B	I don't have enough control over the direction my life is taking.
BYS44C	In my life, good luck is more important than hard work for success.
BYS44D	I feel I'm a person of worth, the equal of other people.
BYS44E	I am able to do things as well as most other people.
BYS44F	Every time I try to get ahead, something or somebody stops me.
BYS44G	My plans hardly ever work out, so planning only makes me unhappy.
BYS44H	On the whole, I am satisfied with myself.
BYS44I	I certainly feel useless at times.
BYS44J	At times I think I am no good at all.
BYS44K	When I make plans, I am almost certain I can make them work.
BYS44L	I feel I do not have much to be proud of.
BYS44M	Chance and luck are very important for what happens in my life.

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