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Bilingual education and at-risk students

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This article reviews research that has examined the linguistic and academic outcomes of at-risk learners in bilingual/immersion programs. Specifically, we review research on at-risk students with: disadvantaged socioeconomic backgrounds, low levels of academic or general intellectual ability, poor first language ability, special education needs (including students at risk for or with language and/or reading impairment), and students who speak non-standard varieties of their first language and/or come from ethnically diverse backgrounds, including minority ethnic groups. We conclude by identifying topics and issues that warrant future research.

Additional abstract at end

Keywords: special education in immersion, reading impairment, ethnic and socioeconomic diversity in immersion, one-way immersion, two-way immersion, indigenous immersion

1. What we know about at-risk students in bilingual programs

In this section we review extant literature on at-risk groups of learners who are participating in bilingual programs.

1.1 Low intellectual/academic ability

With respect to intellectual ability, Genesee (1976) systematically examined the language and academic performance of English-speaking students in both one-way early (kindergarten start) and late (Grade 7 start) French immersion programs in Canada in relationship to their intellectual ability. Students were classified as average ability (IQ between 85 and 115), below average ability (IQ below 85), or above average ability (IQ above 115) based on their scores on a standardized IQ test; none of the students in the below average subgroup were considered

cognitively impaired from a clinical point of view. While many factors can affect academic achievement, scores on IQ tests often correlate significantly with academic achievement and, thus, performance on a standardized IQ test is an indirect way of identifying students who are likely to achieve differentially in school.

With respect to L1 outcomes and academic achievement, Genesee found that below average students in immersion scored at the same level as below average students in monolingual L1 (English) programs. As one might expect, the below average students in both programs scored significantly lower than their average and above average peers in their respective programs on the same measures. With respect to L2 outcomes, the below average students in immersion scored significantly higher on all L2 measures than the below average students in the monolingual L1 program who were receiving conventional L2 instruction. In other words, the below average students were benefiting from immersion in the form of enhanced L2 proficiency. Comparisons between the early and late immersion students revealed interesting and differential relationships between intellectual ability and L2 achievement. More specifically, below average students in both early and late immersion programs scored lower on measures of French literacy (reading and writing) than average and above average students in the same types of immersion — early and late. Similarly, the average students in both types of immersion program scored significantly lower than the above average students. Of particular interest, late immersion students exhibited the same stratification by intellectual ability on measures of speaking and listening as they had demonstrated on measures of L2 literacy. In contrast, there were no differences among the ability subgroups in the early immersion program on measures of L2 speaking and listening. In other words, intellectual ability influenced the development of proficiency in all aspects of L2 acquisition among the late immersion students but had much less effect on the speaking and listening comprehension skills of students in the early immersion program. While we have no definitive explanation for these results, it could be that acquisition of L2 oral language skills during academic instruction in the higher grades of immersion is relatively cognitively demanding in comparison to the acquisition of L2 oral language skills in integrated content-based programs at the elementary level. As a result, like the acquisition of reading and writing skills in an L2, acquisition of L2 oral language skills at the secondary level might call on general cognitive/intellectual skills more than is the case in early immersion and, thus, favor students with relatively high levels of intellectual ability. In any case, overall, these results suggest that low intellectual (academic) ability is no more a handicap for majority language students in one-way immersion programs than it is in monolingual L1 programs. To the contrary, low ability students can experience a net benefit from immersion in the form of advance levels of bilingual proficiency.

In a related vein, students often switch out of immersion programs because they are experiencing academic difficulty. In these cases, students' academic difficulties are thought to make them unsuitable participants in the program. The question arises whether, in fact, students who switch from immersion experience greater academic difficulty than other students in the program and, thus, whether academic difficulty is the root cause of their decision to switch. To examine this question, Bruck (1985a, 1985b) investigated the relationship between academic difficulty and parental decisions to switch students out of immersion. More specifically, she examined the academic, cognitive, attitudinal, behavioral, and second language functioning of poor achieving students both before and after they transferred out of immersion; students were in Grades 3 to 5 of an early French immersion program. Bruck found that students who switched out of immersion scored lower on a number of achievement measures prior to switching than other students on average in their respective classrooms, confirming that the students who switched were, in fact, struggling academically. However, the academic difficulties of the students who switched were no worse than those of a subgroup of students who remained in immersion despite their poor academic performance. Analyses of the results of the behavioral and attitudinal testing indicated that what distinguished students who switched from those who remained in the program despite their academic difficulties was that the former expressed significantly more negative attitudes toward schooling (and immersion in particular) and exhibited more behavioral problems than the latter. Bruck conjectured that it was the behavioral problems and negative attitudes, along with students' academic difficulties, that accounted for parents' decisions to switch their children out of immersion. When Bruck examined the performance of the students who switched one year later, she found that they continued to have academic difficulties and to exhibit attitudinal and behavioral problems. Bruck's results suggest that the ability to cope with academic difficulties may be a more serious problem for some immersion students than others and that poor academic performance alone does not distinguish between those who can cope and those who cannot.

1.2 Special education needs

Students with special education needs have a wide range of learner and background characteristics that put them at risk for difficulty in school, including visual or hearing impairments, developmental delays, speech and language impairments, autism, mental retardation, and specific learning disabilities, among others. As a result, these students require additional services or specialized programs or placements to ensure that their educational needs are met. Myers (2009) examined the performance of both native English-speaking and native Spanish-speaking

students in two-way immersion programs in the U.S. who had been identified as having special education needs; their needs were related to learning disability, developmental delay, emotional disturbance, and other health impairments. They were participating in 50:50 two-way immersion programs (see Tedick, this issue, for definition) and were compared to students with similar special education needs in monolingual English-only programs. The students were in Grades 3, 4 and 5 and were evaluated using criterion- and norm-referenced tests of reading, listening comprehension, writing, spelling, mathematics, science, and social science in English. Myers found no significant differences between the special-needs students in the two-way immersion programs and the special-needs students in the monolingual English-only programs at any grade level (see also Lindholm-Leary, 2005).

Thomas, Collier, and Collier (2010) examined the reading and mathematics achievement of 86 students in 90:10 two-way immersion programs who were receiving special education services. The students were in Grades 3 to 8 in six North Carolina school districts in the U.S. The majority (90%) of these students were identified with specific learning disabilities or specific language impairment. Using criterion-referenced and end-of-grade state assessments, they found that the special needs students in the immersion programs outperformed their peers who were not in these programs in both reading and math. Caution is called for here because their sample was relatively small due to the varied nature of the students' needs, and some special needs students were excluded from the analyses because they were assessed with an alternative test. Nevertheless, these results support emerging evidence that immersion programs can benefit students with special educational needs.

1.3 Poor L1 ability

The issue here is whether students with low levels of L1 ability should be excluded from bilingual programs on the assumption that they would be at greater risk than if they were in a monolingual L1 program. Despite the significance of this issue, there is remarkably little systematic investigation of these students, although, as noted earlier, there is a growing body of research on preschool and young school-age children with specific language impairment who are not in bilingual programs. Bruck (1978, 1982) did study this issue in immersion programs in Canada. She examined the performance of Grade 3 English-speaking students in one-way French immersion programs and students in monolingual L1 programs all of whom had a "language disability" (Bruck's term). The students with a language disability were compared to typically-developing students in each type of program. Classification was based on teachers' judgments, an oral interview,

and a battery of diagnostic tests.¹ When Bruck examined the students' results on literacy and academic achievement measures, she found that both the immersion and non-immersion groups with language disability scored lower than their typically-developing peers in the same programs, as would be expected. Of particular importance, she found that the students with a language disability who were in immersion scored at the same level as students with similar disabilities in the monolingual L1 program. At the same time, the immersion students with language disability had acquired significantly higher levels of L2 proficiency than students in the monolingual L1 program who had had conventional L2 instruction; this was true for both typically-developing students and those with a language disability.

1.4 Low socioeconomic status

Students from families with low socioeconomic status (SES) often achieve at lower levels in school than students from higher SES families for reasons that are complex and not fully understood. As a result, it is often thought that they might be at even greater risk in a bilingual program where they must learn to read and write and acquire academic skills and content in an L2. Canadian researchers have found that majority group English-speaking students in early one-way immersion programs who are from low SES families usually attain the same levels of L1 competence as students from comparably low SES families in monolingual L1 programs (e.g., Holobow, Genesee, & Lambert, 1991). The same pattern has been found for performance on tests of academic achievement in mathematics and science. SES was measured in this study using parents' level of education and occupation and characteristics of the school community. Thus, even though the immersion students from low SES backgrounds had received academic instruction through their L2, they scored as well as students with similarly low SES backgrounds who had received academic instruction through the L1. At the same time, of course, the low SES students in both programs scored lower than students from families with higher SES. With respect to L2 development, the low SES immersion students performed significantly better than comparable students in conventional L2 programs where the L2 was taught as a subject; this was found for performance on all measures of L2 proficiency — speaking, listening, reading, and writing. Of particular note, the low SES students also sometimes performed as well as higher SES immersion students on tests of listening comprehension and speaking, although significantly lower on tests of reading. This finding calls to mind Genesee's (1976) results that early immersion students with relatively low levels of IQ sometimes scored as well as immersion students with higher IQ scores on measures of speaking and listening.

Evidence from studies in the U.S. confirms these findings. More specifically, Lindholm-Leary and her colleagues found that both majority English-speaking students and minority Spanish-speaking students from low SES families were able to succeed in two-way Spanish-English immersion programs (Lindholm-Leary & Block, 2010; Lindholm-Leary & Howard, 2008, see also de Jong, this issue). More specifically, the low SES students, from both majority- and minority-language groups, developed high levels of proficiency in both languages (including reading), and they achieved at the same level as similarly low SES students in English-only programs in academic content areas (e.g., mathematics) (Lindholm-Leary, 2001; Lindholm-Leary & Borsato, 2006; see also Thomas et al., 2010). These evaluations were based on student performance on criterion- and norm-referenced tests or comparisons with state educational norms. Similar results have been found for students who qualify for free and/or reduced lunch services — a proxy measure for SES (Caldas & Boudreaux, 1999; Haj-Broussard, 2005). The low SES students in these evaluations had Euro-American, Hispanic-American, African-American, and Asian-American backgrounds — an issue we turn to now.

1.5 Ethnically and linguistically diverse groups

In this section, we examine research on the effectiveness of bilingual education for two groups of students who often underperform in school in comparison to mainstream students: (1) ethnically diverse English learners (ELs) who speak a home language other than the majority language of the community — in the U.S., Spanish-speakers are by far the largest subgroup within this group and have been the subject of considerable investigation; and (2) students who speak English or a variety of English as an L1 and are members of ethnic minority groups, such as students of Hawaiian or Mohawk backgrounds in the U.S. and Canada, respectively.

In the U.S., students from various ethnic and linguistic minority groups, e.g., African American, Hispanic, and Hawaiian Americans, have frequently been found to underachieve in school in comparison to students from the English-speaking majority group, even in cases when they speak English or a variety of English as an L1 (Hemphill & Vanneman, 2011; Kao & Thompson, 2003). As a result, some educators and families have questioned the appropriateness of bilingual education for these students. In the U.S., there is often overlap between minority group status, low SES, and linguistic difference. Such students may thus be considered at an especially high risk for difficulty in school, owing to risk related to low SES, ethnic minority status, and mismatch between their L1 or the variety of English they speak and the language of instruction (English).

Evaluations of various bilingual programs in the U.S., including two-way, indigenous, and one-way immersion, indicate that ethnically and linguistically diverse students achieve at or above grade level on a variety of measures related to achievement in language, literacy, and non-language academic domains. Students who speak a minority L1 (e.g., Spanish) make up at least one-third of two-way immersion programs. More than two decades of research on such students has consistently found that English learners from a variety of ethnic minority backgrounds achieve as well and sometimes better than their non-immersion peers with similar demographic characteristics (see Genesee & Lindholm-Leary, 2013; Lindholm Leary, 2001; Lindholm Leary & Block, 2010; Thomas & Collier, 2012). Moreover, these ethnically and linguistically diverse students develop high levels of bilingual proficiency and biliteracy (Lindholm Leary & Howard, 2008). Similar results have been found for ethnic minority students in indigenous and one-way immersion programs who speak English or a variety of English as an L1; for example, students from Hawaiian (Wilson & Kamanā, 2011), African American (Krueger, 2001), and Franco-American (Caldas & Boudreaux, 1999) backgrounds. The same results have also been reported in Canada for students with Mohawk (Jacobs & Cross, 2001) and Mi'kmaq (Usborne, Peck, Smith, & Taylor, 2011) backgrounds.

Studies with students who speak a non-standard variety of English are of particular interest because it could be said that they are learning three languages — Standard English, a second or heritage language, and the non-standard variety of English they usually speak outside school. For example, many children of Hawaiian descent speak Hawaiian Creole English (or “Pidgin” English) as an L1, but not Hawaiian at home. If they attend a Hawaiian immersion program, they are learning Hawaiian as a heritage language, Standard English as the language of schooling, and Pidgin English as the common language of every day usage. Research in all of these cases indicates that these students attain the same levels of proficiency in the standard variety of their L1 and in academic domains as comparable students in English-only programs; in addition, they develop advanced levels of functional proficiency in the L2.

2. Conclusions and future directions

Research on the suitability of bilingual education for at-risk learners goes beyond questions concerning academic success. It also includes important ethical, pedagogical, professional development, and assessment issues. Ethical issues are implicated because it could be considered unethical to admit at-risk children to bilingual programs if they are not likely to benefit from participation or if participation is likely to jeopardize their educational success. Conversely, it could be considered

unethical to exclude at-risk students since to do so would, arguably, deprive them of the opportunity to acquire valuable language and cultural skills that would benefit them in their future personal and professional lives. The latter issue is particularly relevant when competence in an additional language is important from a real world perspective — as in the case of French for English-speaking students in Canada where there are real benefits in the local community to being bilingual or, increasingly around the world, where bi/multilingual competence is becoming important for reasons related to globalization. Pedagogical issues concern what forms of in-class instruction and specialized support are required to support at-risk students in bilingual programs and, more specifically, whether they are similar to or different from those that are appropriate for at-risk students in monolingual L1 programs. A related issue concerns the availability of research-based forms of professional development that can assist educators in developing the knowledge and skills needed to implement specialized interventions and practices with at-risk learners. Finally, assessment issues concern how best to identify at-risk learners or the needs of at-risk students learning in a second language.

Research evidence reviewed here (and in Fortune, with Menke, 2010, and Paradis et al., 2011) indicates that educational programs that use an additional language for teaching prescribed school subjects can be effective with a wide range of students, including students with characteristics and backgrounds that may put them at risk. However, our understanding of the effectiveness of such programs for such students is still inadequate. Given the importance of ensuring that all students have access to high quality programs that afford them opportunities to become bi- or multilingual, there is a clear need for much more research on these and related issues. The urgency for more research is underlined by the fact that many extant studies are dated and, thus, may not be based on current conceptualizations of risk or current definitions of language and learning disability. Moreover, most extant studies were carried out in North American contexts and, thus, need to be replicated in other socio-cultural-political settings. Recommended topics for future research include:

1. **Replication of extant research.** There is a need for replication studies of the academic and language outcomes of at-risk students in bilingual programs to ensure that previous findings are generalizable to current realities and conform to current definitions and understandings of language and learning difficulties, learner characteristics, and program models in a variety of languages (e.g., Mandarin, Korean, Portuguese) and sociolinguistic contexts (e.g., European and Asian communities). In particular, we need more studies that examine diverse language combinations, including languages that are typologically dissimilar (e.g., Chinese-English or Estonian-Russian).

2. **Program-learner fit.** Comparison studies are needed to examine the relative outcomes and benefits of particular types of programs (e.g., 50:50, 70:30, or 90:10) or partner languages (e.g., alphabetic or logographic) given a learner's specific language and learning difficulties. In other words, are certain program models/partner languages more suitable for particular learner profiles?
3. **Students with language- and reading-related learning difficulties.** Because difficulties in language and/or reading are frequently associated with academic difficulty and are often also precursors to students transferring out of bilingual programs, research that examines the effectiveness of alternative forms of bilingual education for students who have or are at risk for language or reading impairment would be particularly useful (Genesee, Savage, Erdos, & Haigh, 2013).
4. **Understudied, high-risk learners.** There is a need for research on students with learning challenges that, to date, have had no or very little research attention — especially children with Attention Deficit (Hyperactivity) Disorder and Autism Spectrum Disorder.
5. **Gifted students.** Although not considered at risk in a traditional sense, gifted students merit attention because, today, there is no research on the effectiveness of bilingual programs for gifted students. In question is whether gifted students are appropriately challenged and achieve to the same level as similar students in L1 programs.
6. **Other outcomes.** Research to date on at-risk learners in bilingual education programs has focused on language, literacy, and academic outcomes. It would be useful to examine other outcomes, such as attitudes, long-term educational aspirations, and job-related outcomes after leaving school, for example, in order to have a more complete picture of the consequences of participation in bilingual education for such learners.
7. **Assessment.** Identification of at-risk learners with language-related difficulties is complicated by the fact that it can be difficult to distinguish between poor performance due to acquisition of an L2 or an underlying impairment that requires additional and specialized attention (see Paradis et al., 2011, for a discussion of this issue). In a related vein, research that examines individual differences in language and literacy development in students in bilingual programs would be useful in order to distinguish between difficulties that are common among L2 learners and those that are specific to learners with an underlying impairment (see Bergström, 2002, for an example concerning writing difficulties, and Erdos Genesee, Savage, & Haigh, 2014, for an example concerning reading and language difficulties). As well, research that examines alternative assessment procedures for use in bilingual classrooms that circumvent the above complications would be useful (Fortune, with Menke, 2010).

8. **Effective intervention programs and practices.** Meeting the needs of at-risk learners also requires appropriate and effective intervention. At present, with the exception of some small-scale studies (Rousseau, 1999; Wise & Chen, 2010), there are no large-scale, long-term studies of the effectiveness of interventions involving students in bilingual programs with or at risk for reading, language, or other learning disabilities, although there is a growing body of research on English learners in monolingual English-only classrooms in the U.S. (e.g., Vaughn et al., 2006). An important and recurring question is whether intervention is best provided in the learner's L1 or L2, or both.
9. **Educational challenges of students who struggle and stay versus those who struggle and leave.** Related to the above recommendation, it would be useful to carry out comparative evaluations that examine the relative merits of intervention for bilingual students who remain in the program despite experiencing difficulty versus transferring such students to monolingual programs. Such studies would help teachers meet the needs of struggling learners before they come to believe that switching programs is desirable.
10. **Professional competencies and support systems.** There is also a need to identify the professional skills needed by administrators and classroom teachers, as well as language, reading, and learning specialists, so that they can work effectively to support at-risk learners in bilingual programs. Also, we need a greater understanding of: (a) alternative pedagogical and progress monitoring strategies that can be used to individualize instruction for at-risk learners and, thus, ensure that they attain high levels of achievement in these programs, and (b) the requisite support systems so that programs can be effective with students exhibiting a wide range of learner profiles and to avoid difficulties that cause students to switch to monolingual programs.

In closing, we also call for more longitudinal studies, ethnographic case studies, and mixed methods studies to examine the wide range of questions and issues presented in these recommendations. The issue of best practice with at-risk bi/multilingually-schooled students would also benefit from interdisciplinary research teams that include people working in curriculum and instruction, special education, speech-language-hearing sciences, educational psychology, and others. Finally, we recommend that there be more cross-national studies on at-risk learners in bilingual programs in different socio-political-cultural settings. Collaborative efforts of this sort would greatly enhance our understanding of the suitability and relative benefits of these programs for all students by extending our awareness of the role of community-specific factors in educating students bi- and multilingually.

Endnote

1. The criteria used by Bruck might not be considered adequate to identify these children as having specific language impairment using current definitions.

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Summary

While many forms of bilingual education have been shown to be effective in general (see Genesee, 2004, Lindholm-Leary, 2001, and Genesee & Lindholm-Leary, 2013 for reviews), educators, policy-makers, and parents often have concerns about the suitability and effectiveness of these programs for students who are at risk for academic difficulty. It is often believed that such students are likely to struggle even more in a bilingual program, where they are taught through two (or more) languages, one of which they are just acquiring, than in a monolingual program taught in their first language (L1). The purpose of this article is to review evidence on the effectiveness of bilingual education for students who are at risk in school (Genesee, 2007). We use a very broad definition of “at-risk”; the studies we review included students with low levels of intellectual or academic ability, special education needs (including students at risk for or with language and/or reading impairment), poor L1 ability, and disadvantaged socioeconomic backgrounds. We also consider research on students from ethnically and linguistically diverse backgrounds, including students from minority ethnic groups and those who speak non-standard varieties of English. These types of learners are considered at risk because they often, although not always, perform less well in school than students without these backgrounds. However, it is important not to underestimate the capacity of every student who might fit into one or more of these categories.

There is a small but growing body of research on preschool-age and school-age children who acquire two or more languages simultaneously or consecutively in non-school settings and are at risk for linguistic, cognitive, social, or other disorders owing to Down Syndrome (Kay-Raining Bird, et al., 2005), Autism Spectrum Disorders (Hambly & Fombonne, 2012; Ohashi et al., 2012), and especially Specific Language Impairment (see Paradis, Crago, Genesee, & Rice,

2003, and Gutierrez–Clellen, Simon, & Simón-Cereijido, 2008, for examples). We do not consider these studies because the circumstances in which these children are becoming bi- or multilingual are different from those of children who are learning additional languages in bilingual school programs. Readers interested in at-risk children more broadly are referred to Paradis, Genesee, and Crago (2011) for more detailed discussions of this topic. The focus of the current review is on research that has examined the linguistic and academic outcomes of at-risk learners because this has largely been the focus of such research to date.