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English Language Learners with Low Native Language Literacy: A Profile and an Intervention in New York City

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Abstract

Students with Interrupted Formal Education (SIFE) are a growing population nationwide, and they have, according to some sources (e.g., DeCapua, Smathers, & Tang, 2010; Advocates for Children of New York, 2010), a higher dropout rate than mainstream English Language Learners (ELL), thereby constituting one of the most at-risk student groups in the nation. Yet few studies so far have investigated the educational needs of SIFE. This paper reports on two SIFE studies commissioned by the New York City Department of Education (NYC DOE). The first sought to characterize the typical SIFE by investigating in detail the native language and literacy abilities of 98 Spanish-speaking SIFE in five New York City schools. It was found that SIFE have typically developing oral and aural language abilities, but show serious lacunae in academic reading and vocabulary skills in the native language. Based on this profile, we recommended an additional school year and a specialized curriculum for SIFE upon entering high school. The second study describes this specialized program, named Bridges for Academic Success, specifically designed for SIFE and implemented in three high schools across New York City.

Introduction

This paper reports on a subgroup of English language learners (ELLs) in the New York City public school system, commonly known as SIFE (Students with Interrupted Formal Education). Today, SIFE are defined by the New York State Education Department (NYSED) as newcomer students

- whose home language is not English,
- who did not attend school in their home country for at least two years prior to coming to the United States,
- who are at least two years below expected grade level in reading and math (in English); and
- who show very limited literacy in their home language.

Part of this definition comes from a study we originally conducted for the New York City (NYC) Office of English Language Learners (OELL) between 2004 and 2008, as part of an ongoing research effort to identify and develop best practices for this group of students (Klein & Martohardjono, 2009). From an educational perspective, SIFE constitute the most challenging subgroup of ELLs. Even when given similar curricular instruction, SIFE typically lag far behind other ELLs in content-area knowledge and L2 English language development and are considered one of the most at-risk populations in the public school system (Advocates for Children of New York, 2010). While SIFE come into NYC schools at all grade levels, by far the most critical age group are the 14- to 20-year-olds, whose placement in high school is based on age rather than academic ability. While mainstream ELLs comprise one-quarter of high school dropouts across the United States, the SIFE dropout rate is anecdotally even higher (DeCapua et al., 2010).

Prior to recommendations made by Klein and Martohardjono (2009), incoming ELL students were classified as SIFE only via informal methods. This typically consisted of a form filled out by the parent/guardian of the student upon entry to the school, containing questions

about home language and educational history (informally known as the Home Language Questionnaire) and, in some cases, requiring an ad hoc writing sample in the home language, also taken upon entry. While this rudimentary method was sufficient to indicate whether a student had writing problems in the native language, it was far from adequate as a diagnostic tool to pinpoint students' level of acquired literacy or to inform instructional decisions. We know that foundational skills built up in the native language are a significant predictor of academic success in any subsequently learned language (e.g., Cummins, 1981). Thus, our primary objectives were as follows:

- a) to identify which, if any, language and academic skills were lacking in SIFE in the native language, since such lacunae are likely to contribute to the low levels of literacy attained in the second language, English; and
- b) to develop an intervention program that would bolster SIFE chances of academic success.

This paper reports on both these objectives and is organized as follows: In Part I, we describe the original research leading to a profile of SIFE, the identification of SIFE academic strengths and weaknesses in the native language, and the recommendations made to accelerate SIFE academic development. In Part II, we describe the development and implementation of a curricular high school program, Bridges to Academic Success, designed to meet the specific needs of SIFE.

Part I: SIFE Identification Research

Between 2006 and 2008, the Research Institute for the Study of Language in Urban Society (RISLUS) at the Graduate Center of the City University of New York (CUNY) extended an earlier pilot study of 12 SIFE learners (Klein & Martohardjono, 2006) by conducting a large-scale longitudinal study on Spanish-speaking newcomer students classified by the NYC DOE as SIFE. This longitudinal study consisted

of various sub-studies, and here we report the first set of data collected on the native language and literacy abilities of 98 students in five public high schools in New York City. The students had been placed in the ninth or 10th grade, as determined by their ages, but had been identified as lacking appropriate literacy skills in the native language based on the Home Language Questionnaire administered by the schools. Our recommendation to the DOE was to collect much more detailed measures of native language abilities as a first and necessary step toward understanding and fostering the development of SIFE literacy in the second language, English. Thus, we began with an investigation of various aspects of SIFE language and literacy skills in the native language, Spanish. Such in-depth studies on native language skills in immigrant students had, to our knowledge, never been conducted before, as researchers studying literacy skills in schools typically focus on students' L2 English language abilities. Thus, the sub-study we report here constitutes a first of its kind. The study did not allow for a random selection of SIFE. Rather, selection of the five participating schools was made by the NYC DOE. The schools were located in four New York boroughs: Bronx, Brooklyn, Queens, and Manhattan. Two of the schools were specifically designed for newcomer immigrant students. In all four schools, the majority of students were Hispanic. All four schools served low-income families, as determined by the percentage of students qualifying for free lunch (71%–97%).

Research questions. Our research questions for Part I were these:

- What native language competencies do SIFE bring when they enter U.S. schools?
- What academic language and literacy needs do SIFE have?

Our approach was to zero in on fairly recent arrivals at the most vulnerable grade level, namely ninth and 10th grade (Advocates for Children of New York, 2010). We included only those who, at the beginning of the study, had not been in the country for more than

one year. Our focus on Spanish as the first language was driven by the fact that it is the home language of the majority of SIFE in New York City. According to the 2013–14 demographics of New York City ELLs (REF), 59% of all newcomer SIFE were native speakers of Spanish. In order to get a comprehensive SIFE profile, we needed to find out about a variety of native language and literacy abilities, including oral language and listening comprehension abilities, foundational preliteracy skills, and potential atypical language development. Another focus of the study was to see whether the gap in formal education (as indicated in the name SIFE) was indeed true of the student population we were testing. These goals required several instruments, most of which were created specifically for this study. Below, we describe the battery of instruments we administered.

1. **Learner questionnaire.** The purpose of this instrument was to obtain information on familial and educational background, including language and literacy practices at home. Questions included personal information about the students (e.g., age, provenance); questions about their parents/guardians (e.g., years of education, profession); whether the students had attended school primarily in an urban or rural environment; how much, if any, English they heard or spoke in the home; and what their goals and aspirations were.
2. **Assessments of oral/aural language and typical development.**
 - A. *Spanish Versant.* A commercially developed oral/aural proficiency test published by Pearson, The Versant is a standardized and automated test of comprehension and production. Participants are tested individually over the phone for a period of 10 minutes on sentence mastery, vocabulary, fluency, and pronunciation.
 - B. *The RISLUS syntax test in Spanish.* A listening comprehension test evaluating typical development of complex sentence structure, the syntax test, developed by RISLUS, measures typical development of syntactic comprehension and is based on sentence types that are benchmarks of normal L1 child language development. The purpose of giving this instrument in

the native language in this study, even though the participants were in their teens, was to detect potential language delays.

The test is orally presented in Spanish in a group setting. Participants hear a sentence and have to match it to one of three pictures in front of them. The sentences are syntactically complex and include coordination, subordination, and adverbial temporal clauses. Some examples are given below.

Object relative clause:

El gato empuja al oso, que carga al mono.

The cat pushes the bear that carries the monkey.

Subject relative clause:

El perro que el oso abraza, salta.

The dog that the bear hugs, jumps.

Temporal adverbial clause:

Después de nadar, el oso abraza al mono.

After swimming, the bear hugs the monkey.

- 3. The Academic Language and Literacy Diagnostic (ALLD) test in Spanish.** This was the main instrument used to obtain a detailed profile of literacy abilities in the native language. The ALLD (Klein & Martohardjono, 2008) consists of two parts: (1) a preliteracy test of foundational reading skills (phonological and orthographic awareness; word reading and simple sentence comprehension), and (2) a mainstream reading test measuring reading vocabulary (synonyms, multiple-meaning words, and context clues) and reading comprehension (ability to read and understand passages, assessing “basic understanding” and text-level skills such as “critical analysis,” “strategies,” and “interpretation”). The reading section of the ALLD contains items from grades 2–11 in increasing order of difficulty.

The Spanish ALLD was expressly developed for this study and is based on the Aprenda (Harcourt, 2004), a standardized test measuring proficiency in Spanish that is used in public schools nationally. Items from the Aprenda were carefully selected for inclusion in the ALLD so as to avoid cultural bias and culturally specific background knowledge. For example, an item on interstate highways in the United States referring to them by the abbreviations I-90, I-44, and so forth was excluded.

Performance on the ALLD is automatically computed by a customized scoring program, the W-SERS (Web-based Scoring and Evaluation System) created specifically for the ALLD. W-SERS calculates the grade level attained for all subtests taken on the ALLD, as described above.

Results

1. Learner Questionnaire

Background. Participants in this study were between 14 and 19 years old, with 16 as the mean age. Fifty-one percent were male, and 49% were female. The majority (77%) had come from the Dominican Republic; 11%, from Central America (Guatemala, Honduras, El Salvador); 8%, from Mexico; and the rest, from Colombia, Ecuador, or Puerto Rico.

Family and home background. Eighty-six percent of the 98 participants reported living with at least one parent in the United States, and 14% reported that they did not live with either parent, but with another relative. Sixty-two percent reported high school; 30%, college; and 8%, elementary school as the highest level of education in the household. Forty-nine percent reported having been schooled in a city; 34%, in a town; and 17%, in both.

Exposure to Spanish and English in NYC. For all 98 participants, Spanish was the native language and the primary language spoken at home. Sixty-nine percent reported that both Spanish and English were spoken in their neighborhoods. Seventy-eight percent reported some interaction in English with a person in their household. A great majority (95%) also reported being exposed to some English outside of school in the form of watching television, accessing the Internet, or using other media.

Education history. Since our research sought to determine the extent to which SIFE indeed have gaps in schooling, we carefully devised this questionnaire section in such a way as to record the number and the duration of interruptions in schooling for every year the participants were of school age in their home countries. When asked this way, 67% reported having no gaps in their education, a result that was quite surprising given that educational gaps (as reported on the school-administered intake form, the Home Language Questionnaire) constitute a classification criterion for this group. Twenty-seven percent reported gaps of two years, and only 7% reported gaps of more than two years.

Goals and aspirations. The majority of students, 61%, aspired to a professional career (e.g., teacher, lawyer, doctor), while 33% planned to work at jobs that did not necessarily require higher education (e.g., plumbers, electricians), and 6% reported goals unrelated to work (e.g., travel, raise a family).

2. Assessments of Oral/Aural Language and Typical Development

Spanish Versant. The mean score on the Versant test was 80% correct, with a standard deviation of 16 and a range of 34% to 100%. The scoring program describes 80% correct as indicating that the student has “fluent, smooth, intelligible speech; controls appropriate language structure for speaking about complex material.”

Syntax test. Scores on the complex-sentence comprehension test were high, with a mean percent correct of 89%, a standard deviation of 12, and a range of 36% to 100%.

Together, these two measures indicate that, on average, our participants displayed typical native language development, showing fluency in comprehension and production in the oral and aural modes.

3. Native Language Literacy Diagnostics: Spanish ALLD

Results on the Spanish ALLD measuring basic and academic literacy skills showed sharp differences between basic skills (pre-literacy) and higher-level skills (academic reading vocabulary and reading comprehension).

Pre-literacy. In the pre-literacy section measuring phonological and orthographic awareness, word reading, and simple sentence comprehension, our participants had a mean score of 96% ($SD = 4.5$). This suggests that there were no developmental delays in foundational reading skills, further supporting the results obtained on typical language development and also importantly suggesting absence of dyslexia.

Academic reading vocabulary and reading comprehension. Results of higher-level reading skills in the native language, by comparison, point to possible serious deficits, with academic reading vocabulary averaging at fifth grade and reading comprehension at third grade, well below the expected eighth grade level scores (recall that these students had been placed in grade nine). Figures 1 and 2 show how participants distributed across grade levels in vocabulary and reading comprehension. In vocabulary comprehension, participant placement ranges from below third grade to seventh grade, with about 40% of the group placing at sixth and seventh grade, and 30% placing at third grade and below. Scores in reading comprehension showed a narrower and lower distribution, with more than 50% of the students placing

at third grade and below. None of the participants were able to score beyond fifth grade.

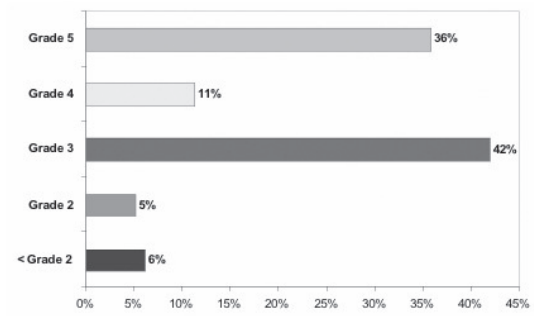


Figure 1: Distribution of SIFE attainment across grade levels in native language (Spanish) reading comprehension

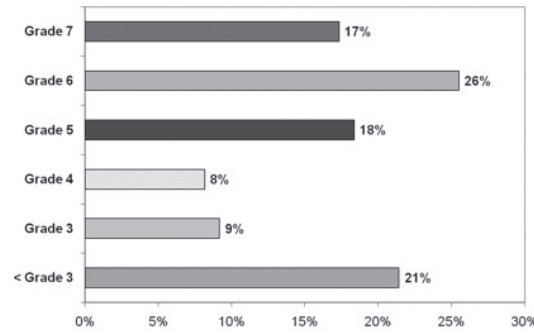


Figure 2: Distribution of SIFE attainment across grade levels in native language (Spanish) reading vocabulary

Reading comprehension sub-skills. We further analyzed results on the reading comprehension section by looking specifically at two subskills: basic understanding and text level skills. Answers to items assessing basic understanding are explicitly stated in the text and thus involve relatively simple retrieval of information. Text level skills are higher level comprehension skills and require the student to think critically, make connections, and use reading strategies. Such skills increase in

importance beginning in fifth grade and become critical to academic success in high school. Participants scored significantly higher on basic understanding skills than on text level skills, as shown in Table 1.

Basic understanding	Text Level Skills	Significance
73%	49%	t(97) = 14.07; p<.001

Table 1: Mean Percent Correct on Two Reading Comprehension Subskills ($n=98$)

We also separated responses to the sub-skills into two levels of difficulty: grades two and three, and grades four and five (five being the highest grade level achieved among these ninth and 10th graders). At the lower grade level sections of the diagnostic assessment, when texts are relatively easier to read and questions are relatively simpler to answer, participants scored at nearly 80% correct on both basic understanding and text level skills. At the next level (grades four and five), both basic understanding and text-level skills show a decline, with basic understanding dropping to 65% and text-level skills to 42%.

The native language assessments administered in this part of the study revealed the following profile: SIFE typically show normal, age-appropriate development in oral and aural language skills, expected levels of foundational literacy at the word level, and adequate reading abilities at the sentence level. However, SIFE also show seriously under-developed academic language and literacy abilities in their native language, indicating inadequate school preparation, even for those who had attended school continuously in their home countries. Upon entrance into the ninth grade in the United States, SIFE are at least four grades below the expected grade level *in the native language*. In spite of the fact that there was some variation, none of the students we tested showed reading comprehension abilities beyond the fifth grade, with the majority reaching only third grade level. Furthermore, while these adolescent readers can arrive at an answer to a comprehension question if that answer is explicitly stated in the text and if the text is short and relatively simple (basic understanding), they falter when the answer

requires text-level skills, such as inferencing and critical thinking, even for items at the elementary grade levels.

Conclusions and Recommendations

The language and literacy measures described above were taken at the beginning of our longitudinal study (Klein & Martohardjono, 2009). Given the serious lacunae in native language literacy, we predicted even more serious difficulty for the attainment of L2 English literacy. Indeed, at the end of the longitudinal study, we found that after one and a half years of English instruction, this same group was not able to go beyond third grade in English reading comprehension. By this time, they were already halfway through grade 10 and had less than two years to catch up to literacy levels minimally required for high school graduation. This was clearly an impossible feat. We therefore made several recommendations to the NYC DOE. The most important one was that adolescent SIFE be allowed at least one additional year of schooling prior to entry into “regular” high school. This additional year should offer an accelerated curriculum that includes native language support. We further recommended that this program should consist of “sheltered” classes with a focus on academic language and literacy skills, with particular emphasis on critical thinking skills and other higher-level literacy skills that were found lacking in the native language. Finally, given that we found many SIFE without actual gaps in schooling, we suggested that the *I* in *SIFE* stand for “insufficient” rather than “interrupted.”⁸ We also recommended that the main criterion in the initial identification of SIFE not be gaps in schooling, but objective measures of literacy skills in the native language. The Spanish ALLD was subsequently adopted by the NYC DOE as the main tool in identifying newcomer students as SIFE, at least those whose home language is Spanish. A new diagnostic tool, the LENS, has since been developed in our lab and is currently available to NYC schools in all the major SIFE languages: Spanish, Haitian, Chinese, Arabic, Bangla, and Urdu. Finally, a specialized

⁸ At the time of writing, this recommendation has not been adopted.

program was also developed to provide SIFE with the academic language and literacy skills they lack. Part II of this paper gives a full description of this program, which is named Bridges.

Part II: Bridges to Academic Success—Intervention for SIFE

Partially based on our study of the SIFE population described in Part I and our concluding recommendations, along with the increasing research on SIFE (e.g., Cloud, Genesee, & Hamayan, 2010; DeCapua et al., 2009; Garrison-Fletcher, 2009; Klein & Martohardjono, 2009; Short & Fitzsimmons, 2007; Tarone, Bigelow, & Hansen, 2009), we developed and implemented an intervention for SIFE in greatest need of additional services, particularly those with very limited academic background and English skills upon entry to school. The program, called “Bridges to Academic Success”⁹ (which, from here forward, is referred to simply as “Bridges”), drew upon the following observations among this student group to determine the strategies that Bridges would address.

Observation 1.: For many SIFE, native language literacy is underdeveloped. The students with the greatest challenges are those whose home language literacy is severely limited.

Bridges strategy 1. (a) Assess the literacy skills of SIFE in their native languages; (b) select those with the lowest home literacy for participation in the program; (c) focus on “learning to read” in every subject or content area (i.e., science, social studies, math, English language arts) for those SIFE with severely limited reading skills, and focus on “reading to learn” for students who are ready to develop text level literacy.

⁹ We gratefully acknowledge the funders and supporters of this project: the New York Community Trust, the New York City Department of Education, the New York State Education Department, the Research Institute for the Study of Languages, and the Center for Advanced Study in Education at the CUNY Graduate Center, NYC.

Observation 2. SIFE native oral language skills are “typically developed.”

Bridges strategy 2. Use native oral language skills to build academic language in the second language (L2), English.

Observation 3. L2 English is generally very limited for SIFE.

Bridges strategy 3. Focus on the learning of English language and literacy skills in all content areas through the use of native language support and specialized, differentiated instruction geared to the needs of a diverse student group.

Observation 4. School experience and academic/background knowledge and skills are severely limited for these students.

Bridges strategy 4. Develop and implement a specialized Bridges curriculum and instructional framework to build academic and literacy skills and background knowledge and also accelerate the learning needed for upper level school readiness; include in this framework a focus on critical thinking skills and the development of good academic and social habits to help in school and with cultural adjustment.

Observation 5. Distinct from other ELLs, SIFE have to do “triple the work” needed for academic success (Short & Fitzsimmons [2007] have noted that ELLs have “double the work”). Unlike other ELLs, SIFE (a) would benefit from furthering their native language literacy skills to help develop L2 literacy and (b) need to develop the background knowledge prerequisites for learning grade level academic content. Like other ELLs, they must acquire L2 English language and literacy.

Bridges strategy 5. Provide an additional year of schooling, prior to secondary school, to “frontload” skills and knowledge in preparation for entrance into mainstream secondary school classes.

The Bridges Program. Bridges was developed as a pilot program in 2011 in New York City. It encompasses an additional/ transitional year for a designated group of newly arrived SIFE who are preparing to enter secondary school. SIFE are selected for the Bridges Program because of their limited school experiences and home language literacy skills. The highly structured program involves a specialized, interdisciplinary Bridges curriculum and targeted instruction, integrating language, literacy, and academic content into subject-area courses (e.g., social studies, science). The Bridges class is *sheltered*, with students staying together the whole day in a positive, respectful classroom community, which is needed for optimal academic development. The class is taught by an interdisciplinary *team* of teachers, who meet and plan together and are specifically trained to deliver the Bridges curriculum and its instructional framework. We report here on the second year of the Bridges program in NYC (2012–13)¹⁰ as delivered to students who were preparing to enter their first year of high school.

- I. **Goals.** There are two major goals for the Bridges Program. The first goal is to prepare selected SIFE for achievement in secondary school. The second goal is to prepare teachers to teach Bridges students through the Bridges curriculum.
- II. **Program structure.** The Bridges program was initiated in schools serving large numbers of low-literacy newcomers. To develop the program, the school administration selected a team of teachers to attend a special training program (see “V. Teacher support,” below) to address the needs of these students in each of four subject areas (English, science, social studies, and math) through the Bridges curriculum (see “IV. The curriculum and instruction,” below). There was one Bridges class within a school; students in this sheltered class studied different subjects together over the course of one school year, in preparation for *mainstream* (i.e., *non-sheltered*) classes that they would begin taking with the general school population following the Bridges year. In this way,

¹⁰ Currently in the middle of its third year, Bridges has expanded to other areas in New York State.

the Bridges program provides a transitional year in which instruction is targeted to meet students' needs but accelerated to prepare them for the rigors of academic work. In addition, students develop appropriate academic behaviors in a safe environment where students with limited academic backgrounds work together to learn.

III. *Participants.*

The schools. In our pilot year, the New York City Department of Education selected four urban public high schools (grades 9–12) for the Bridges Program, three of which remained for the second year.¹¹ These schools are located in sections of NYC with large numbers of linguistic minority students, many of whom had been identified as SIFE. Two of the schools (so-called international schools) that participated in year two serve solely students who recently arrived in the United States each have a school population of about 300 students mainly from the Dominican Republic, Central America, Yemen, and regions of west Africa. The third school, with a school population of over a thousand students, has two bilingual programs, one in Spanish/English and the other in Bangla/English; Bridges students in this school were part of these bilingual programs, with most students from the Dominican Republic, Central America, and Bangladesh. (The rest of the student body within this school is linguistically mixed and includes monolingual English students.) The schools are located in three (out of five) of NYC's most diverse boroughs: Manhattan, Queens, and the Bronx.

The students. Fifty-eight students, ages 13–18 ($m = 15.14$), participated in the Bridges program across the three schools. All had recently arrived in the United States (< 1.5 years) and were entering ninth grade. All students were assessed in reading in their home (i.e., native) language and evidenced \leq fifth-grade literacy. Twelve of the 46 students who participated in the native language reading diagnostic tests had no native language literacy skills, thereby distinguishing

¹¹ One of the schools dropped out during the second year, citing administrative reasons, but it renewed its participation in the third year (2013–2014).

them from the SIFE in the study reported in Part I, where no students evidenced a total absence of L1 experience with print materials; 25 had fourth-grade or lower reading ability; 10 had the equivalent of a fifth-grade reading ability in their native language; and none had higher—which are all in line with the SIFE characteristics reported in the study above. Bridges students therefore had native language reading abilities that were four or more grades below grade level (ninth). Math skills in the native language, also assessed, were even weaker—six or more grades below grade level.

As suggested above by each school's demographics, the students came from 12 different home countries, with the highest percentage from the Dominican Republic (32.7%). Others were from Bangladesh (15.5%), Gambia (5.1%), or the Ivory Coast (3.4%). The students spoke nine different home languages, with the highest percentage speaking Spanish (53.4%). Some others spoke Bangla (15.5%), Arabic (6.8%), or Fulani (1.7%).

The teachers. There were 13 teachers participating in the Bridges Program across the three schools. Four to five teachers from the following subject areas were on a Bridges team in each of our participating schools: English, social studies, science, and math. Two school teams included a native language arts or literacy teacher. Each teacher met with the Bridges class once a day for at least a 45-minute period; in all schools, the English class was at least an hour long. Teachers also met as a team once a week to plan their lessons together and discuss their common students; this meeting was led by a team leader, who also served as the liaison with researchers. Bridges teachers, on average, had at least four years of teaching experience; most of them had a minimum of three years working with ELLs and specifically SIFE.

IV. ***The curriculum and instruction.*** The goal of the Bridges curriculum is to prepare students for higher-level academic work and integration

into mainstream classes; in this sense, it is a preparatory curriculum rather than a guide to specified grade-level content and skills. The content developed for the Bridges curriculum consists of (a) carefully selected academic topics that provide background knowledge and concepts to help students access the academic material they will encounter when they enter more-advanced classes and (b) language and literacy materials and instruction to help them develop the requisite skills for academic learning.

The Bridges curriculum is interdisciplinary: It provides *themes* that are repeated in each of the academic subject areas, and it spans four *units* that integrate language, literacy, and content. Thus, some of the same vocabulary and language structures, for example, are repeated across several disciplines within a given unit, with thematic units intentionally chosen to target universal, high-interest ideas (e.g., survival, journeys, adaptation). At the same time, the Bridges curriculum's units are aligned to and informed by city, state, and national Learning Standards, as well as by the students themselves. This was possible because development of the curriculum was led by a very experienced SIFE teacher who incorporated students' preferences for subject matter and types of materials. During our pilot year, teachers filled out weekly online logs indicating students' responses, and the curriculum was revised accordingly.

All Bridges units incorporate subject area content, and language and literacy activities, with the joint goals of developing academic knowledge and the language and literacy skills needed to further acquire academic information and develop critical-thinking skills. The curriculum and instruction also includes a focus on the development of good academic and social habits to help in the acculturation and school adjustment process.

In order to accelerate learning, Bridges instruction is heavily focused on providing (a) students with the background knowledge and skills necessary to eventually access grade-level materials, and (b) teachers with *scaffolding* techniques for making difficult oral language and texts accessible for student learning. In addition, Bridges' core

instructional elements represent the major pedagogical principles that guide the Bridges curriculum and inform the critical instructional practices used in its delivery. These core instructional elements are integrated into the structure and methods that shape the units and lessons in the curriculum. These core elements include (a) the classroom environment as a resource for learning; (b) a focus on oral academic language, in both the home language and English, as a precursor and aid to literacy development; (c) a focus on foundational literacy instruction (learning to read) for those students who need these skills, along with text level literacy instruction (reading to learn) as students increasingly gain academic language; (d) the use of students' home languages as a critical resource for gaining literacy skills; (e) the integration of language, literacy, and subject-area content into all classes; (f) emphasis on activities that promote the development of critical-thinking skills; and (g) the use of multimedia resources and materials to deliver instruction, which includes the development of digital literacy as an important goal. These core elements reflect the current theories of and research on this student population (August & Shanahan, 2006; Bigelow & King, 2014; Bigelow & Vinogradov, 2011; Cloud et al., 2010; DeCapua & Marshall, 2011; Klein & Martohardjono, 2006, 2009; Klein, Short, Curinga, McNamara, & Smith, 2014; Tarone et al., 2009; Walqui & vanLier, 2010).

- V. ***Teacher support.*** Teacher support involved three types of professional development (PD): a series of full- or half-day group PD sessions; on-site curriculum coaching of individual teachers at their schools; and twice-a-year observations and feedback by an external evaluator.

Group PD sessions: A series of group PD sessions was offered to Bridges teachers throughout the school year, facilitated by the Bridges instructional staff. The sessions focused on the theories, principles, and practices on which Bridges instruction is based. Activities emphasized the use of the core instructional elements to deliver the Bridges curriculum, with materials supporting the learning of content,

language, and literacy across the curriculum. Importantly, teachers of academic subjects like science and social studies were introduced to second-language and literacy-acquisition principles and practices, with the goal of understanding how to develop and implement lessons that integrate academic content with language and literacy activities that further the academic readiness of their students.

Curriculum coaching sessions. PD sessions were supplemented by on-site curriculum coaching of Bridges teachers throughout the year. A curriculum coach helped teachers plan lessons, observed the execution of these lessons, and gave feedback to teachers to help further their expertise in delivering Bridges instruction.

Observations and feedback. An outside evaluator developed a teacher-observation protocol for use in observing Bridges teachers twice in the academic year, once in fall and once in spring. From this protocol, teachers received feedback on their skills and worked with the curriculum coach to continue improving their instruction.

VI. ***Student academic and language progress.*** As will be shown in the results below, during their year of instruction, Bridges students made notable progress in their language, literacy, and content development. According to teachers and principals, they were also more motivated and more engaged in Bridges classes than were similar students typically in prior years.

Pre- and post assessment measures. The students participated in pre- and postassessments of early literacy (similar to the preliteracy assessment described in Part 1) in English, English writing, and mathematics. As shown in Tables 2–4, the Bridges students exhibited statistically significant growth ($p < .001$) in all these areas. In early English literacy development (Table 2), improvements in

student performance were significant on specific subsections of the English assessment¹² as well as on the test overall.

	Pre Mean % correct	Post Mean % correct	t	Sig.
LENS Total Scores	65.3 s.d.= 15.3	= 7.8	5.01	.00

Table 2: 2012-2013 Summary of Literacy Evaluation for Newcomer SIFE (LENS) before and after Student Assessment Results ($n=43$)

The students were also administered an English writing assessment in the fall and again in the spring. The total possible score was 42, with Table 3 showing that Bridges students exhibited statistically significant growth ($p < .001$) in writing during the year.

	Pre mean raw score	Post mean raw score	t	Sig.
Total Scores	8.8 s.d.= 4.9	14.9 s.d.= 5.7	8.20	.00

Table 3: 2012-2013 Summary of Results in English Writing before and after Student Assessment Results ($n=33$)

Table 4 presents pre- and post-test math data. The total possible score was 71, with the results showing statistically significant growth ($p < .001$) for the Bridges students.

	Pre mean raw score	Post mean raw score	t	Sig.
Math Total Scores	28.7 s.d.= 15.1	36.0 s.d.= 10.2	4.41	.00

Table 4: 2012-2013 Summary of Results in Math before and after Student Assessment Results ($n=44$)

¹² Following our development of the ALLD, described in Part I, the LENS (Literacy Evaluation for Newcomer SIFE) was developed by the RISLUS research team for the New York City Department of Education to assess the skills of incoming SIFE.

We also assessed students in English reading comprehension using the LENS. Although students were not pre-tested on these skills (because their entry-level skills in English were too low for evaluation), the results of 46 students who participated in an assessment at the end of the year showed that more than half of them ($n = 29$) reached a reading level of grade two or higher, a presumed gain in reading comprehension of at least two years.

Some Teacher Reflections

As noted above, Bridges teachers kept online logs of their experiences with the Bridges class. They were also interviewed at the end of the school year. The teachers, in general, overwhelmingly supported the Bridges program, indicating heightened student interest and motivation, improved attendance, and better academic performance as compared with earlier years. A written report from our external evaluator indicated the following, as an example:

One teacher noted that the skills of other newcomer students [who were not in Bridges but were in the school] remained fairly static during the year while the Bridges students' skills improved. This was confirmed by a staff member teaching summer school [summer 2013] at that site who acknowledged the Bridges students in the literacy classes were more advanced than non-Bridges students in areas such as spelling patterns, sentence structure, and phonics.

Here are a few teacher quotations that are representative of the very positive responses we received:

“[C]reating this environment in which they feel they can succeed has been the greatest benefit to our Bridges students.” (English teacher)

“Bridges students are showing increased engagement, a more positive attitude towards school because they are spending more of their time in class working on activities that are accessible to them and appropriate for their level.”
(Math teacher)

“Teachers said ... they never saw [one particular student] smile the way she smiles in the Bridges class. This is because we presented her with material that she could work with.” (Science teacher)

“In past years the lowest SIFE group has been really overwhelmed and made little to no progress ... Everyone in this [Bridges] class has made huge gains.” (Science teacher)

“[S]tudents in the Bridges class will ... come into ninth grade with the requisite knowledge and skills to give them a much better opportunity to be proficient or even high performing in all outcomes. This will also set them up for much more success in later grades. ... In years past it would be very common for SIFE students to lose interest in school because they were not able to meet basic expectations. ... Having all of these students in one class makes it a safer space to make mistakes and learn together.” (Math teacher)

Principals’ Reactions to Bridges

Interviews with the three Bridges principals were conducted by our external evaluator at the end of the school year. Her report indicated that all the principals expressed positive views of the Bridges program and planned to continue to offer Bridges in the following year. In addition, all reported that Bridges techniques and strategies had spread to other classes and that the Bridges program added value to non-Bridges

students, as teachers employed the techniques in an increasing number of the school's mainstream classes.

Summary and Conclusions

The study conducted in Part I described the characteristics of SIFE in an urban high school setting, which led to recommendations indicating that their unique needs required additional schooling geared to the development of academic language and literacy skills. Bridges to Academic Success, described in the second half of this paper, offers an accelerated, specialized program, a teacher-training component, and a curriculum to such students, particularly those with very low native language literacy skills. After one year of instruction, with native language support, Bridges students made significant gains in English foundational literacy and math, suggesting the promise of this program for increasing the academic success of SIFE in our schools. The work described here has led to the development of native language literacy diagnostics in all the major home languages of SIFE and the languages of other low-literacy adolescents in New York City, including Haitian Creole, Chinese, Arabic, Bengali, and Urdu. The Bridges program, including its curriculum, instructional methods, and related professional development, also serves as impetus to practitioners, researchers, and policy makers so that they may develop or review critical interventions to improve academic outcomes for the underserved students described in this report and others like them around the world.

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