

Conducting Large-Scale Research in Adult ESL: Challenges and Approaches for the Explicit Literacy Impact Study

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BACKGROUND

According to the most recent statistics from the U.S. Department of Education (2004), more than 40% of the over 3 million students in the federally funded adult education program are English as a second language (ESL) students. These students—most of whom are immigrants and refugees—represent a wide range of nationalities and cultural backgrounds. Many students have had limited educational opportunities and have not developed the basic foundational reading and writing skills in their native language that are necessary for acquiring English literacy and language skills. They struggle with the dual challenge of acquiring literacy skills as they learn to communicate in English. Adult basic education (ABE) and ESL programs assist students in their efforts to acquire literacy and language skills by providing instruction through local education agencies, community colleges, and community-based organizations, but are often hampered with chronic under- and erratic-funding, lack of institutional support, and shifting student populations.

Teachers in these classes face their own challenges as they strive to provide effective instruction. Often poorly paid and working part-time, they usually receive little or no professional development and teach in crowded classrooms with limited resources. Furthermore, the open enrollment policies of many programs, along with the relatively low retention and attendance of adult ESL students, interfere with providing the continuous level of instruction students need to acquire literacy and language skills. As a result, instruction in community-based adult ESL classes is often eclectic and focused on functional or life skill topics without a clear curriculum scope and sequence.

Unfortunately, in ABE and adult ESL, there is very little research to help guide instruction or curriculum development. To help address the lack of research-based knowledge in adult ESL instruction for low literacy populations, the National Center for Education Evaluation and Regional Assistance of the Institute of Education Sciences (IES) funded a task to identify promising adult ESL literacy interventions and to design a rigorous large-scale study to test the impact of the intervention.

In order to identify a promising intervention, Condelli and Wrigley (2004) first conducted a comprehensive review of all research studies on the effects of ABE and adult ESL instruction. They identified several widely used instructional approaches, but concluded that the research base was too limited and the studies' methodologies were not sufficiently rigorous to warrant a large-scale, randomized study of any of the approaches identified in the research. Two separate panels of experts, one composed mostly of reading researchers and methodologists and another composed of adult ESL practitioners, concurred with this conclusion. However, after considering the broader research on

literacy development, including research on elementary school children (e.g., National Reading Panel, 2000), the expert panels agreed that explicit literacy instruction was a promising intervention that would be valuable to study with low-literate adult ESL learners.

THE ADULT ESL EXPLICIT LITERACY IMPACT STUDY

To follow up on the results of the design task, IES is now funding an evaluation of the impact of explicit literacy instruction on adult ESL learners. AIR is leading the study, along with its partners at the Lewin Group, Berkeley Policy Associates, Mathematica Policy Research and the Educational Testing Service.¹ The purpose of the study is to test the impact of a curriculum-based explicit literacy intervention for low-literacy adult ESL learners. More specifically, the goal is to answer the following research questions:

- How effective is the explicit literacy intervention in improving the English reading, writing, and speaking skills of low-literate adult ESL learners?
- Does the explicit literacy intervention have different effects on subgroups of adult ESL learners?
- How well do instructors implement the intervention, and how does this affect learning?

To answer these questions, the study will employ an experimental design in 10 adult ESL programs, with teachers and students randomly assigned to condition within each program. Forty teachers (4 in each program) will be randomly assigned to teach either the explicit literacy intervention class or a regular ESL class offered by the program. Approximately 1,800 low-literacy (e.g., about third- to sixth-grade equivalent) students will also be randomly assigned to either an explicit literacy class or a regular ESL class.

After the experimental instruction is completed (about 16 weeks after enrollment and 60 hours of instruction with the explicit literacy intervention), both groups of students will be assessed on measures of reading, writing, and speaking. The design also includes an optional one-year follow-up, during which students would be assessed again a year after exit to determine the longer-term effects of the intervention.

This paper presents the research base which underlies the Adult ESL Explicit Literacy Impact Study, as well as some of the challenges inherent in community-based adult education programs to

¹ The study team will also consist of an intervention developer, who will be identified and selected through a competitive process.

conducting a large-scale rigorous study, and the approaches the study team is taking to address those challenges.

RESEARCH SUPPORT FOR EXPLICIT LITERACY APPROACHES

At present, there is no experimental or quasi-experimental research in adult ESL literacy that strongly supports either an implicit or explicit approach to teaching language and literacy skills to adults who have limited literacy skills in their native language. In addition, an explicit teaching model is not often used in adult ESL literacy classes, where implicit teaching and a focus on life skills tend to predominate and the focus is primarily on oral language development (Condelli et al., 2003). Conducting a large-scale research project with an intervention approach that focuses on (1) developing key bottom-up processing skills; (2) using explicit instruction; and (3) engaging students around specific aspects of language and literacy will open the field to new possibilities.

Although the research base supporting explicit instruction in literacy development for adults is very weak, and practically non-existent for adult second language learners, there is strong support for this approach from other fields.

A large body of research on how children learn to read shows that explicit and student-centered classroom instruction results in positive learning outcomes. For example, there is overwhelming evidence from studies in reading from elementary grades, summarized by the National Reading Panel (2000), which supports the explicit and systematic instruction in literacy skills, particularly for students experiencing reading difficulties. Smaller studies in adult literacy, reviewed by NIFL and NCSALL (Kruidenier, 2002) suggest similar trends for adult ABE learners, although studies with adult second language learners were not a significant number of the studies examined.

Research on what it takes for bilingual children to develop language and literacy in English might inform the current study as well. Unfortunately, this field also lacks a strong research base (Grant & Wong, 2003). Early indicators from current work by the National Literacy Panel, reviewing English language and literacy acquisition research (see <http://www.cal.org/natl-lit-panel/>) and some longitudinal in-progress work (August, Calderon, & Carlo, 2002) suggest that there is a strong relationship between oral proficiency and reading skills, and that language and literacy development need to go hand-in-hand for those who are acquiring literacy in a language not yet mastered. An information brief from AERA (2004) reviewed existing research and policies on instructional practices that support academic achievement for young English language learners to summarize what

is known about the language-literacy connection. This review recommends explicit, systematic instruction supplemented by ample opportunities for reading, delivered by a highly qualified instructor who receives intense professional development.

This research base points to the potential benefit of explicit literacy instruction for adult English language learners with low literacy in their native languages. It also highlights the many gaps in understanding how to balance explicit components with implicit and authentic components and in understanding how to deliver and monitor such an intervention. The current study identifies the following challenges to this effort.

CHALLENGES AND APPROACHES TO CONDUCTING THE EXPLICIT LITERACY IMPACT STUDY

Community-based adult education and ESL programs are not widely considered to be educational settings conducive to implementing and evaluating an intervention on a large scale effectively. Only a handful of these types of studies are currently underway, funded by the National Institutes for Child and Human Development (NICHD).

In the current study, formidable challenges to developing and implementing the explicit literacy intervention are posed by the realities of the student population, the teaching force, and the novelty of the proposed intervention. In addition, the lack of existing research in the area and the instability of the target population make designing the study difficult, while the design itself and the language and literacy backgrounds of the students make recruitment and data collection a challenge. Each of these challenges and how the study team proposes to address them are explored in this section.

DEVELOPING AND IMPLEMENTING THE INTERVENTION

Student Population

The students in this study will be those who have low literacy skills in their native language and beginning oral English skills. Several key issues emerge as central to the investigation such as the interrelated processes of language and literacy development (discussed above); the specific phonological, orthographic, and morphological features of students' first languages; and students' level of proficiency with oral English, which may complicate their understanding of English structures. Since all areas of second language reading are influenced by both language proficiency (in

the target language) and underlying literacy skills (in the first language), relative skill levels need to be considered. These issues need to be taken into account in both the design and implementation of the intervention (Burt, Peyton, & Van Duzer, 2005).

First languages of the students will need to be considered since differences between the native language and the target language can cause difficulties in second language acquisition, including reading achievement. For example, skills related to phonemic awareness are influenced by whatever pronunciation patterns a language learner might have. Differences might be rooted in their native language where sound symbol relationships may take a different form than in English. Spanish speakers, for example, are likely to have difficulty distinguishing and reproducing minimal pairs such as “van-ban” and “share-chair.”

The writing system and orthography of the native language may influence English literacy acquisition. Learners whose languages use a logographic system (or a combination of symbols and phonemes such as Chinese) may find it more difficult to develop phonemic awareness than speakers of languages that are alphabet-based. Among the latter group, those who write in languages that use the Roman alphabet (e.g., Spanish or Vietnamese) may acquire phonemic awareness in English more readily than those who have to learn a new script (e.g., Koreans or Russians). Learners whose first languages are written from right to left (Chinese and Arabic) or use diacritic marks (symbols above or below letters) to denote meaning (such as Khmer/Cambodian or Lao) may encounter additional difficulties. Tonal languages such as the various Chinese dialects and Lao may influence fluency in English (particularly expression). Learners who write in languages that do not separate words with spaces may find this convention confusing and may need explicit training in dealing with word boundaries.

The areas of morphology and syntax may pose similar challenges to learners who are new to English. For example, languages that do not use word endings to denote meanings (e.g., third person or tense markers such as “every day we walk to the park but yesterday we walked to the river”) may need assistance and practice in hearing and producing these endings in both oral and written form. Since phonemic awareness of how specific sounds map to written language is thought to be largely language specific (Koda, 1999), second language speakers may need direct instruction on how to transfer their particular language processing skills to English.

Providing curriculum and teaching that meets the instructional needs of the various groups in a multilingual, multilevel class will be a major challenge. Students with low levels of literacy in their native language are likely to need direct instruction in transfer strategies to apply what meta-

language skills they do have to their growing English literacy learning. Similarly, a class is likely to represent a wide range of the English abilities that students bring to the learning process. For example, the student sample will likely represent a range of proficiency with oral English, ranging from “silent ability” (able to understand some but not yet able to produce English) to the ability to use simple English related to everyday life. Since it is very difficult to decode text in a new language and impossible to comprehend text in a language one does not know, different levels of English proficiency have to be taken into account if all students are to make progress on literacy skills.

The study’s use of random assignment of both students and teachers (described below) is designed to address the challenges posed by the range of student demographics and background knowledge. Additionally, careful collection and analysis of sub-group data will inform the adult education and second language acquisition fields about how background knowledge and native language impacts English literacy development.

Teaching Force

It is clear from the research on teacher professional development (Bos, Mather, Narr, & Babur, 1999; McCutchen, et al., 2002; O’Conner, 1999) that licensed teachers’ knowledge of English phonology, orthography, and morphology is often “underdeveloped for the purpose of explicit teaching of reading and writing” (Moats & Foorman, 2003, p. 28). Bell, Ziegler, and McCallum (2004) further demonstrated that adult educators, many of whom lack formal education training, are even less prepared to explain and demonstrate explicit reading instruction.

The lack of professional development opportunities has meant that most adult education teachers lack training in teaching reading and have little knowledge of the research in reading and literacy development (Bell, Ziegler & McCallum, 2004; Snow & Strucker, 2000). The situation is the same, if not worse, for ESL teachers providing instruction to students with weak educational backgrounds and low levels of literacy in their native language. Teacher data from the What Works study (Condelli et al., 2003), for example, showed that just over half (53%) of ESL teachers had higher education degrees in education or English as a Second Language. Their opportunities for professional development were similarly limited, with a large majority reporting no professional development within the past two years in reading or literacy instruction (Condelli et al., 2003).

Combined with the challenges associated with teaching a highly diverse ESL population, the intervention is unlikely to be implemented faithfully and consistently across programs unless careful thought is given to how the intervention is designed and how teachers are trained and supported. The

study will therefore also include an intensive week-long professional development institute for the intervention teachers. The training will be designed to ensure that the teachers understand and recognize the value of the enhanced curriculum. To do this, the training will incorporate best practices from the systematic change literature and be built around principles of adult learning and effective teaching.

The training will also involve opportunities for the teachers to learn the phonologic, orthographic, and morphemic elements, which they will then be expected to teach. Building teachers' knowledge is especially critical to ensuring that they will be able to effectively differentiate the intervention curriculum in order to accommodate the multiple levels and strengths of their learners (Inverizzi & Hayes, 2004; Moats & Foorman, 2003).

Intervention

The explicit literacy intervention will need to address a number of challenges to increasing the language and literacy skills of adults who do not have a strong foundation of literacy in their native language. One of the challenges will be to translate the findings from research conducted with native speakers, children for the most part, as discussed above, to adults who are learning to read in a language they have not yet fully mastered.

The intervention to be studied will consist of a comprehensive program that includes curriculum development, adaptation of materials, teacher training, implementation, ongoing teacher support, and assessment. It will focus on the key components of language and literacy development with a special emphasis on English reading skills for those who are new to English and relatively new to literacy in general.

These key skills related to reading success were identified by both the National Reading Panel (2000) and the Adult Reading Research Group (Kruiderier, 2002) established by NIFL in collaboration with NCSALL. Research is also converging on best practices for instructing English language learners on academic achievement (AERA, 2004; Carlo, et al., 2004; Gersten & Baker, 2000) and the literacy skill correlates of learning to read (Hammill, 2004). The skill areas identified in the literature as essential to an explicit intervention include:

- Alphabets, which includes phonemic awareness, phonics, and concepts of print;
- Word attack, word analysis skills, and pronunciation;
- Spelling;
- Fluency;

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- Vocabulary; and
 - Text comprehension skills and strategies for reading and writing.

What is unclear is how much literacy students can learn in a 60-hour timeframe. There is very little research to guide this element of the study, therefore, the key skills that can be affected readily will be emphasized, taking into account the difficulties that different language groups might have. For example, an explicit focus on pronunciation, including attention paid to the rhythm and expression of English, is likely to have a significant positive effect on both phonemic awareness and fluency, with additional benefits for listening comprehension and expression. These skills will be taught within a context that addresses the interests and goals of adults and will reflect sound teaching practices based on principles of language and literacy learning.

DESIGNING AND CONDUCTING THE IMPACT STUDY

Lack of Existing Research and Other Design Issues

Technical considerations such as expected effect sizes and the practicalities of how adult education programs operate significantly affect the design of this complex study. Since there is so little research on learning gains of low-literate adult ESL students and no research on the impact of explicit literacy instruction with this population of learners, it is difficult to estimate effect sizes for the outcome measures of interest.

After considering the few experimental research studies on ABE students and accepted standards for power analysis during the previous design task for this project, MDRC and AIR determined that an effect size of approximately .20 would be minimally acceptable and appropriate, and developed a design capable of detecting a difference of that size at a .10 significance and 80% power level. The final design required by IES calls for a sample size of 1,800 students and 40 teachers from 10 adult education programs, to detect an effect size of .24. This design also takes into account a related set of power issues having to do with the realities of working with an adult ESL education setting—that of high student attrition and fluctuations in attendance patterns.²

Given the demands of the study and the wide diversity in how adult education programs operate, however, it is likely there will be some deviation from the initial design of 10 programs, 40

² The initial power calculations in the design task assumed a student attrition rate of 20% for the 16-week intervention period.

teachers, and 1,800 students. The study will have to be flexible to the needs of program, but in a way that does not compromise the overall design and maintains a minimum effect size of .24. This means that if the number of programs or sites changes, the number of teachers and students must be adjusted accordingly. In addition, the power analyses conducted for the study assume 20% student attrition. While the program selection process will weed out programs with a history of high student attrition, the overall sample size may need to be adjusted if attrition is higher than anticipated.

Study Design

The study design itself creates some challenges. To obtain a student sample of the specified size, the programs included in the study will need to offer at least four low-level ESL classes serving the target population that are taught by different teachers, and have a total enrollment in these classes at the end of the two semester treatment periods of 180 students (90 each treatment and control).³ This will constrain considerably the types of programs that can be included in the study.

Additional requirements of the design will create further difficulties in identifying and recruiting programs. To allow for random assignment of students, there will have to be two pairs of classes offered at the same time, for the same level of students and the same location. For example, there would have to be two classes in the morning and two in the afternoon, or two classes meeting at the same time at two different sites. Otherwise, students may refuse to go to a site when they are randomly assigned because it is at an inconvenient time or location, which would destroy the integrity of the random assignment.

Furthermore, classes must provide sufficient class time to implement the full curriculum of about 60 hours. For example, the class would need to meet at least four times per week for 2 hours each day for 15 weeks to allow one hour of the explicit literacy instruction per each class meeting. Other class arrangements are possible as long as they can implement the full curriculum within about 16 weeks. The implication for site selection is that the classes in each program paired for random assignment must have the same duration in terms of total class hours and hours per week.

The design requirements mean that only large urban programs are likely to be able to participate in the study. Smaller adult education programs will not have the number of students or teachers needed, nor would they offer a sufficient number of classes for the target population that

³ While class sizes in adult ESL vary widely, the largest classes usually have about 20–25 students per semester. Including four classes of this size for two semesters will achieve the required sample size.

meets at the same time, location, and duration. Other requirements for site selection are that the programs have a managed enrollment policy where students are only allowed to enroll at the beginning of the class term, or have an open-enrollment policy where the majority of learners enroll during a limited time period at the beginning of the session; are geographically diverse; have a high rate of student retention; and do not already offer explicit literacy instruction. Beyond these requirements, programs also have to agree to participate in relatively intrusive random assignment procedures and all of the teachers in the program whose classes are eligible for the study must agree to participate in the study. This latter requirement is necessary because teachers must be randomly assigned to condition.

The need to implement random assignment procedures in itself is likely to be a barrier to gaining participation from programs. Implementing random assignment successfully includes developing workable procedures, adapted specifically to unique program conditions; training staff to implement the procedures; and monitoring the implementation of the random assignment process. Part of the recruitment approach will be to clearly communicate a willingness to work collaboratively within the structures and needs of the program to develop a system that is fair to the participants, is fully supported by the study, and creates as little burden as possible. From previous experience, it is expected that a fair proportion of the programs approached will be interested in participating under these conditions, as long as the intervention itself is consistent with the programs' priorities.

Once the programs are recruited, each program will be visited twice to support and train program staff to implement the study procedures. A preliminary procedure and agreement by telephone and e-mail will be developed, and then each site will be visited so that study staff can explain procedures and finalize the approach. Just before the first and second study implementation periods begin, each site will again be visited, and all staff involved in the study will be trained on the screening and random assignment procedures. To assist programs in dealing with any related costs, especially the additional work required of program intake staff (see Exhibit 1), recruitment staff will work out an acceptable level of compensation with the program at the beginning of the study. Teachers will also be supported; their travel and the time they participate in professional development activities will be fully compensated.

Part of the random assignment process includes creating an easy-to-use system and monitoring the random assignment that programs perform to ensure that there is no breach in the procedures. The random assignment process will be made easily implemented by being automated on a study website, and program staff will be thoroughly trained in its use. Program staff will manage

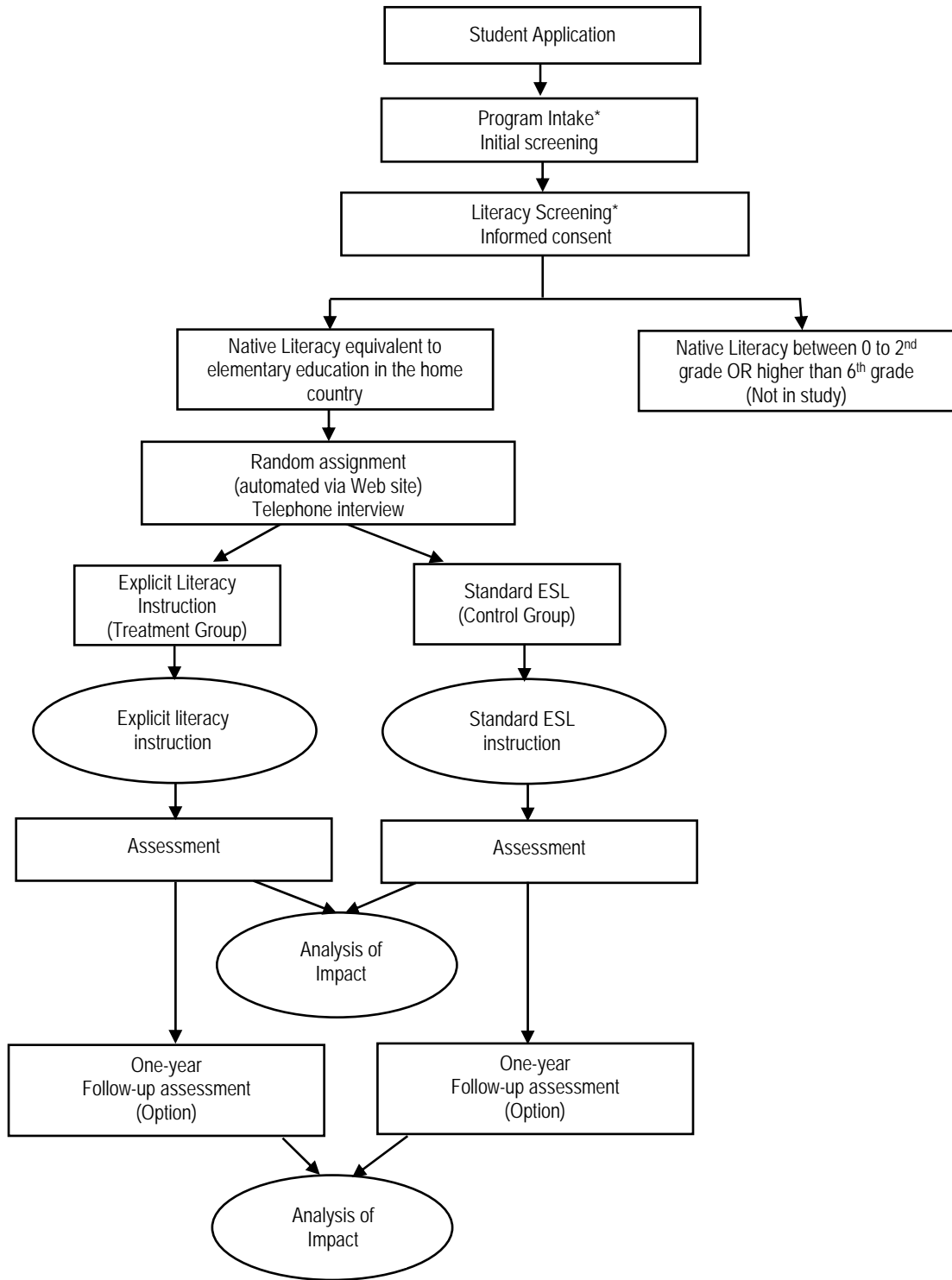
student intake by administering a simple native language screen to determine eligibility, and then entering the score into the study's website. The website will immediately indicate whether the student is eligible for the study. At this point, the intake worker will explain the study and obtain informed consent. No further data will be collected on students who choose not to enter the study. For students who do agree to participate, the intake staff will check the appropriate option on the study website, and the website's randomizer program will randomly assign the student to either an intervention or comparison class. The intake worker will then ask students who are in the study to participate in a background interview, which will be administered in the student's native language by the study's survey staff via telephone. Students will later attend their assigned class and will be assessed at the end of the intervention period.

Availability of Appropriate Assessments and Procedures

Most of the challenges related to collecting assessment data from low-literate adult ESL learners stem from the characteristics of the students. They are likely to have limited English skills and by definition have low literacy. Consequently, instructions for the assessments will likely have to be given in each student's native language. Since all of the assessments are individualized, data collectors will have to speak the student's language or secure translators on site. The study population also tends to be highly transient because many of the students will be new immigrants who move frequently. Reliable tracking procedures will be crucial in order to follow students, especially for the optional one-year follow-up.

Assessment in adult ESL is complicated by the fact that it requires measurement of skills in two domains: English language proficiency and literacy ability. Language proficiency includes such skills as the ability to communicate face-to-face (or over the phone), a store of vocabulary, and the ability to create sentences that are comprehensible to native speakers, if not always grammatically correct. The ability to communicate in English also includes understanding the rules that govern social communication—what to say to whom under what circumstances and, sometimes more importantly, what not to say—a concept known as “social appropriateness.” Literacy, on the other hand, requires the ability to process print, which involves decoding and encoding skills, “meaning making” (ability to understand written texts and the ability to write in ways that convey meaning), the use of strategies to deal with different kinds of texts, and vocabulary knowledge.

Exhibit 1:
Proposed Student Random Assignment and Study Flow Chart



The study team will therefore need to identify or develop several types of appropriate assessments for the study, including a native-language literacy assessment to be administered to students at intake, and the reading, writing, and speaking assessments to be administered after the treatment period. Assessment of low-literate adult ESL learners is a daunting activity due to the lack of appropriate assessments for these students. Since they have low-level literacy skills and limited familiarity with tests and test taking, they are unable to take most available written tests. Language barriers also prohibit the use of many tests that require knowledge of English, as language and literacy ability become confounded. Language issues are likely to be a substantial issue in this study, as students from many language backgrounds will probably be included in the study sample.

There are several performance-based oral language and writing assessments that could be considered for the explicit literacy study. However, the greatest challenge is likely to be the lack of reading tests suitable for the study population. Yet, the reading assessment is critical to the success of the study because the intervention can be expected to affect students' basic reading skills most directly. This outcome measure needs to be closely aligned with the instructional concepts taught as part of the experimental intervention. All available reading tests that may be appropriate will be considered, including recently developed reading assessments for low-literate, second language adults. To select the assessments to use in the study, all assessments identified (see Appendix for a preliminary list) will be evaluated on the following dimensions:

- *Appropriateness* of the assessment for the study ESL learners;
- The *language and literacy skills* within each domain the assessment measures;
- The extent to which the skills assessed *align* with the intervention;
- The extent to which the test *allows separation of general language proficiency from literacy abilities* (reading and writing);
- *Technical properties* of the test (e.g., validity, reliability, norming);
- The *logistics* of using the test—(e.g., time and difficulty to administer, cost); and
- *Sensitivity* of the test for measuring gains in ESL low-intermediate literacy learners, who will receive relatively short periods of instruction.

Assessment of native language literacy poses similar problems, although there are several options for Spanish-speaking students, which may comprise most of the student sample. Spanish reading assessments such as the Spanish version of the Woodcock Johnson and the Moreno test used in Mexico are appropriate for adults who have limited literacy in Spanish. However, there are very few options available for other languages. Consequently, alternative approaches will need to be

developed to assess literacy in these languages, such as having them read and write simple text or use proxy measures such as years of education in their home country.

Educational Importance of the Adult ESL Explicit Literacy Impact Study

The Explicit Literacy Impact Study will be the first study to test the effectiveness of using an explicit literacy approach with a low-literacy adult ESL population. The potentials to be gained from this work include:

- Data on the effectiveness of explicit literacy instruction for this difficult to teach population;
- Data on population sub-groups and their English learning trajectories;
- A commercial curriculum that marries explicit literacy instruction with an authentic adult ESL text;
- Literacy assessment data;
- Data on implementing a random design in community-based literacy programs; and if the optional year is funded,
- Longitudinal data on language acquisition retention and continued growth.

Clearly, the lessons learned from designing and conducting this study will inform those interested in doing similar community-based literacy research that will add to a much needed body of scientifically-based research to guide programs and curriculum development.

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APPENDIX A

Exhibit 2:

Characteristics of Existing Potential Assessments

Reading Assessment		
Assessment	Skill Areas Assessed	Description*
Comprehensive Test of Phonological Processing (CTOPP)	<ul style="list-style-type: none"> • Phonological awareness • Phonological memory • Rapid naming 	The second version of the CTOPP is designed for individuals ages 7 through 24, and contains six core subtests and eight supplemental tests which allow the examiner to more carefully assess specific phonological strengths. Each core subtest takes approximately 5 minutes to administer.
Study of Adult Reading Acquisition (SARA) Assessment Battery	<ul style="list-style-type: none"> • Alphanumeric, picture, pseudoword and real word naming • Sentence processing • Silent/oral reading rate 	The SARA battery is a computer-assisted battery that assesses speed and accuracy for key components of reading and related skills.
Fluency Addition to NAAL (FAN)	<ul style="list-style-type: none"> • Decoding • Word recognition • Fluency 	The FAN is used to describe the basic reading skills of adults aged 16 and over. It utilizes speech-recognition software to record and analyze respondent readings of passages and lists of words and numbers and takes approximately 15 minutes to administer.
Peabody Picture Vocabulary Test (PPVT) III	<ul style="list-style-type: none"> • Receptive vocabulary • Screen verbal ability 	The PPVT III is designed for ages 2–90+ and provides age-based standard scores, percentile ranks, NCEs stanines, and age equivalents. Administration takes 10–15 minutes.
Tests of Word Reading Efficiency (TOWRE)	<ul style="list-style-type: none"> • Decoding • Word recognition 	The TOWRE was designed for ages 6–25, and provides scale scores for both decoding and word recognition. Administration takes 5–10 minutes.
Wechsler Individual Achievement Test (WIAT) Basic Reading and Reading Comprehension Subtests	<ul style="list-style-type: none"> • Decoding • Word recognition • Reading comprehension 	The WIAT was originally designed for ages 5–19. The basic reading subtest assesses decoding and word-reading ability; the comprehension subtest taps skills such as recognizing stated details and making inferences. Administration takes approximately 5 minutes per subtest.

Exhibit 2:
Characteristics of Existing Potential Assessments (continued)

Reading Assessment		
Assessment	Skill Areas Assessed	Description*
Wide Range Achievement Test-3 (WRAT-3) Reading Subtest	<ul style="list-style-type: none"> • Word recognition 	The Wide Range Achievement Test is intended and normed for native English speakers. The reading subtest requires oral reading of a list of real English words of increasing difficulty. Administration takes 10–30 minutes, depending on the skills of the test taker.
Wide Range Achievement Test-3 (WRAT-3) Spelling Subtest	<ul style="list-style-type: none"> • Spelling 	The Wide Range Achievement Test is intended and normed for native English speakers. The spelling subtest requires the spelling of a list of real English words of increasing difficulty. Administration takes 10–30 minutes, depending on the skills of the test taker.
Woodcock-Johnson-Revised (WJ-R) Reading Battery	<ul style="list-style-type: none"> • Phonological and phoneme awareness • Letter word recognition • Word attack • Passage comprehension • Vocabulary 	The WJ-R was designed for ages 2–95. The reading battery measures a broad range of basic and intermediate reading skills and takes approximately 50 minutes to administer.

Exhibit 2:
Characteristics of Existing Potential Assessments (continued)

Writing Assessment		
Assessment	Skill Areas Assessed	Description
Adult-Language Assessment System-Writing (A-LAS-W)	<ul style="list-style-type: none"> • Writing simple and complex passages (prose and document literacy) 	The A-LAS-W is intended for use by ESL and adult education programs to evaluate students' needs and progress, and by industry to identify/screen applicants and provides evaluative information on the effectiveness of employee training programs. The assessment has two parts and takes a total of 30–45 minutes to administer.
Comprehensive Adult Student Assessment System (CASAS) Functional Writing Assessment	<ul style="list-style-type: none"> • General writing level • Content • Organization • Word choice • Grammar • Sentence structure • Punctuation • Spelling • Capitalization 	The Functional Writing Assessment provides assessment of writing skills in a functional workplace, employability, and life skills context, using any of three 30-minute writing tasks: Process Task, Picture Task, or Form Task. May be administered in a group setting.
English Speaking Assessment		
Basic English Skills Test-Plus (BEST Plus)	<ul style="list-style-type: none"> • Listening comprehension • Speaking ability 	The BEST Plus is designed for adult ESL learners at the survival and pre-employment skills level. The BEST uses “real life” tasks and stimuli to measure performance of basic language competencies, is computer assisted, and takes approximately 15 minutes to administer.
Adult Language Assessment System-Oral (A-LAS-O)	<ul style="list-style-type: none"> • Vocabulary • Oral comprehension • Sentence construction • Narration • Pronunciation 	The A-LAS-O assesses language proficiency of ESL adults who are at least “minimally proficient” in English and takes 25–35 minutes to administer.
Oral Proficiency Interview (OPI)	<ul style="list-style-type: none"> • Listening comprehension • Speaking ability 	The OPI is designed for adult ESL learners and measures the proficiency in language skills required to function in given life/job situations. Administration time varies with students' ability level.

* Unless stated otherwise tests are designed to be administered individually