Identifying Effective Methods of Instruction for Adult Emergent Readers through Community-Based Research

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Abstract

We present a community-based research project aimed at identifying effective methods and materials for teaching English literacy skills to adult English as a second language emergent readers. We conducted a quasi-experimental study whereby we evaluated the efficacy of two approaches, one based on current practices at the English Skills Learning Center (ESLC), and the other involving a number of innovative methods and materials. In addition, we collected written reflections from the instructors in the study and conducted interviews with the students. The qualitative and quantitative data together suggest that while both approaches led to student gains, the one based on current practices led to greater student gains.

Here we report the progression and findings of a collaborative project between a second language acquisition researcher (the second author) and the English Skills Learning Center (ESLC; represented by the first author). The ESLC is a nonprofit community organization serving adult English as a second language (ESL) learners in the Salt Lake City, UT, area. This work was conducted in the community-based research (CBR) tradition. CBR is a "collaborative approach to research that equitably involves…community members, organizational representatives, and researchers in all aspects of the research process" (Israel, Schulz, Parker & Becker, 1998, p. 177). The specific idea for this research emerged over a period of regular meetings between the second author and the leadership of the ESLC to discuss the successes and challenges facing the ESLC, focusing in particular on student goals and outcomes. The ESLC provides English as

a second language instruction to immigrant and refugee members of our community, nearly one-third of whom have had no schooling in their native countries and typically are not literate in their native or any other language. These learners, who we will refer to as adult ESL emergent readers (or AESLERs)[1], face the task of acquiring basic literacy skills and a new language simultaneously.

The ability to read and write in English is key to full participation in the United States, where literacy is a "fundamental component of our culture, in which it plays a decisive role not only in the functional aspects of our lives, but also from a political, social, and personal standpoint" (Huntley, 1992, p. 3). Furthermore, literacy plays an important role in learning a second language—the ability to acquire spoken English proficiency is hindered by AESLERs' lack of literacy, as they "cannot easily do many of the typical activities of language learners: use bilingual dictionaries, take notes to review later, write translated words in the margins of texts, and refer to language and grammar reference books" (Vinogradov, 2012, p. 31). In part for these reasons, AESLERs often remain isolated, unable to express themselves without the assistance of a translator. These limitations restrict their ability to work to support their families and to perform tasks that many take for granted: obtaining a driver's license, shopping, understanding leases and contracts, navigating public transportation, and helping their children succeed in school.[2]

Despite the urgent need to address these language and literacy challenges facing AESLERs, this population of learners remains underrepresented in the scientific and educational literature on adult second language acquisition (Tarone, Bigelow, & Hansen, 2009), and there is a lack of methods and materials designed specifically to support their acquisition of English (Huntley, 1992). The overarching goal of the project presented here is to contribute both to the research addressing AESLERs and to the set of pedagogical materials available for educators working with these learners. In the next section, we review a small number of relevant studies that have been conducted, and present the specific goals driving the present work.

Literature Review

The challenges facing AESLERs are widely acknowledged (Bigelow & Vinogradov, 2011; Young-Scholten & Strom, 2006). A relatively small number of scholars have suggested methods and materials for improving literacy and ESL instruction for these learners (Florez & Terrill, 2003; Vinogradov, 2008; Vinogradov, 2010; Vinogradov & Bigelow 2010). This section focuses on studies that have documented instructional practices for AESLERs and/or investigated the efficacy of these practices.

Studies of Adult ESL Emergent Reader Teacher Training and Classroom Practice

A number of studies document current practice in adult ESL emergent reader instruction and investigate ways of improving teacher preparation. In attempt to characterize the methods of instruction used by teachers of AESLERs, Crevecoeur (2010) conducted a survey and focus group study of teachers' instructional practices. While Crevecoeur specifically probed four research-based instructional practices (i.e., the language experience approach, use of the native language, active learning, and environmental print), the study also allowed teachers to describe additional instructional practices. Seventeen instructors throughout Florida responded to a survey asking them to identify their teaching practices. In addition, five teachers participated in a focus group discussion. The survey and focus group revealed that a large majority of teachers employ the language experience approach (82%), use environmental print

in the classroom (82%), and use the native language of the students to explain concepts (88%), while fewer use discussions (31%), manipulatives (31%), and field trips (19%). The study also revealed teachers' use of a number of other teaching practices, including phonics, total physical response, oral repetition, and auditory discrimination of letters tasks. Crevecoeur (2010) concludes by stating that "training that specifically meets the needs of teachers of per-literate learners is highly recommended" (p. 31).

Vinogradov (2012) noted the dearth of professional development opportunities for teachers of AESLERs and conducted a pilot study in a study circle designed to address their professional development needs. Over the course of eight weeks, a study circle comprised of 11 teachers of AESLERs met three times for three hours at a time. Prior to each meeting, the teachers read relevant research articles and completed assignments, and spent the meetings discussing what they learned from the readings and assignments, in addition to strategies for improving their teaching practice. Vinogradov (2012) evaluated the impact of the study circles on participants by means of written reflections, questionnaires, observations of the sessions, and group interviews. It was found that interaction among the teachers in the study circles had three main effects: (1) the teachers developed "loyalty and a sense of commitment to the group"; (2) the teachers were able to "share resources, ideas, teaching tips, and other professional wisdom"; and (3) the teachers found that the study circle helped to "break their sense of isolation in their teaching" (Vinogradov, 2012, pp. 41-42).

Studies of Efficacy of Instruction for AESLERs

Few studies have explicitly investigated the efficacy of particular teaching methods in helping AESLERs meet their language learning goals. Notable examples include those by Condelli and Spruck Wrigley (2006), Condelli et al. (2010), and Huang and Newbern (2012). However, the students involved in these studies appear to have been at higher levels of literacy than the students in focus in the present study, who all had Best Literacy test scores of 0. For example, the Condelli et al. (2010) students scored at Grade 2 or higher on two subtests of the Woodcock Johnson for Reading Skills (WJR), while the learners studied by Condelli and Wrigley (2006) demonstrated a mean level of just above Grade 1 (averaged across four subtests of the WJR). The lowest-level students in the Huang and Newbern (2012) study were at the Low Beginning ESL level on CASAS, defined in part as "recognizes and writes letters and numbers and reads and understands common sight words. Can write own name and address." (Skill Level Descriptors for ESL, found at casas.org).

Despite their focus on learners at more advanced levels than those in the present study, these earlier studies provide some helpful insights into the effectiveness of various instructional practices for low-literacy ESL learners. Condelli and Spruck Wrigley (2006) report the results of an investigation of the relationship between a number of instructional (and other) variables and student learning gains. In a study involving 495 students from 13 programs spread across seven states, they found that "bringing in the outside," or making connections with the outside world through the use of "field trips, speakers, and real-life materials" (Condelli & Spruck Wrigley, 2006, p. 113), was positively correlated with development in basic reading skills. Both Condelli et al. (2010) and Huang and Newbern (2012) performed quasi-experimental studies comparing instructional methods. Condelli et al. (2010) did not find a significant difference in learning outcomes between groups of learners who were taught using standard instruction or instruction guided by the *Sam and Pat* textbook (Hartel, Lowry, & Hendon, 2006), which differs from standard instruction in terms of (1) the

sequence in which English phonemes are taught, (2) the words chosen for phonics and vocabulary study, (3) the simplification of grammar structures presented, and (4) the added bridging of systematic reading instruction to ESL instruction (Condelli et al., 2012, p. x). Huang and Newbern (2012), on the other hand, did find a significant effect of explicit metacognitive strategy instruction on reading gains.

We have thus found a very small number of studies that have explicitly and systematically investigated a causal relationship between instructional practice and literacy development by AESLERs, and these studies have tended to focus on learners at higher levels of English literacy than those in focus in the present study. Because we are specifically interested in the very earliest of emerging readers, as will be seen below, the instructional strategies considered here involve the low-level skills of letter identification, mapping between letters and phonemes, and reading one-, two-, and three-letter words.

Project Goals

As stated above, the overarching goal of the present project is to contribute to the research on and instructional strategies for AESLERs. Our specific goals are as follows:

1. To identify existing (and new) approaches to teaching AESLERs;
2. To conduct a systematic study whereby the efficacy of these approaches can be assessed; and
3. To affirm the role AESLERs play in making curricular decisions.

In addressing these goals, we first reviewed AESLER teaching practices, both those already in use at the ESLC and additional possibilities found in the literature, focusing primarily on practices having to do with helping learners develop low-level print decoding skills. In doing so, we identified a number of dimensions on which approaches to teaching ESL emergent readers may differ from one another. These include the order in which letters are introduced, the method of introducing phonemes/letters, the use of word families, the use of nonsense words to demonstrate possible letter sequences (e.g., 'daf'), how many letters are introduced at a time, how many letters are introduced before reading words, the length of words students are exposed to, the use of a marking system to help students sound out words, whether the focus is on pronunciation versus reading comprehension, and the use of explicit spelling rules.

Given our second goal of conducting a systematic study whereby the efficacy of instructional choices along these dimensions can be assessed, we created two instructional approaches, attempting to distinguish the two approaches to the extent practical. The result of this process, described in detail below is a pair of approaches, neither of which necessarily represents any particular established instructional approach (though Approach 1 shares many characteristics with that of the ESLC leading up to the project), which provide an opportunity to investigate the efficacy of various instructional choices for teaching AESLERs.

We conducted a quasi-experimental study involving four ESL classes taught by two teachers. We employed a pre-test/post-test design using a specially-designed test of early literacy, and also collected extensive qualitative data. Crucially, given our commitment to affirming the voice of the learners themselves, in addition to learner test scores and various sources of input from the teachers concerning the efficacy of the two teaching approaches, we interviewed the learners in order to gain a better understanding of their experiences as learners in general and in the study in particular.

Study Methods

The question of what teaching characteristics are most effective was addressed via a quasi-experimental study. The advantage of the quasi-experimental study

design is that it takes advantage of existing program structures offered by the ESLC. In particular, we selected AESLER populations at locations in the Salt Lake City area and, with the help of a Community-Based Research Grant from the University of Utah, we were able to offer classes to meet the community's needs while also addressing the goals of the study. These classes, of which four were selected for inclusion in the study, were randomly assigned to the two instructional approach conditions, described below.

Instructional Approaches

Here we use the term "approach" to refer to a set of instructional methods and materials. Approach 1 is the standard form of ESL literacy instruction used by ESLC teachers and volunteer tutors prior to the project period, and is characterized by a focus on reading real words in context. Approach 1 was developed over time by ESLC teachers and staff, and was primarily influenced by the organization's experience with AESLERs, given the lack of a body of research to inform curriculum design and the lack of published materials and methods designed for this population of learners. The ESLC learned of Approach 2 via a promotional workshop offered by a for-profit organization that has asked not to be identified in this manuscript. A number of studies indicated that the method could be helpful with both child and adult emerging readers, and the ESLC and this company decided to partner to explore the efficacy of their potentially promising literacy instruction method for AESLERs. Approach 2 is characterized by a focus on the pronunciation of individual phonemes, emphasizing spelling rules via a marking system. Because Approach 2 was originally developed for native English-speaking children and adults, the research team made a number of adjustments in order to make the materials more appropriate for AESLERs, e.g., replacing less common vocabulary in the materials with words likely to be familiar to the learners. The significant differences between the two approaches are detailed in Table 1.

Students and Classes

Four classes of AESLERs from a variety of native language backgrounds (i.e., Somali Bantu, Kirundi, Nepali, French, Karen, Burmese, Kunama, Arabic, and Swahili) participated. The classes were organized by the ESLC to serve populations around Salt Lake City. Two of the classes were exposed to Approach 1 and the other two classes were exposed to Approach 2. Two teachers were selected and trained by the research team to use the two approaches. Each teacher implemented Approach 1 in one of their classes and Approach 2 in another of their classes, creating a counterbalanced design. The enrollment goal for each class was ten; actual numbers of students varied by class—information about student populations, enrollment, retention, and total number of student contact hours is provided in Table 2.

Teachers

We selected two teachers and trained them via a twelve-hour workshop covering adult learning theory and lesson planning, plus an additional four-hour training in the two targeted approaches. Teacher A had certificates in teaching English as a foreign language and in tutoring; no formal language learning experience, and had taught ESL for one year. Teacher B had a bachelor's degree in Applied Linguistics and TESOL, spoke Japanese as a second language, and had taught ESL for 1.5 years. Neither had any previous AESLER teaching experience.

Procedures

Over a 30-week period, during which each class met for three hours/week, the teachers implemented the approaches. Students took a pre-test at the beginning of the study period and a post-test at the end of the study period.

Informed consent was collected orally in the students' native languages with the help of translators and the research was approved by the University of Utah Institutional Review Board.

Pre-Test. At the beginning of the 30-week class session, the research team assessed the literacy level of each of the twenty-nine students using a custom assessment tool that was developed for the present research. While there are well-known early literacy assessments available (e.g., the Best Literacy test), the research team knows of no widely-available assessments that are sensitive to the very earliest emerging literacy skills. The team thus designed an assessment tool to probe a number of literacy subskills in a step-wise fashion: (1) letter shape recognition, (2) matching lowercase and uppercase letters, (3) letter identification, (4) writing letters, (5) writing corresponding uppercase and lowercase letters, (6) phoneme identification, (7) reading short-vowel words, (8) writing short-vowel words, (9) reading long-vowel words, (10) reading blends and digraphs, and (11) writing long-vowel words, blends and digraphs. The assessment tool was administered one-on-one as the examiner showed the student a page with letters, numbers, or words written on it and asks the student questions following a test script. Each of the 11 literacy skills comprises a level on the test: Each level has five or ten questions, based on the complexity of the literacy skill being tested. The student passes a level if they answer 60% of questions correctly. The test ends once the student fails three levels or answers every question on the test. If the student fails one level but passed the next, their final score indicates the last level passed.

Ensuring Consistent Differentiation of the Approaches. We took a number of steps to ensure consistency in the differentiation of the two approaches. First, the teachers and the first author met weekly to address questions regarding the approaches. Second, the first author visited each class monthly to ensure that teachers were adhering to the research guidelines, with the researcher indicating required corrections to the teacher. Finally, midway through the research project, the teachers completed a questionnaire, which provided an opportunity for them to reflect on how well they believed they were differentiating their teaching in the Approach 1 and 2 classes.

Post-Test. The post-test, identical to the pre-test, was conducted after the 30th week of instruction (72 hours of class time).

Student Interviews. The first author and the teachers interviewed the students during the week following the post-test. The teachers interviewed each others' students. Interviews were conducted in English. Because professional interpreters were not available, we selected willing individuals with the highest level of English proficiency possible to serve as interpreters. All interviews were audio-recorded.

Teacher Reflection. The teachers wrote in a shared electronic journal every Friday. These reflections included remarks about student progress the teachers' observations regarding the effectiveness of each approach. In addition, at the conclusion of the project both teachers wrote a final reflection document regarding the two approaches. They commented on the efficacy and challenges of each of the approaches and they suggested adaptations to the approaches for future curriculum development. And finally, the first author and the teachers had three one-hour meetings to discuss curriculum development. Each meeting was audio-recorded.

Results

Quantitative Analysis of Post-test Scores

Table 3 presents students' background information, pre-test and post-test scores, and number of hours of instruction. As indicated in Table 2, there was some student attrition in the

classes; from this point on, test data from only those students who completed the post-test is considered. In the end, there were 11 Approach 1 students and nine Approach 2 students.

First we asked whether, as a group, the twenty learners who completed the study demonstrated overall improvement over the course of the study period. A paired samples t-test was conducted with time of test (pre-, post-) as the independent variable and test score as the dependent variable. We found a significant difference in pre- versus post-test scores ($t(19)=-.923$, $p=.009$), with post-test scores higher (mean=5.5) than pre-test scores (mean=4.4).

We next determined whether the students in the two Approach conditions differed from one another in their pre-test scores. An independent samples t-test was conducted with Approach (two levels: 1, 2) as the independent variable and pre-test score as the dependent variable. The two groups were significantly different in their pre-test performance ($t(18)=3.068$, $p=.007$), with Approach 1 students having substantially higher pre-test scores (mean=5.64) than did Approach 2 students (mean=2.89). An additional variable of interest is the number of hours of instruction that students in the two groups received during the study period. While number of hours of *available* instruction was the same for all students, most students missed some class meetings. An independent samples t-test case conducted with Approach (two levels: 1, 2) as the independent variable and hours of instruction as the dependent variable revealed no significant difference ($t(18)=-.381$, $p=.708$) between the hours of instruction of Approach 1 (mean=53.05) and Approach 2 (mean=55.06) students. In order to control as carefully as possible for the effects of pre-existing ability (pre-test score) and exposure to instruction (hours of instruction), in subsequent analyses we used pre-test scores and hours of instruction as covariates.

To investigate the effectiveness of the two approaches, we next conducted an Analysis of Covariance (ANCOVA) with Approach and Teacher (Teacher A, Teacher B) as independent variables, post-test score as the dependent variable, and pre-test score and hours of instruction as covariates. Adjusting for pre-test score and hours of instruction, there was a significant main effect of Approach ($F(1,14)=5.583$, $p=.033$; $\eta^2_{partial}=.285$), with students in Approach 1 classes (mean score=6.36) outperforming students in Approach 2 classes (mean score=4.44). There was a significant main effect of Teacher ($F(1,14)=17.372$, $p=.001$; $\eta^2_{partial}=.554$), with scores for Teacher A's students (mean=5.71) significantly higher than those of Teacher B's students (5.38). There was also a significant interaction of Approach and Teacher ($F(1,14)=11.290$, $p=.005$; $\eta^2_{partial}=.446$). Following up on this interaction, we split the data by teacher and performed a one-way ANCOVA with Approach as the independent variable and post-test score as the dependent variable. There was no significant effect of Approach for either the students of Teacher A ($F(1,3)=4.918$, $p=.113$; $\eta^2_{partial}=.621$) or Teacher B ($F(1,9)=.023$, $p=.883$; $\eta^2_{partial}=.003$). However, when we split the data by Approach and repeated the ANCOVA with Teacher as the independent variable, we found a significant effect of Teacher for Approach 2 ($F(1,5)=94.435$, $p<.005$; $\eta^2_{partial}=.950$), with Teacher A's students (mean = 6.0) outperforming Teacher B's students (mean = 3.67), but no significant effect of Teacher for Approach 1 ($F(1,7)=.097$, $p=.765$; $\eta^2_{partial}=.014$; Teacher A's students = 5.5; Teacher B's students=6.86). Figure 1 illustrates the interaction of Teacher and Approach.

In summary, the quantitative results suggest the following:

- Overall, test scores improved over the course of the study period.

- Overall, students in Approach 1 classes outperformed those in Approach 2 classes.
- The effect of Approach was moderated by Teacher—that is, Teacher A's students outperformed Teacher B's students in Approach 2, but there was no Teacher difference for Approach 1.

Qualitative Analyses

In conducting the qualitative analyses, the authors took the following steps. Each author studied and prepared summaries of the raw qualitative data (teacher journal entries and reflections, minutes of teacher meetings, class observations, transcripts of student interviews, and teacher questionnaire responses). The authors then met to compare summaries, looking for areas where the summaries captured similar sentiments on the parts of the teachers and/or learners. In this way, we followed a bottom-up approach to the data, allowing themes to emerge from convergence in the two authors' summaries. Here we discuss the qualitative findings, organized by the seven instructional strategy dimensions identified above.

Uppercase and Lowercase Letters. It is often observed that AESLERs find it easier to recognize and write uppercase than lowercase letters, and this tendency is reflected in many textbooks designed for ESL literacy. For example, Saslow (2003) and Gati (1992), texts used for content in the Approach 1 curriculum, introduce lowercase letters only after students can read entire sentences written in uppercase letters. In the present study, Approach 1 students only learned uppercase letters because they did not reach the point in the manuals where lowercase letters were introduced. In contrast, Approach 2 students were taught uppercase and lowercase letters at the same time, using the terms "big" and "small." Teacher A said, "I find …teaching the upper case rather…frustrating for the students, as lower case forms are much more common." At the end of the study, A1 students demonstrated their knowledge of lowercase letters, despite having had no exposure to them in class. Thus the necessity of waiting to introduce lowercase letters until students had mastered the uppercase letters was not supported by our study.

Real Words and Nonsense Words. AESLERs often have a highly-developed ability to memorize new information; however, this can be problematic when students use a strategy of memorizing entire sight words to the exclusion of developing decoding skills. Approach 2 anticipates this challenge by using nonsense words to teach and to evaluate students' ability to manipulate phonemes. In Approach 2, nonsense words (e.g., /bæf/) are marked with an asterisk to distinguish them from real words. The teachers noted that Approach 2 students expressed confusion about nonsense words. The teachers felt that student motivation was low when learning them.

Approach 1, on the other hand, emphasizes comprehension when reading, using only real words that can be associated with pictures. In the interviews, students spoke strongly in favor of Approach 1 on this point. For example, A1/9 said, "[I] can understand the meaning of the particular words which signifies the picture, which is the right pictures." A1/5 agrees: "If you show the pen, and you say 'pen' and you spell it P-E-N, and repeat four or five times, then make [us] to write on the paper. So [we] are able to say, 'Oh, this P-E-N, pen.'" The teachers also favored the use of real words, for example, Teacher A said, "The use of pictures…is absolutely vital. They want to relate to the word, not just know how to read or write it on paper. As soon as I hold up a new picture for a new…word, their brains immediately click, and they begin chattering away in their native tongues about that particular object." In summary, both teachers and students expressed a preference for the use of

real words. Nonetheless, the teachers also recognized the value of nonsense words in evaluating students' ability to manipulate phonemes, and suggested that nonsense words be used as occasional review activities as opposed to a core part of the curriculum.

Number of Phonemes Introduced Before Reading Words. AESLERs often succeed at learning individual phonemes, but struggle with the task of blending phonemes to form words. Our students were no exception, as student A2/5 said, "[I][3] can read individual letters, but [I] can't pronounce the combination."

Approach 2 responds to this challenge by teaching students, for example, the letter B, then the short vowel A (/æ/), then immediately blending them to form /bæ/ This consonant-vowel blend is called a "slide," an integral part of the Approach 2 curriculum. Students are given extensive exposure to the concept of blending early on with the use of slides. In contrast, in Approach 1, students learn all of the consonants and the short vowel A (æ) and then learn to read three-letter words using combinations of consonants and A.

Sequence of Teaching Phonemes. Approach 2 students were introduced to the vowel E after learning eight consonants and reading seven words with A. Approach 1 students were introduced to the vowel E after learning all 21 consonants and reading 23 words with A. The teachers observed that Approach 1 students who were given much more time to work with the consonants and A were more successful at distinguishing between A and E. Teacher B noted that students in her Approach 2 class "are really struggling with the short E sound…I think they might be just guessing when there are two vowels being reviewed at one time."

Both approaches use letter groups to teach students the alphabet in small, manageable chunks. The teachers felt that letter groups helped the students learn the alphabet at an appropriate pace. However, students were exposed to the alphabet outside of class and were frustrated that they did not know all of the letters and that they were not learning them in order. When asked if she felt that her English skills had improved over the previous six months, Student A2/5 said, "[I feel that I have] improved a little, but [I don't] even know the complete alphabet up to Z."

Approach 1 students were taught several blends and digraphs and read four- and five-letter words while Approach 2 students only read two- and three-letter words. The teachers felt that it was too early to be introducing advanced concepts such as blends and digraphs. The students also expressed confusion with reading longer words. Student A1/11 said, "Sometimes you pronounce is, /ʃ/, and sometimes /s/...[I know] you said it was 'sled', but sometimes [I look] at it, and [I think] it says, 'shed.'" Student A1/5 said, "Four or five letter when they combine I have a hard time to pronounce or get the meaning."

Method of Teaching Phonemes. Approach 1 uses picture cards to associate each letter with a word that starts with the letter's phoneme (often known as 'word sort'). Once students learn several phonemes, they are blended to form words in onset-rime word families. Each word in a word family has an associated picture. Approach 2 does not use pictures, rather the teachers orally associate the letters with words with the onset phoneme. Occasionally the word is accompanied by a physical action such as tapping one's leg and saying, "/l/, leg."

The teachers and students preferred Approach 1 over Approach 2 for learning phonemes. Teacher A said that the method of "associating the pictures alongside the words is… indispensable." Student A1/10 said, "It was very easy with the sounds and the letters…the pictures symbolize what is the first letter of that pictures, so [I] can…relate the words and the pictures."

Word Families. Approach 1 students spoke in favor of the use of onset-rime word families. Student

A1/3 said, "P, pan, M-A-N, man. Yes, [I feel] easy while reading. The word is ending with the same letters, so [I feel] easy to learn that." Student A1/10 said, "The last letter is the same, so this kind tricks or techniques by the teacher…[I like] that technique." The teachers both attributed a large part of Approach 1 students' rapid progress to the use of onset-rime word families. Students learned to read several words very quickly when they were introduced within an onset-rime word family. It took much longer for students in the Approach 2 classes to learn to read words with differing onsets and codas.

Marking System. Approach 2 employs a complex marking system to teach emergent readers how to decode words. Three of the marks in this system were used in the research project: (1) an arrow is drawn under slides to reinforce reading from left to right; (2) an 'x' under vowels is intended to encourage students to focus on accurate pronunciation of the vowels; and (3) an asterisk before a nonsense word indicates that the word does not have meaning. The teachers found it challenging to explain the use of the marking system to students with limited oral skills. Students had never encountered the marking system before and were therefore resistant to using it for the first several weeks of the project. When given the assignment to put x's under vowels on a sheet of sight words, the students put the x's underneath the middle of the words instead of the vowels, unaware of the vowels' significance. In the student interviews, only one out of nine Approach 2 students was able to explain the purpose of the marking system (A2/3). When Student A2/1 was asked why there was an 'x' under the word "bag," she replied, "That means bad… bags hold a lot of bad things…they will kill someone." Teacher B concluded, "I'm afraid that the marking system [was] only a new source of English-related stress for them."

When one counts the number of phonemes and words actually learned over the project's duration, Approach 1 students' progress was substantially greater than that of Approach 2 students. Approach 1 students learned 23 phonemes and could read 37 words by the end of the project. Approach 2 students learned 10 phonemes and could read 16 real words by the end of the project. The researchers and teachers hypothesize that this discrepancy was due to Approach 2's lack of visual support or use of onset-rime word families, focus on non-meaningful text (nonsense words and slides), and early introduction of a second vowel.

Discussion

Together, the quantitative and qualitative data suggest that Approach 1 is superior to Approach 2 with respect to student test scores in addition to student and teacher perceptions. However, this finding should be interpreted with caution for a number of reasons. First, this study involved a very small number of participants. Ideally, such studies should involve much higher numbers of students, and the small sample presented here is problematic with respect to the generalizability of our findings. A related problem is student attrition—we do not know why individual students stopped attending class, and cannot be certain whether or not the instructional approach played some role in that decision. Students enrolled in ESL classes like those offered by the ESLC experience a number of life circumstances that interfere with their ability to regularly attend classes, and research on this population of learners must necessarily grapple with the challenge of very small numbers of students who persist in attending classes for the duration of a study period. In fact, this challenge may contribute to the relative dearth of research on AESLERs. Nonetheless, these learners deserve recognition by the scholarly community, and it is the authors' hope that, despite the limitations of the present study, this work will contribute to the empirical foundation underlying ever-improving

educational opportunities for these learners.

A second note of caution concerning the general finding that Approach 1 was superior to Approach 2 is that the effect of Approach on post-test scores was moderated by Teacher, as indicated by the significant interaction of Approach and Teacher. This suggests that the benefit to student learning associated with Approach 1 was not experienced equally by each teacher's students. While the study was not designed to probe teacher differences, it is not unexpected that the two teachers might differ in their implementation of the prescribed approaches despite the efforts to maintain consistency described above.

Finally, we consider our findings in light of some of Knowles' assumptions about andragogy, in particular that (1) adults seek the immediate applicability of what they learn; (2) internal motivation is important; and (3) adults desire to know why they need to learn something (summarized in Merriam, Caffarella & Baumgartner, 2012). Students' strong preference for the use of real words (as opposed to nonsense words) speaks to their desire to be able to understand and use the material they are learning. In addition, the teachers expressed sensitivity to the impact of the nonsense words on students' motivation, preferring to use to more motivating real words in class. The students also expressed opinions about what they should be learning (e.g., wanting to learn the entire alphabet in order), consistent with the high level of engagement and investment that is typical of adult learners.

Conclusion

We have presented the progression and findings of a Community-Based Research on the efficacy of two approaches to ESL literacy instruction for AESLERs. Our commitment to the ideals of CBR has been manifested in the collaborative nature of all aspects of the study, from its conception to the dissemination of our findings, and most importantly, in highlighting the voices of our students throughout the process. The combined results of the quantitative and qualitative data reinforce many aspects of the current practices at the ESLC with respect to instruction in AESLER classes, and provide a foundation for further development of the AESLER curriculum. ❖

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[1] See Burt, Peyton & Schaetze (2008) for a discussion of terminology used for this population of learners.

[2] It is worth noting that adult ESL emergent readers often show remarkable skill in tackling such challenges as supporting their children's education (see Bigelow's (2007) story of a Somali mother who does so creatively and effectively).

[3] Our non-professional interpreters frequently spoke in the third person; we have converted third-person pronouns to first-person pronouns and indicated these changes with brackets.

Table 1—*Instructional Strategies Employed in the Two Studied Instructional Approaches, by Instructional Dimension*

Instructional Dimension	Approach 1	Approach 2
Uppercase and Lowercase Letters	Uppercase before lowercase	Uppercase and lowercase simultaneously
Real/Nonsense Words	Only real words	Nonsense and real words
Number of Phonemes Introduced Before Reading Words	Learn 22 phonemes before reading words	Begin reading words immediately after learning the first two phonemes
Sequence of Teaching Phonemes	Vowels introduced after all consonants Use of blends and digraphs	Vowels introduced after four consonants No blends or digraphs
Method of Teaching Phonemes	Phoneme-picture association	Letter cards only
Word Families	Word families e.g. bad, dad	Words with combinations of letters in a letter group e.g. bad, dab
Marking System	No marking system	Marking system e.g. *daf, ja →

Table 2—*The Four Study Classes*

Approach & Teacher	Location	Enrollment	Contact Hours*
Approach 1 Teacher A (A1/TA)	Community Center	Initial: 6 Final: 4	139.75
Approach 1 Teacher B (A1/TB)	Community Center	Initial: 10 Final: 7	358.75
Approach 2 Teacher A (A2/TA)	Apartment complex leasing office	Initial: 7 Final: 6	317.5
Approach 2 Teacher B (A2/TB)	Community Center	Initial: 6 Final: 3	178

** Total number of individual student contact hours*

Table 3—*Students' Background Information, Pre-test and Post-test Scores, and Number of Hours of Instruction*

ID	Approach	Teacher	M/F	Age	Native Lang.	Formal Education (years)	Pre-Test	Post-Test	Instruction (hrs.)
A1-1	1	A	F	35	Burmese*	2	3	6	48
A1-2	1	A	F	42	Burmese*	6	5	6	34.75
A1-3	1	A	F	46	Burmese*	0	3	3	57
A1-4	1	A	F	-	Arabic	-	7	7	40
A1-5	1	B	F	52	Nepali	0	5	5	48.25
A1-6	1	B	M	54	Nepali	0	7	7	66
A1-7	1	B	F	59	Nepali	0	5	5	60.75
A1-8	1	B	M	60	Nepali	0	7	10	60
A1-9	1	B	F	65	Nepali	3	5	5	66
A1-10	1	B	M	79	Nepali	0	5	5	57.75
A1-11	1	B	M	-	Nepali	-	10	11	45
A2-1	2	A	F	67	Nepali	0	3	7	60
A2-2	2	A	F	69	Nepali	0	0	5	54.5
A2-3	2	A	M	76	Nepali	0	2	6	63.5
A2-4	2	B	F	53	Somali*	0	3	3	26
A2-5	2	B	F	55	Somali*	0	4	5	74.5
A2-6	2	B	M	66	Kunama	0	3	3	57.5
A2-7	2	B	F	69	Somali*	0	1	1	49.5
A2-8	2	B	F	73	Kunama	0	7	7	51.25
A2-9	2	B	F	74	Kirundi	0	3	3	58.75

** Some students identified their languages as "Burmese" or "Somali" and did not provide more specific language information. "-" indicates that we were unable to collect this information from the student.*

Figure 1—*Box Plot of Post-test Scores, by Approach and Teacher*