# The Impact of a Reading Intervention for Low-Literate Adult ESL Learners

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# The Impact of a Reading Intervention for Low-Literate Adult ESL Learners

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# Acknowledgments

# Disclosure of Potential Conflicts of Interest[1]

The research team for this study consisted of a prime contractor, American Institutes for Research (AIR), and four subcontractors, BPA, ETS, the Lewin Group, and Mathematica Policy Research, Inc. None of these organizations or their key staff has financial interests that could be affected by findings from the Study of the Impact of a Reading Intervention for Low-Literate Adult ESL Learners. No one on the technical working group, convened by the research team approximately once per year to provide advice and guidance, has financial interests that could be affected by findings from the evaluation.

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# THE IMPACT OF A READING INTERVENTION FOR LOW-LITERATE ADULT ESL LEARNERS

## EXECUTIVE SUMMARY

According to the 2008 program year statistics from the U.S. Department of Education (ED), 44 percent of the 2.4 million students in the federally funded adult education program in the United States were English as a second language (ESL) students (ED, 2010). Of these, about 185,000 were at the lowest ESL level, beginning literacy. These students, many of whom face the dual challenge of developing basic literacy skills—including decoding, comprehending, and producing print—along with proficiency in English, represent a range of nationalities and cultural backgrounds. Although the majority of students come from Mexico and other Spanish-speaking countries, there are also students from Africa, India, the Philippines, China, Vietnam, and the Caribbean (Wrigley, Richer, Martinson, Kubo, & Strawn, 2003).

Adult basic education (ABE) and ESL programs, authorized by the Workforce Investment Act and also funded with state and local funds, are designed to assist students in their efforts to acquire literacy and language skills by providing instruction through local education agencies, community colleges, and community-based organizations. The content of instruction within ESL classes varies widely. It is often designed to assist students in their efforts to acquire literacy and language skills by providing a combination of oral language, competency-based work skills, and literacy instruction (Condelli, Wrigley, Yoon, Cronen, & Seburn, 2003). There is, however, little rigorous research that identifies effective instruction. A comprehensive review of published research studies on the effects of literacy interventions for ABE and adult ESL learners (Condelli & Wrigley, 2004) found that out of 17 adult education studies that used a rigorous methodology (i.e., quasi-experimental or randomized trials), only 3 included adult ESL learners (Diones, Spiegel, & Flugman, 1999; St. Pierre et al., 1995; St. Pierre et al., 2003). Furthermore, among the 3 studies that included adult ESL learners, only 1 presented outcomes for those learners, and that study experienced substantial methodological problems that limited the validity of the findings (e.g., a 40 percent overall attrition rate and different attrition rates in the intervention vs. control groups; Diones et al., 1999).

To help improve research-based knowledge of effective instruction for low-literate ESL learners, the National Center for Education Evaluation and Regional Assistance of ED's Institute of Education Sciences contracted with the American Institutes of Research (AIR) to conduct a Study of the Impact of a Reading Intervention for Low-Literate Adult ESL Learners. The intervention studied was the basal reader *Sam and Pat, Volume I,* published by Thomson-

Heinle (2006). The study team consisted of AIR, Berkeley Policy Associates (BPA), the Lewin Group, Mathematica Policy Research, Inc., Educational Testing Service (ETS), and World Education.

The goal of this study was to test a promising approach to improving the literacy skills of low-literate adult ESL students under real-world conditions. In their review of the research on ESL instruction in related fields, including adult second language acquisition, reading and English as a foreign language instruction, Condelli & Wrigley (2004) concluded that instruction based on a systematic approach to literacy development was a promising intervention for low-literate adult ESL learners that would be valuable to study (Brown et al., 1996; Cheek & Lindsay, 1994: Chen & Graves, 1995; Carrell, 1985; Rich & Shepherd, 1993; Roberts, Cheek & Mumm, 1994). Specifically, the factors identified as defining a systematic approach to literacy development included: (1) a comprehensive instructional scope that includes direct instruction in phonics, fluency, vocabulary development and reading comprehension, (2) a strategic instruction sequence, (3) a consistent instructional format, (4) easy-to-follow lesson plans, and (5) strategies for differentiated instruction.

*Sam and Pat* was selected as the focus of the study because it offers an approach to literacy development that is systematic, direct, sequential, and multi-sensory. It also includes multiple opportunities for practice with feedback. Consistent with characteristics identified as promising by Condelli & Wrigley (2004), *Sam and Pat* provides opportunities for cooperative learning, real world tasks, and an explicit focus on reading. In addition, the text was developed for and had been used by the developers with students similar to the study population (literacy level ESL learners).

The impact study used an experimental design to test the effectiveness of *Sam and Pat* in improving the reading and English language skills of adults enrolled in 66 ESL literacy classes at 10 sites. The study addressed three key research questions:

1. How effective is instruction based on the *Sam and Pat* textbook in improving the English reading and language skills of low-literate adult ESL learners compared to instruction normally provided in adult ESL literacy classes?

2. Is *Sam and Pat* effective for certain subgroups of students (e.g., native Spanish speakers)?

3. Is there a relationship between the amount of instruction in reading or English language skills and reading and English language outcomes?

This report describes the implementation of *Sam and Pat* at the study sites, compares the instruction and student attendance in *Sam and Pat* classes with that in the standard adult ESL classes, and examines the impact of *Sam and Pat* on reading and English language outcomes. In addition, the report examines the relationship between instruction, attendance, and student outcomes.

The study produced the following key results:

❖ ***More reading instruction was observed in Sam and Pat classes, while more English language instruction was observed in control classes.*** The *Sam and Pat* classrooms spent more time on reading development instruction (66 percent of observed intervals in *Sam and Pat* classrooms compared to 19 percent in control classrooms), and the difference was statistically significant. Conversely, the control classrooms spent more time on English language acquisition instruction (68 percent of observed intervals in control classrooms compared to 27 percent in *Sam and Pat* classrooms), and this difference was also statistically significant.

❖ ***Although students made gains in reading and English language skills, no differences in reading and English language outcomes were found between students in the Sam and Pat group and students in the control group.*** On average, students participating in the study made statistically significant gains in reading and English language skills over the course of the term (effect sizes of 0.23 to 0.40). However, there were no statistically significant impacts of *Sam and Pat* on the reading and English language outcomes measured for the overall sample.

❖ ***There were no impacts of Sam and Pat on reading and English language outcomes for five of six subgroups examined.*** For students with relatively lower levels of literacy at the start of the study, there was some suggestive evidence of a positive impact on reading outcomes.[2] Among students with lower levels of literacy at the beginning of the term, *Sam and Pat* group students scored higher on the Woodcock Johnson word attack (decoding) assessment than control group students (effect size = 0.16). Because this difference was not significant after adjusting for multiple comparisons, however, it is possible that the effect is due to chance alone.

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[2] Lower literacy was defined as scoring at a Grade 2 equivalent or below on the Woodcock Johnson Letter-Word Identification and Word Attack subtests (raw scores of 31 and 9, respectively).

## Summary of Study Design and Methods

The study was designed to estimate the impact of *Sam and Pat* relative to standard ESL instruction (i.e., the kind of instruction ESL students in study sites would receive in the absence of the study) on reading and English language outcomes.

The evaluation employed a randomized research design that included the following:

- ❖ 10 adult education program sites;
- ❖ 33 teachers;
- ❖ 66 classes; and
- ❖ 1,344 low-literate adult ESL learners.

The program sites were a purposive sample. From among the states with the largest adult ESL enrollments, we selected sites that had enrollments of adult ESL literacy learners large enough to support the study design, 2 or more classes for ESL literacy students that met at the same time and in the same location, and an enrollment process that would accommodate random assignment.

Within each site, teachers and students were randomly assigned to one of two groups:

- ❖ The *Sam and Pat* group, which was intended to include a minimum of 60 hours of *Sam and Pat*-based instruction per term, with any remaining class time being spent on the standard instruction provided by the program; and
- ❖ The control group, which consisted of the standard instruction provided by the program.

Teachers (or classes) within each program site were randomly assigned in pairs, so that, within each pair, the *Sam and Pat* and control class met at the same time, in the same or an adjacent building, and for the same number of hours. Data collection for the study occurred between September 2008 and May 2009 with two cohorts of students, one that attended in fall 2008 and the second in spring 2009. Students were tested on the study's battery of assessments, which included tests of reading and English language skills at the beginning of the term and after about 12 weeks of instruction. A description and schedule for the study's data collections are provided in Table ES.1.

The following tests were selected to measure the range of skills that could potentially be impacted by *Sam and Pat*–based instruction:

**Reading Skills**

- ❖ Woodcock-Johnson Letter-Word Identification (WJID; Woodcock, McGrew, & Mather, 2001)
- ❖ Woodcock-Johnson Passage Comprehension (WJPC; Ibid.)
- ❖ Woodcock-Johnson Word Attack (WJWA; Ibid.)
- ❖ SARA Decoding (SARA Dec; Sabatini & Bruce, in press)

**English Language Skills**

- ❖ Oral and Written Language Scales (OWLS; Carrow-Woolfolk, 1996)
- ❖ Receptive One-Word Picture Vocabulary Test (ROWPVT; Brownell, 2000)
- ❖ Woodcock-Johnson Picture Vocabulary Test (WJPV; Woodcock, McGrew, & Mather, 2001)

**Table ES.1: Data Collection Schedule**

| Data Collection | Respondent | Summer 2008 | Fall 2008 | Spring 2009 | Type of Data |
|---|---|:---:|:---:|:---:|---|
| **Teacher Data Form (2008)** | Teachers | X | X | | Teacher background information |
| **Teacher Data Form (2009)** | Teachers | | | X | Descriptive information about instructional materials used and *Sam and Pat* implementation |
| **Student Intake Form** | Site Staff on Behalf of Students | | X | X | Student background information |
| **Reading and English Language Pre-Tests** | Students | | X | X | Pre-test data |
| **Reading and English Language Post-Tests** | Students | | X | X | Outcomes data |
| **Daily Student Attendance Sheets** | Teachers | | X | X | Dosage/exposure to instruction |
| **Classroom Observations** | Evaluation Staff | | X | X | Descriptive information about instruction in both groups |

The basic analytic strategy for assessing the impacts of *Sam and Pat* was to compare reading and English language outcomes for students who were randomly assigned to either the *Sam and Pat* or the control group, after controlling for student and teacher background characteristics (e.g., gender and ethnicity). The average outcome in the control group represents an estimate of the scores that would have been observed in the *Sam and Pat* group if they had not received the intervention; therefore, the difference in outcomes between the *Sam and Pat* and control groups provides an unbiased estimate of the impacts of *Sam and Pat*.

## The Adult ESL Literacy Intervention: *Sam and Pat*

The *Sam and Pat* textbook (Hartel, Lowry, & Hendon, 2006) is described by the developers as a basal reader or textbook that tailors the methods and concepts of the Wilson and Orton-Gillingham reading systems developed for native speakers of English (Wilson & Schupack, 1997; Gillingham & Stillman, 1997) to meet the needs of adult ESL literacy level learners.[3] *Sam and Pat* was designed to incorporate the following components of the Wilson/Orton-Gillingham systems:

- ❖ A focus on moving students systematically and sequentially from simple to complex skills and materials;
- ❖ The use of multisensory approaches to segmenting and blending phonemes (e.g., sound tapping);
- ❖ An emphasis on alphabetics/decoding, fluency, vocabulary, and reading comprehension;
- ❖ The use of sound cards and controlled text (wordlists, sentences, stories) for practicing skills learned; and
- ❖ Continual review (cumulative instruction) of letters, sounds, and words already learned.

However, when writing *Sam and Pat,* the developers made variations on the base reading systems to make the text useful and relevant to the adult ESL literacy population for which the text was designed. Specifically, *Sam and Pat* differs from the base reading systems on four dimensions:

- ❖ The sequence in which the sounds of English are taught;
- ❖ The words chosen for phonics and vocabulary study;
- ❖ The simplification of grammar structures presented; and
- ❖ The added bridging of systematic reading instruction to ESL instruction.

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[3] Although there is no available research on the effectiveness of *Sam and Pat*, the textbook and its accompanying training and technical support is based on these two reading systems (Wilson & Orton-Gillingham), which have shown promise in teaching struggling readers (Adams, 1991; Clark & Uhry, 1995; Kavenaugh, 1991; Torgesen et al., 2006).

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