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



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Larry Condelli Stephanie Cronen Johannes Bos American Institutes for Research

Fannie Tseng Jacklyn Altuna Berkeley Policy Associates

Melanie Ali, Project Officer, Institute of Education Sciences

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Arne Duncan *Secretary*

Institute of Education Sciences

John Q. Easton *Director*

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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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TABLE OF CONTENTS

Executive Summary	xi
Summary of Study Design and Methods	xiv
The Adult ESL Literacy Intervention: Sam and Pat	
Summary of Study Findings	
Generalizability of the Study Findings	xxi
Chapter 1: Introduction and Overview	1
Selection of the Adult ESL Literacy Intervention	
Research Questions	
Summary of Study Design	
Standard ESL Instruction: The Control Group	4
The Adult ESL Literacy Intervention: Sam and Pat	5
Overview of Sam and Pat	5
Intended Use of Sam and Pat	7
Teacher Training and Follow-Up Technical Assistance	8
Organization of the Report	10
Chapter 2: Study Design and Methods	11
Selection of Adult ESL Programs and Sites	11
Recruitment and Random Assignment of Teachers and Students	13
Teachers	13
Students	14
Data Collection	17
Teacher Data Form (2008)	17
Teacher Data Form (2009)	17
Student Intake Form	20
Student Assessments	20
Daily Student Attendance Sheets	22
Classroom Observations	22
Integrity of Random Assignment	23
Baseline Equivalency of Sam and Pat and Control Groups	23
Student Movement Between Groups	23
Chapter 3: Instruction and Attendance During the Study	28
Description of Instruction in Sam and Pat Classrooms	29
General Class Duration	29
Proportion of Instructional Intervals Incorporating Sam and Pat	
Materials	30
Use of Instructional Practices in Support of Sam and Pat	31
Two-thirds of Sam and Pat Classes Observed Met Fidelity Criteria	33

Context of Implementation in Sam and Pat Classrooms	34
Accessing Implementation Supports	
Preparation Time for Sam and Pat Lessons	35
Lesson Number Completed	35
Use of Materials Other than Sam and Pat	36
Sam and Pat and Control Group Differences in Instruction and Student	
Attendance	37
More Reading Instruction Observed in Sam and Pat Classes, while	
More English Language Instruction Observed in Control Classes	37
No Group Differences in Hours of Class Attended	39
Chapter 4: Impacts on Reading and English Language Skills	41
Estimation Model	41
Impacts on Students' Reading and English Language Skills	42
No Impacts on Reading Outcomes	
No Impacts on English Language Outcomes	43
Putting the Findings into Context	43
Subgroup Analyses	46
Overview of Subgroups	46
No Impacts on Reading and English Language Outcomes Found for	
Subgroups Based upon Native Language and Cohort	48
Some Suggestive Evidence of A Positive Impact on Reading	
Outcomes for Lower Literacy Students	48
Chapter 5: Non-Experimental Analyses	53
No Direct Relationship Between Reading or English Language	
Instruction and Outcomes	54
Positive (although Weak) Relationship Between Attendance and	
Reading and English Language Outcomes	55
Student Exposure to Reading or English Language Instruction Unrelated	
to Most Reading and English Language Outcomes Measured, Although	
Weak Relationships Found Between Exposure to Instruction and One	
English Language Outcome	
References	
Appendix A: Assessment Selection, Administration, and Scoring	
Assessment Selection	
Test Administration Preparation and Methods	
Test Administrator Recruitment and Training	
Data Collection for the Full Study	۸ 6

Scoring Quality	A-7
Reliabilities of the Post-Tests During the Study	A-8
Appendix B: Supplemental Tables and Figures for Chapter 2	B-1
Appendix C: Classroom Observation Methods and Instrument	
Observation Training and Methods	C-1
Training	C-1
Scheduling and Preparing for the Observation	
Conducting the Observation	
Data Quality Control Procedures and Analysis	C-2
Appendix D: Power Calculations and Impact Estimation Methods	D-1
Power Analyses	D-1
Missing Data Approach	D-1
Covariate and pre-test data	D-1
Post-test data	D-1
Estimation Model	D-3
Adjusting for Multiple Comparisons	D-6
Appendix E: Supplemental Tables for Chapter 3	E-1
Appendix F: Supplemental Analyses for Chapter 4	F-1
Additional Sensitivity Analyses	F-4
Correcting for "No-Shows"	
Spline Estimation.	

LIST OF TABLES AND FIGURES

Tables	
Table ES.1: Data Collection Schedule	χV
Table 2.1: Number of Classes and Students in the Study, Overall and by	
Site	
Table 2.2: Data Collection Schedule	19
Table 2.3: Percentage of Teachers, Classes, and Students Participating in	
Data Collections, by Group	
Table 2.4: Assessment Administration Schedule, by Test	
Table 2.5: Teacher Background Characteristics, by Group (Percentages)	
Table 2.6: Student Background Characteristics, by Group (Percentages)	25
Table 2.7: Mean Student Assessment Scores at Beginning of Term, by Group	26
Table 2.8: Number and Percent of Students Who Attended Unassigned	20
Study Classes, by Crossover Type	27
Table 3.1: Percent of Instructional Intervals During Which Sam and Pat	20
Materials Were Used in Sam and Pat Classrooms	30
Table 3.2: Percent of Instructional Intervals During Which <i>Sam and Pat</i> Teachers Engaged in Practices in Support of <i>Sam and Pat</i>	31
Table 3.3: Percent of Observations During Which All Fidelity Criteria	
Were Met in Sam and Pat Classes	33
Table 3.4: Number of Times Each Support for Sam and Pat Was	
Accessed, as Reported by Sam and Pat Teachers	34
Table 3.5: Average Number of Minutes Per Week Spent Preparing to	2.5
Teach Study Class, as Reported by Sam and Pat Teachers	33
Table 3.6: Final <i>Sam and Pat</i> Lesson Number Covered in Class, as Reported by <i>Sam and Pat</i> Teachers	36
Table 3.7: Percent of Teachers Who Reported Supplementing Sam and	
Pat Instruction With Other Materials During the Study, by	
Frequency of Use, as Reported by Sam and Pat Teachers	36
Table 3.8: Number of Classroom Observations, by Cohort and Group	37
Table 3.9: Percent of Instructional Intervals Spent in Key Instructional	
Areas, by Group	38
Table 3.10: Hours of Attendance, by Group	40
Table 4.1: Impact of Sam and Pat on Reading and English Language	

Table 4.2: Mean Pre- vs. Post-Test Scores on Reading and English

Table 4.3:	Grade Level or Age Equivalents (GLEs/AEs) for Pre- and Post- Test Means	46
Table 4.4:	Impact of <i>Sam and Pat</i> on Reading and English Language Outcomes Among Students With a Non-Roman-based Alphabet Background	49
Table 4.5:	Impact of <i>Sam and Pat</i> on Reading and English Language Skills Among Spanish Speaking Students	50
Table 4.6:	Impact of <i>Sam and Pat</i> on Reading and English Language Skills Among Students With Lower and Higher Literacy Levels at the Beginning of the Term	51
Table 4.7:	Impact of <i>Sam and Pat</i> on Reading and English Language Skills Among Students in Cohort 1 and Cohort 2	52
Table 5.1:	Relationship Between Reading and English Language Instruction and Outcomes	54
Table 5.2:	Relationship Between Hours of Attendance and Outcomes	56
Table 5.3:	Relationship Between Exposure to Instruction and Outcomes	57
Table A.1	: Correlations Between Post-Test Assessments (Full Sample)	A-3
Table A.2	Percent Agreement on Item Scoring Between Testers and Expert Scorers, by Pre- and Post-Test Assessment	A-7
Table A.3	: Post-Test Reliability Estimates	A-8
Table C.1:	Average Percent Agreement Among Observers for Fall and Spring Terms	C-3
Table D.1	: Predictors of Missing Post-Test (Probit Analysis), by Post-Test	D-2
Table E.1:	Percentage Distribution of Final Sam and Pat Lesson Number Covered in Class, as Reported by Sam and Pat Teachers	E-1
Table E.2:	Percentage Distribution of Students Attending Varying Numbers of Class Hours, Overall and by Group	
Table E.3:	Percentage Distribution of Students Attending Varying Percentages of Class Hours, Overall and by Group	
Table F.1:	Impacts Based on Reading Assessments Before Rescoring	
	Impacts Based on Scaled English Language Assessment Scores	
	Impacts Based on Raw Woodcock Johnson Scores	
Table F.4:	Mean Pre- vs. Post-Test Scores on Reading and English	
	Language Assessments, by Group	F-3
Table F.5:	Impacts After No-Show Correction.	F-5
Table F.6:	Impacts Estimated With Spline Terms	F-7
Table F.7:	Number and Percentage of Students Meeting the Study's Definition of Lower Literacy, by Site	F-8

Figures

Figure ES.1: Percent of Observed Instructional Intervals Spent in Key	
Instructional Areas, by Group	xix
Figure ES.2: Impact of <i>Sam and Pat</i> on Reading and English Language Skills: Differences Between <i>Sam and Pat</i> and Control Groups	
at the End of the Term	XX
Figure 2.1: Sample Selection Flowchart	16
Figure 2.2: Study Procedural Flow Chart	18
Figure B.1: Flow of Students From Random Assignment to Analysis	B-1
Figure F.1: Impacts on Woodcock Johnson Letter Word Identification Scale Scores, by Site	F-9
Figure F.2: Impacts on Woodcock Johnson Word Attack Scale Scores, by Site	F-10
Figure F.3: Impacts on SARA Decoding Scores, by Site	F-11
Figure F.4: Impacts on Woodcock Johnson Passage Comprehension Scale	
Scores, by Site	F-12
Figure F.5: Impacts on OWLS Scores, by Site	F-13
Figure F.6: Impacts on ROWPVT Scores, by Site	F-14
Figure F.7: Impacts on Woodcock Johnson Picture Vocabulary Scale	
Scores, by Site	F-15

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	Doonandant	Summer 2008	Fall 2008	Spring 2009	Type of Data
Teacher Data Form	Respondent Teachers	X	X	2009	Type of Data
(2008)	reachers	۸	^		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	Х	Student background information
Reading and English Language Pre-Tests	Students		X	Х	Pre-test data
Reading and English Language Post-Tests	Students		Χ	Х	Outcomes data
Daily Student Attendance Sheets	Teachers		Χ	Χ	Dosage/exposure to instruction
Classroom Observations	Evaluation Staff		Х	Х	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. *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.

xvi

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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