



Study of the Evidence-Based Learning Instruction (EBLI) Program:

Preliminary Findings

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EXECUTIVE SUMMARY

This report presents preliminary evaluation results for the Evidence-Based Literacy Instruction (EBLI) program for teaching functionally illiterate adults. Information was collected over the six-month span of October 2012 through March 2013. The evaluation used a mixed method approach in which information was obtained from assessment test scores and surveys. The small sample size (n=31) of the supplied data provided by the control (Laubach, n=7) and experimental (EBLI=24) groups limits the applicability of conclusions to broader populations. Therefore, discussion is limited to findings collected from participants in the experimental (EBLI) group.

Preliminary Findings

EBLI Participants' Assessment

Learners in the EBLI group were surveyed about their reading and writing skills at the conclusion of 12 hours of instruction. Of 13 respondents:

- One hundred percent (n=13) perceived changes in their reading and writing skills.
- Over three-quarters (84.6%, n=11) perceived that they had met their goals about improving reading and writing skills.
- One hundred percent (n=13) perceived a difference in how they felt about their ability to read and write.
- Over three-fifths (61.5%, n=13) expressed a preference to continue with the EBLI program.

Tutors who received training in the EBLI program were surveyed about the instructors' training component of the program. Key findings include:

- Ninety percent of 10 respondents (n=9) perceived that the instructional program prepared them to be effective adult literacy tutors.
- Over three-fifths of eight respondents (62.5%, n=5) indicated a preference to continue teaching with the EBLI program.

EBLI Learners' Progress Data

EBLI learners' **Progress** Data as measured by Wonderlic General Assessment of Instructional Needs (GAIN)® testing system reporting guidelines, and collected at the conclusion of 12 hours of instruction:

- Over one-third (38%, n=9) of 24 EBLI learners demonstrated improvement of 1 to 2.6 grade levels in reading and writing skills.
- Mean reading scale score improved from beginning basic to low intermediate basic education functioning level.
- Mean grade level equivalency improved from third grade six months to fourth grade two months.

Recommendations

It is suggested that Reading Works continue its study of the EBLI program with emphasis placed on recruitment and retention of additional learners assigned to both the control and experimental groups. Further study is needed to collect statistically significantly valid data that will provide reliable:

- Comparison of the effectiveness of EBLI to Laubach for teaching reading and writing skills to adult learners at educational functional levels 1 through 3.
- Identification of learner characteristics that might explain performance differentials between learners who scored above and below the group mean (.67) progress calculated for reading grade level.
- Collection of sufficient feedback from EBLI participants who performed below the group mean (.67) progress calculated for reading grade level.
- Useful findings to inform tutor training and mentoring services that will support tutors in effective instruction of learners who present at educational functional levels 1 and below.

INTRODUCTION

In 2011, the National Institute for Literacy estimated that 47% of the 426,000 adults (age 24 and older) in Detroit, Michigan are functionally illiterate¹. Given the importance of increasing the level of adult literacy in the metropolitan Detroit area (including Macomb, Oakland and Wayne counties), there was a clear need to develop partnerships between civic and literacy agencies. In 2012, The Reading Works Alliance ('Reading Works'), a group of diverse leaders from the business, education, media, civic and faith communities was formed to advocate on behalf of significantly boosting adult literacy in metro Detroit². As part of its advocacy, Reading Works funded nine literacy agencies to increase capacity and effectiveness. The nine agencies were selected due to proven track records, the potential to serve more clients, a commitment to share best practices and to publish detailed reports on their learners' progress.³

Evidence Based Learning Instruction Pilot Study

The Evidence Based Literacy Instruction (EBLI) Study was a pilot grant awarded in 2012 from the Charter One Bank to Reading Works, aimed at evaluating the EBLI program's effectiveness for improving reading scores for functionally illiterate adults. Evidence Based Literacy Instruction is a program designed to individualize literacy instruction for each student. The EBLI program trains educators and tutors so they are able to efficiently infuse instruction into their current curriculum that improves learners' reading and writing proficiency.

The focus of the grant was to compare the effectiveness of the EBLI program to the current core curriculum of the Laubach Way to Reading, a well-known method of teaching adults to read, write, and do basic math. The reading scale scores, grade level equivalent scores, and educational functional levels of 30 learners age 18 and above with low level literacy skills who received instruction using EBLI (experimental group) would be compared to the reading scale scores, grade level equivalent scores, and educational functional levels of 30 learners age 18 and above with low literacy skills, who received instruction using Laubach (control control). Initial activities were piloted with two partner agencies, Dominican Literacy Center (East Detroit) and Siena Literacy Center (Northwest Detroit). The study period is October 2012 through June 2013.

¹ U.S. Census Bureau American Community Survey. *2006 Public Use Microdata Samples* [Data File]. Retrieved from www.census.gov/acs.

² Reading Works, <http://www.readingworksdetroit.org/>

³ Ibid.

Methodology

The evaluation strategy consists of both formative and summative evaluation. A mixed method approach was employed in which participant follow-up surveys and pre- and post-test scores administered through Wonderlic General Assessment of Instructional Needs (GAIN)® testing system were used. These evaluation activities have stemmed from foundations laid in best practices documented for non-profit organizations and community-based participatory research settings.⁴

Formative evaluation assesses program processes and whether and to what extent a program is being implemented. With formative evaluation, one could identify several common implementation problems: no program implementation, insufficient implementation, and incorrect implementation (Rossi et al., 2004). This allows for corrections to program implementation and is also a necessary preliminary before checking for expected outcomes. Failures of program implementation often preclude the possibility of meaningful outcome evaluation. Formative evaluation activities consisted of the participant follow-up analysis: With the conclusion of the Laubach component of the study, participants responses will be collected and evaluated to determine if there are any differences in reported satisfaction and/or perceived reading skills between the two groups.

Summative evaluation allows evaluators to determine whether a program has had the intended impacts. An evaluation that documents desirable program effects is an important resource to show an organization's fiscal accountability and to encourage and sustain funding support. Summative evaluation included evaluation of the pre- and post- training test scores assessed by GAIN® and learner follow-up surveys. With the conclusion of the Laubach component of the study, participants' pre- and post-test scores with grade equivalent level will be collected and evaluated to determine if there are any differences in measured improvement in reading skills between the two groups. The findings collected from this study will assist Reading Works and its agencies in their on-going refinement of the adult reading curriculum.

⁴ United Nations Development Programme. 2009. *Handbook on Planning, Monitoring and Evaluating for Development Results*.

FINDINGS (PRELIMINARY)

This section provides a descriptive report of preliminary findings from the formative and summative stages of the study. Findings are divided into two sections. The first section includes formative results based upon feedback received from participants' (learners and tutors) perceptions of the EBLI program. The second section includes summative results based on data collected from 24 EBLI learners' post-test scores.

Formative Feedback

Learners

The WSU evaluator developed a Learner Survey to gather participants' perceptions of changes in reading and writing skills, whether the reading sessions met goals about improving reading and writing skills, differences in how they felt about their ability to read and write, preference to continue with the instructional program or try a different program, and comments at the end of each 12-hour session. Surveys were self-administered and respondents could choose which questions to respond to, therefore the number of responses from each study group, and to each survey item varies.

As shown in Table 1, 100.0% (n=13) of EBLI respondents indicated that they had noticed changes in their reading and writing skills; 84.6% (n=11) indicated the reading sessions met their goals about improving their reading and writing skills, 100.0% (n=13) indicated that they noticed a difference in how they felt about their ability to read and write, and 61.5% (n=8) would prefer to continue with the EBLI program.

Table 1. Learner Survey Post-Instruction

Question		n	EBLI	Laubach
Please tell us if you have noticed <u>any</u> changes in your reading and writing skills?	Yes	22	13 (100.0%)	9 (100.0%)
	No	0	0 (.0%)	0 (.0%)
		Total=22		
Has the reading sessions met your goals about improving your reading and writing skills?	Yes	19	11 (84.6%)	8 (88.9%)
	No	3	2 (15.4%)	1 (11.1%)
		Total=22		
Have you noticed a difference in how you feel about your ability to read and write?	Yes	21	13 (100.0%)	8 (38.1%)
	No	1	0 (.0%)	1 (100.0%)
		Total=22		
Would you prefer to <u>continue with this program</u> or try a <u>different program</u> ?	Yes	14	8 (61.5%)	6 (66.7%)
	No	7	5 (38.5%)	2 (22.3%)
		Total=21		

In addition, respondents were asked to comment on their learning experiences. There were notable similarities between responses from the EBLI and Laubach groups, participants described their experiences working with their tutors as positive. Learners from the EBLI group commented “This is a good program, but it could be more times a week (sic)”; “This process help me read a lot faster. And help me learn to remember ...words, all it take is practice (sic)”; “This program helped a lot on how to read better and faster”; and “I really like EBLY”.

Tutors

The EBLI system offers specialized 2-day training for tutors, community volunteers, or individuals who work exclusively in 1-on-1 settings. These trainings are focused on the building blocks of reading and are geared towards any individual that teaches exclusively in 1-on-1 settings. Tutors learn how to teach the building blocks of reading and how to assist their students reading in authentic text so they become independent, proficient readers. Upon completion of training, tutors received a set of 15 lessons to assist them in systematically teaching their students to read to their highest potential. Consulting is mandatory for this 2-day training. At minimum, 3 consulting visits are required per trainee.

Tutors were asked to provide information about what they perceived to be the strengths and weaknesses of the EBLI program in terms of meeting the needs of adult learners, and preference to continue teaching with the program or try a different instructional program, their narratives are cited below. Surveys were self-administered and respondents could choose which questions to respond to, therefore the number of responses from each study group, and to each survey item varies.

As shown in Table 2, 90.0% (n=9) of 10 EBLI respondents indicated they felt that the program prepared them to be an effective adult literacy tutor, and 62.5% (n=5) of eight EBLI respondents would prefer to continue teaching with the EBLI program exclusively.

Table 2. Tutor Survey Post-Instruction

Question		n	EBLI	Laubach
Do you feel that the instructional program prepared you to be an effective Adult Literacy Tutor?	Yes	13	9 (90.0%)	4 (100.0%)
	No	1	1 (10.0%)	0 (.0%)
		Total=14		
Would you prefer to <u>continue teaching with this program</u> or try a <u>different instructional program</u> ?	Yes	8	5 (62.5%)	3 (75.0%)
	No	1	1 (12.5%)	0 (.0%)
	Both	3	2 (24.0%)	1 (24.0%)
		Total=12		

EBLI Tutor Training: EBLI-trained tutors expressed satisfaction that the instructional program prepared them to be effective adult literacy tutors: “Training was excellent”. “EBLI training day was excellent preparation. Follow-up support was also helpful.” In terms of improvement, tutors recommended extra layers of support: “Training was excellent. However, 3 days of training would have been better. I was not totally prepared for my first student”; and “Would have liked extra tutorials for review.”

EBLI Program Strengths: Tutors described their perceptions of the strengths of the EBLI instructional program in terms of meeting the needs of adult learners: “... I liked the methods that were involving of the learner and used tactile kinaesthetic approaches”, “Consistent, predictable pattern for word decoding and comprehension”; “Consistent developmental patterns;” “Focus on different spellings for sounds;” “Presents concepts quickly without rules – the method of putting syllables together for reading and spelling works – authentic reading is an important need for adults learners –EBLI has really convinced me of that;” and “Learners with the least experience with reading seem to benefit the most. Their reading skills greatly improve.”

EBLI Program Weaknesses: Tutors described their perceptions of the limitations of the EBLI instructional program in terms of meeting the needs of adult learners: “As a teacher, I still believe in the importance of review. When something is taught it is never repeated (though you may look at the same sound again – tendencies are only mentioned so nonchalantly –rules are avoided – but some people still don’t know when something says what it says;” “I wondered if learner would have benefited from a more direct approach to vocabulary and comprehension skills;” “Too many items during one session;” “... Also, some learners who come here may be able to decode quite well but may still need more explicit comprehension instruction (e.g., teaching inferences and drawing conclusions);” “Way too much information for six lessons;” and “Experienced students get bored easily.”

Continue/Discontinue with EBLI: More than three-fifths (62.5%) of the EBLI tutors expressed willingness to continue teaching with the EBLI instructional system, and one-quarter (24.0%) expressed interest in trying a hybrid approach of EBLI and Laubach: “I hope I will feel more comfortable with the program as I move on to my next learner;” “Depending on the learners – there may be a few who have specified learning disabilities that this may/may not work for;” “As I become more familiar with the program things are running more smoothing;” “This program has great advantages and should be used as a part of a comprehensive literacy teaching system;” and “I like EBLI a lot! I am using many parts of it with my non-EBLI research learners.”

Summative Feedback

Upon entry into the study, learners in the control and experimental groups were assessed on three reading indicators using the Wonderlic General Assessment of Instructional Needs (GAIN)[®] numeracy and literacy test. The three indicators are reading scale scores, grade level equivalent, and educational functioning level. Table 3 displays the distribution of pre- and post-performance scores of the 24 EBLI participants.

At the start of the 12-hour instructional sessions, EBLI learners' mean reading scale score (481) was assessed at the beginning basic education functioning level with mean grade level equivalency of third grade six months. Impact ('Gain') is based upon the learner's progress by comparing his/her proficiency status between start (Pre-test) and conclusion (Post-test) of 12 hours of instruction.

Table 3. EBLI Learners Distribution Scores⁵

Learner No.	Reading Scale Score1	Reading Scale Score2	Gain	Grade Level1	Grade Level2	Gain	Education Function Level (1)	Education Function Level (2)	Gain
1	606	712	106	5.1	7.7	2.6	3	4	1
2	432	583	151	2.4	4.8	2.4	2	3	1
3	644	707	63	5.7	7.6	1.9	3	4	1
4	547	667	120	4.3	6.1	1.8	3	4	1
5	422	521	99	2.2	3.9	1.7	2	2	0
6	233	365	132	0.3	1.6	1.3	1	1	0
7	652	687	35	5.8	6.8	1	3	4	1
8	450	509	59	2.7	3.7	1	2	2	0
9	440	496	56	2.5	3.5	1	2	2	0
10	249	359	100	0.6	1.5	0.9	1	1	0
11	681	702	21	6.6	7.4	0.8	4	4	0
12	200	336	136	0.5	1.3	0.8	1	1	0
13	546	584	38	4.2	4.8	0.6	3	3	0
14	497	528	31	3.5	4	0.5	2	3	1
15	632	659	27	5.5	5.9	0.4	3	3	0

⁵ As measured by General Assessment of Instructional Needs (GAIN)[®] testing system.

Learner No.	Reading Scale Score1	Reading Scale Score2	Gain	Grade Level1	Grade Level2	Gain	Education Function Level (1)	Education Function Level (2)	Gain
16	448	467	19	2.6	3	0.4	2	2	0
17	348	380	32	1.4	1.7	0.3	1	1	0
18	464	484	20	3	3.3	0.3	2	2	0
19	484	491	7	3.3	3.4	0.1	2	2	0
20	407	385	-22	2	1.8	-0.2	2	1	-1
21	511	496	-15	3.7	3.5	-0.2	2	2	0
22	627	595	-32	5.4	5	-0.4	3	3	0
23	560	509	-51	4.5	3.7	-0.8	3	2	-1
24	716	667	-49	7.9	6.1	-1.8	4	4	0

Rating differences between the two data-points measures change or progress in educational functioning level and equivalent grade level. At the conclusion of the 12-hour instructional sessions, EBLI learners' mean reading scale score (555) had improved to the low intermediate basic education functioning level with mean grade level equivalency of fourth grade two months. Table 4 summarizes the mean progress of 24 EBLI learners (E-GAIN) and seven Laubach learners (L-GAIN) following 12 hours of instruction.

Table 4. Post-Instruction Reading Results⁶

		EBLI(1) (n=24)	EBLI(2) (n=24)	E-GAIN ⁷	Laubach(1) (n=7)	Laubach(2) (n=7)	L-GAIN
Reading Scale Score	Mean	480.56	555.13	72.57	426.71	456.14	29.43
Grade Level	Mean	3.57	4.24	.67	2.61	2.97	.36
Educational Functional Level	Mean	2.31	2.70	.39	1.86	2.00	.14

⁶ As measured by General Assessment of Instructional Needs (GAIN)® testing system.

⁷ Unable to test for statistically significant differences between EBLI and Laubach study groups due to insufficient sample sizes (n<30) of both groups.

At the time of this report, the small sample size of the supplied data provided by the control (Laubach, n=7) and experimental (EBLI=24) groups prohibited testing for statistically significant differences between study groups. The small sample size of the supplied data limits the applicability of conclusions to broader populations (e.g., learners at educational functional levels below 1 or above 3); may invalidate conclusions drawn about the data itself due to the higher variability of data in small samples; and relationships between two variables may be influenced by a third or fourth variable, that is, correlation does not imply that one variable is the sole effect on the other.

DISCUSSION

The evaluation of the Evidence-Based Literacy Instruction (EBLI) program for instructing adult learners with low-level literacy skills includes a formative component to gather information for continuous adult reading program improvement by documenting learner and tutor assessment of the EBLI program. The summative component is designed to measure the impact of the program on 24 learners, by comparing reading proficiency levels between start (Pre-test) and conclusion (Post-test) of 12 hours of instruction.

The small sample size of the supplied data provided by the control (control (Laubach, n=7) and experimental (EBLI=24) groups limits the applicability of conclusions to broader populations; may invalidate conclusions drawn about the data itself due to the higher variability of data in small samples; and relationships between two variables may be influenced by a third or fourth variable, that is, correlation does not imply that one variable is the sole effect on the other (spurious relationships). Therefore, it is suggested that Reading Works continue its study of the EBLI program, with emphasis placed on recruitment and retention of additional learners assigned to both control and experimental groups. Preliminary findings on the EBLI program are provided below.

EBLI Learners' Progress Data

Results from progress data collected from GAIN test scores indicate that the EBLI program may be effective at teaching adult learners with low level reading and writing literacy skills:

- Over one-third (38%, n=9) of 24 EBLI learners demonstrated improvement of 1 to 2.6 grade levels in reading and writing skills.
- Mean reading scale score improved from beginning basic to low intermediate basic education functioning level
- Mean grade level equivalency improved from third grade six months to fourth grade two months.

Recommendation on EBLI Learners' Progress Data:

Additional study with larger, comparable sized control and experimental groups are necessary to:

- Compare the effectiveness of the EBLI program in comparison to the Laubach program for teaching reading and writing skills to adult learners who present at educational functioning levels 1 through 3.
- Examine learner characteristics that might explain performance differentials between learners who scored above and below the group mean (.67) progress calculated for reading grade level.
 - One tutor commented: "My experience with EBLI indicates that it is an effective tool for those endeavouring to improve their reading skills when they are between a 1.5 and 5.5 reading level at intake."

EBLI Participants' Assessment

EBLI *learners* were surveyed about their perceptions of whether the reading sessions met goals about improving reading and writing skills, differences in how they felt about their ability to read and write preference to continue with the instructional program or try a different program, and comments at the end of each 12-hour session. Of 24 learners who received tutoring in reading and writing based on the EBLI model, 13 chose to complete the survey,

- All (100.0%, n=13) perceived changes in their reading and writing skills.
- Over three-quarters (84.6%, n=11) perceived that they had met their goals about improving reading and writing skills.
- All (100.0%, n=13) perceived a difference in how they felt about their ability to read and write.
- Over three-fifths (61.5%, n=13) expressed a preference to continue with the EBLI program.

Recommendations on EBLI Participants' Assessment - Learners:

Additional study of the EBLI program is necessary to:

- Collect sufficient feedback from learner participants who performed below the mean (.67) progress calculated for reading grade level grade level score.
 - One tutor commented: "Lessons were very different depending on initial skill level of learner. Perhaps having lessons geared toward beginning readers would be helpful."

EBLI tutors were surveyed about their perceptions on whether or not the instructional program prepared them to be an effective adult literacy tutor, the strengths of the instructional program in terms of meeting the needs of adult learners, the weaknesses of this instructional program in terms of meeting the needs of adult learners, if they would prefer to continue teaching with this program or try a different instructional program. Of respondents who received training and consulting in teaching reading and writing skills to adult learners based on the EBLI model,

- Nine of 10 respondents perceived that the instructional program prepared them to be effective adult literacy tutors.
- Over three-fifths of eight respondents (62.5%, n=5) indicated a preference to continue teaching with the EBLI program.

Recommendations on EBLI Participants' Assessment - Tutors:

Additional study of the EBLI program is necessary to:

- Use findings to inform tutor training and mentoring services that will support tutors in effective instruction of learners who presenting at educational functional levels 1 and below.
 - One tutor commented: “Moving beyond word decoding called for considerable preparation on part of tutor. Stash of reading materials at different levels was needed.”
 - One tutor commented: “However, if future studies are done with EBLI, I would recommend that tutors have a few non-research learners to work with to gain experience in adjusting the lesson when learners experience difficulty –before they begin working with research subjects.”