



CALL RESEARCH BRIEFS

The idea of the briefs is to make research available to students, researchers, and practitioners both in and outside of the field of CALL, L2 pedagogy, and SLA. Please see previous briefs for examples.

Please use the following template to complete the brief. Keep faithful to the original article. Use language appropriate for an educated but not expert audience, and avoid technical terms (e.g. output-based, recasting, intervention, significant). Ideally the brief should be no more than one page, but may be up to two.

Title: Summary of (name of article) Summary of Effects of a Word Boxes Electronic App on Improving Letter-Sound Correspondences of Learners of English as an Additional Language	
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Original Text: Ross, K. M., & Joseph, L. M. (2021). Effects of a Word Boxes Electronic App on Improving Letter-Sound Correspondences of Learners of English as an Additional Language. <i>Journal of Applied School Psychology</i> , 37(3), 268–299. https://doi.org/10.1080/15377903.2020.1848953	
Rational /overview of the study- <i>What does this study try to answer and why is it important?</i> Ross and Joseph explain the research-based importance of phoneme and grapheme knowledge on reading known and unfamiliar words. Further explaining that direct and explicit letter-sound instruction has shown to be beneficial for English-speaking and English language learner kindergarteners. Additionally, the use of multi-sensory activities to engage students in letter-sound correspondence has been especially beneficial in helping struggling readers. This study looks at the effectiveness of an electronic word box application, <i>Build a Word Easy Spelling with Phonics</i> , on improving letter-sound correspondence and whole word reading of five kindergarteners who are English learners. This application uses the word box structure to engage students in listening and articulating individual sounds to make whole words. The application provides modeling and multiple opportunities for practice. Ross and Joseph argue that there has been little prior research on the impact of using electronic applications to improve the basic reading skills of English language learners or on the effectiveness of using word boxes with language learners.	
Research methods – <i>Who are the participants, the context, the data collection tools, data analysis approach, etc..</i> (use subheadings as needed) Participants- This study included five kindergarten students with limited English proficiency. All five students were identified as Hispanic with Spanish as their dominant language. There were three inclusion criteria. The first was that all of the students had to be considered as having limited English proficiency and receiving English as a Second Language services. Second, all participants had to have fine motor skills to be able to use the iPad application. Last, the students needed to have difficulty with letter-sound correspondences. Context- The school was in a low socioeconomic area. The students were kindergarteners who received whole group phonics instruction and English as a Second Language services for 45 minutes per day. Data Collection Tools- Initial screeners of the students included using the Dynamic Indicators of Basic Early Literacy Skills Next (DIBELS-Next) assessment for nonsense word fluency. Scores on this screener showed all students at the “well below benchmark” level. The initial screener also included using the Fountas and Pinnell data, showing that the students were one or two levels behind the mid-year kindergarten level.	

Ross and Joseph created a list of 15 letter-sound correspondences to use that were based on the student results. All students demonstrated that they knew two or less of these correspondences, except for one student who knew eight. A list of taught and untaught words was also generated. Students were required to recognize the letter-sound correspondence and read the words within three seconds to be counted correct.

There was a baseline, intervention, and maintenance phase for the study. The baseline phase lasted about five minutes per student and included a letter-sound and whole word reading probe. During the intervention phase, the *Build a Word-Easy Spelling with Phonics* application was used with each student. Five target words (CVC) were listed on the application's practice mode. The intervention occurred for to five times per week and lasted fifteen minutes. In order to move from intervention to maintenance, the student had to show that they had an upward trend in their letter-sound correspondences for at least three weeks in a row. The last two of these weeks had to show mastery. In the maintenance phase, the letter-sound correspondence and whole word reading words were given every three days using paper instead of the application.

Data Analysis-

Ross and Joseph used a visual analysis of the data including the level, trend, and variability in the students' performance. This visual analysis was conducted across the different phases of the study. The researchers used a TAU-U calculator to calculate the "magnitude of the intervention effects" (p. 282).

Results – In non-technical terms, what does the study show/suggest? How sure can we be? (may use bullet points)

- There was large student growth in the letter-sound correspondence skill for all but one student. They identified that one of the students entered the study with higher letter-sound correspondence proficiency, which could have had many causes. This student English language proficiency was at Early Intermediate and reading level was "A" (reading level program was not noted) which could have helped her letter-sound knowledge.
- There was moderate growth for whole word reading skills. It took more learning trials for there to be changes in the students' performance levels for whole word reading. The app was minimally effective for one student who continued to guess the whole word based on the first letter.
- Students had a higher success rate when they were using letter-sound correspondence to decode untrained words rather than to spell untrained words.
- These growths were maintained over time.

Practical Implications – What are the implications for learning and teaching? What pedagogical suggestions are there that apply the results?

Although the results of this study are limited to the context and participants that were involved, it can begin to open the conversation in education about using letter-sound correspondence and word reading applications with English language learners. Applications like the *Building a Word-Easy Spelling with Phonics* are portable and allows consistency between school and home. This can help families support their students by engaging in targeted learning. Additionally, applications like the one in this study add a game-like feature to basic reading skills. This can increase engagement with students who might need the extra support. Programs like Response to Intervention (RTI) and Multi-Tiered System of support (MTSS) may find this program effective and accessible for students.