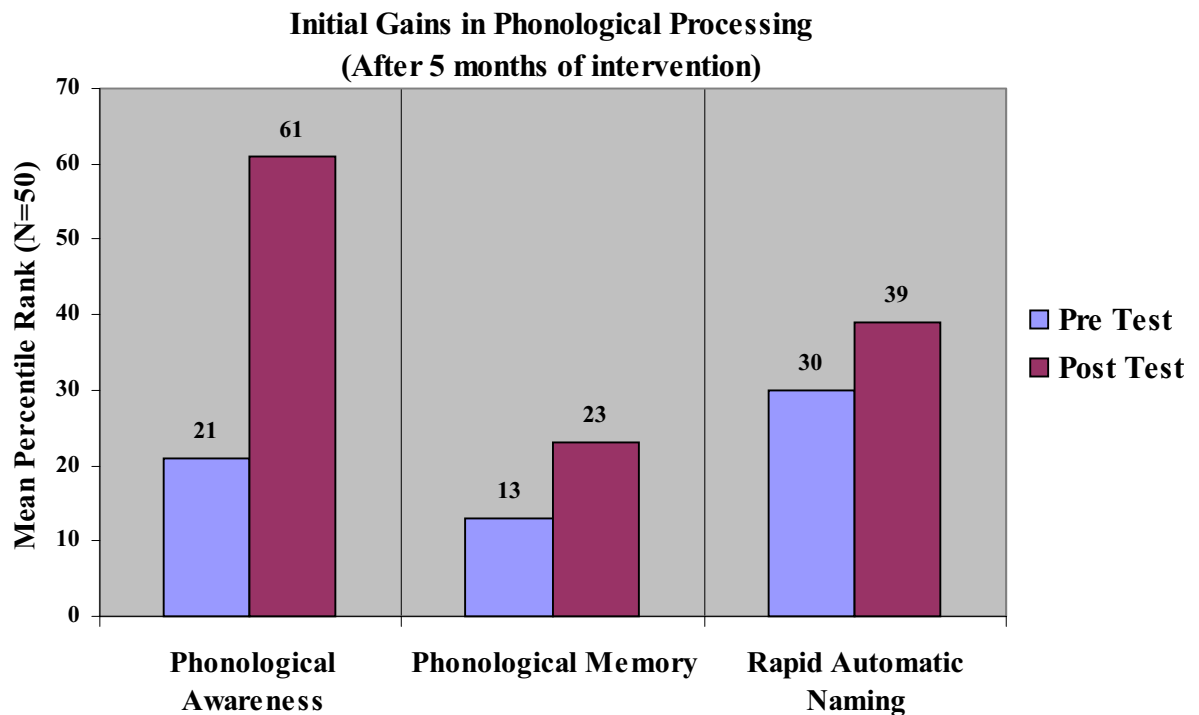


RESEARCH SUPPORTS PHONOLOGICAL GAINS WITH INTERVENTION:  
BARTON READING & SPELLING SYSTEM

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Research conducted at three San Jose area schools<sup>1</sup> with para-educators and elementary age children validates significant growth<sup>2</sup> in Phonological Processing with early intervention. Fifty elementary school children, identified as at-risk for reading failure, took part in school-based Early Intervention Programs with para-professional tutors using the Barton Reading & Spelling System. Students' phonological processing skills were pre and post tested using The Comprehensive Test of Phonological Processing (CTOPP). Across all three measures: Phonological Awareness, Phonological Memory and Rapid Automatic Naming, students made statistically significant gains.



The Barton Reading and Spelling System was designed to quickly train non-professionals to be effective tutors in an Orton–Gillingham (O.G.) based system that incorporates the latest research from the NICHD<sup>3</sup> on phonemic awareness and fluency. (All other published O.G. systems were created before this research was released). Susan Barton, Founder of *Bright Solutions for Dyslexia*<sup>4</sup>, has expanded the traditional O.G. approach, adding phonemic awareness activities before letters are introduced, and building fluency through repeated reading exercises.

For the past year, several San Francisco Bay Area schools used the Barton Reading System as their primary early intervention program. Based on recommendations from the National

<sup>1</sup> Study included both public and private schools, including: Valley View, McAuliffe and Los Gatos Christian.

<sup>2</sup> Phonological Awareness ( $p \leq .001$ ); Phonological Memory ( $p \leq .05$ ); Rapid Automatic Naming ( $p \leq .01$ )

<sup>3</sup> National Institute of Child Health and Development

<sup>4</sup> [www.BrightSolutions.US](http://www.BrightSolutions.US); (408) 559-3652

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Research Council urging early reading intervention, remediation focused on intensive<sup>5</sup>, multisensory, systematic and explicit language instruction. Scripted lesson plans guide tutors in facilitating student mastery of the language continuum, increasing fluidity and flexibility between listening, speaking, reading, and writing.

The complete Barton System is unique not only in the depth of its scope and sequence, but also in its accessibility to non-professionals. Students are screened to rule out significant difficulties with counting words, clapping syllables, or auditory discrimination. Developmentally, students must first master these skills before they are ready to retain phonological processing skills. Likewise, a five-minute phonemic awareness tutor screening ensures that tutors hear sounds well enough to catch their student's mistakes.

Research is limited in the area of phonological gains, yet it is an important research topic because Phonological Processing is part of the primary, underlying foundation for strong reading and spelling skills. Phonological Awareness includes the ability to segment spoken words into smaller parts (Elision) and the ability to blend individually presented segments into whole words (Blending Words). Segmenting words into parts, and blending parts into words, is a precursor to identifying how sounds map to print in words. Phonological Memory incorporates auditory short-term memory (Memory for Digits) and the ability to repeat non-words that range in length from 3 to 15 sounds (Non-word Repetition). Phonological Memory supports learning new written or spoken vocabulary. Rapid Automatic Naming requires efficient retrieval of phonological information from long-term memory, and can significantly impact reading fluency. Rapid naming involves a precise timing mechanism that is important for developing knowledge of common letter patterns in words and for quickly processing visual and phonological information.

Complete phonological development is expected to be in place between four and eight years of age; a deficit is viewed as a common cause of learning disabilities. CTOPP data collected over the year of the project were analyzed to assess the impact of para-professional tutoring using the Barton Reading System with 50 at-risk elementary age students. Students' Phonological Processing improved significantly in all three areas: Phonological Awareness ( $p \leq .001$ ), Phonological Memory ( $p \leq .05$ ), and Rapid Automatic Naming ( $p \leq .01$ ). At the time of post testing, students completed only the early levels of the Barton program. Further gains are expected with further intervention.

This study has national implications regarding untapped resources for improving literacy. Training paraprofessional tutors to facilitate early intervention programs not only helps to increase phonological skills in elementary school children, but also may ultimately serve to dramatically reduce the number of children in an at-risk category for reading failure. Findings from this study support further research.

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<sup>5</sup> Small groups met with tutors twice a week, for an hour at a time.