BrainWare: Implementation and Impact Report
Big Shoulders Fund, Chicago, IL
June, 2018

Overview / Project Scope

During the 2015-2016 school year, six Big Shoulders Fund schools elected to implement BrainWare with students in middle elementary grades. BrainWare SAFARI is a cognitive skills development software program that uses video-game technology, for students ages 6 and older. Students play what they consider to be "video games," but are activities that are actually derived from clinical therapy. In 30 minutes 3-5 times a week, over 10-14 weeks, the program aims to develop each child's cognitive capacity to excel across the curriculum and the cognitive processes required for STEM knowledge and skills. These latter skills include visual-spatial understanding, pattern recognition, sequential processing, and working memory.

Six schools applied for and received funding from Big Shoulders to use BrainWare. This report reflects implementation, usage, and outcomes for 2017-2018. The schools implemented BrainWare in different ways. Some used it exclusively as an activity in their general Extended Day programs while others made it available in Extended Day but also deliberately integrated it into their in school classroom practices. These school choices dictated how many students availed the program. In the former case usage was individualized and numbers were limited while in the latter cases all students in a class utilized the program. For implementation of the program with fidelity, students were to utilize the program for at least 30 minutes at least 3 times a week. School administrators and participating teachers received training from BrainWare and had access to ongoing direct support, as needed.

Data Collection and Analysis

In collaboration with BrainWare, Big Shoulders tracked student usage rates and surveyed teachers and administrators in order to assess implementation, accessibility, and quality of the program. Student growth and outcomes were tracked over time using the ACT Aspire Interim assessments, which are formative in nature, specifically Interim 1 (delivered early fall) and Interim 2 (delivered mid-year). One school was able to provide Interim 3 scores as well. Results of the summative annual assessment are not yet available.

Four of the six schools showed to have sufficient to high usage levels and participating students were able to make adequate progress. Two schools showed no usage data during the year. In schools where BrainWare was used more heavily, ACT Aspire Interim testing showed the following:

- 17 of 29 students demonstrated positive growth in Math from Interim I to Interim II testing
- Growth in number of students reaching the readiness benchmark in Math Interim I to Interim II
- 6 BrainWare users had scores increase considerably, going up by more than 4 points

At St. Mary of the Angels, there were several students with significant usage. Amongst that group of students, the more frequent BrainWare users all saw their Math scores improve from Interim I to Interim III. Two of the three students moved from Below Benchmark in Interim I to Meets Benchmark in Interim III. A few students with less but still sufficient usage had Interim scores increase in each testing and moved from Below Benchmark in Interim I to Meets Benchmark in Interim III.

With consistent usage in one class and otherwise uneven usage, St. Philip Neri viewed the program highly and cited the example of a student whose growth on classwork and math standardized test

scores they attributed to his usage of BrainWare. According to principal, this student's scores rose by 5% and the student specifically referenced BrainWare for the increase in confidence and the capacity to increase scores.

Project Challenges

Low users and non-users indicated that the usage requirements of the program, both in terms of time and frequency, were significant barriers to entry. Schools struggled to carve out the time that the program called for in order to implement with fidelity and see substantive results with students. In two other sites with low or non-usage, the schools pointed to personnel being the barrier or limiting agent. In one site, the school staff member who used it faithfully in the past left the school and there was not someone to consistently maintain it. In another site, the format of the school's Extended Day program changed and the new staff member overseeing the students who could have been utilizing the program, was not able to do so due to a lack of experience and comfort using technology.

Lessons Learned

Feedback from several schools, spanning the usage ranges, suggested that BrainWare's content and potential were highly regarded – the program appeared to have the ability to support students' growth. Based on the outcomes, it is evident that in cases where teachers can dedicate the appropriate time for students to utilize the program, they can benefit from leveraging BrainWare as a tool to support student growth. When schools are able to meet or come close to meeting the time and frequency requirements established by BrainWare, then we see an impact on student outcomes and confidence in ability. The perception of BrainWare as a quality resource, however, did not always translate into higher usage rates at some schools. Several school administrators shared that they did not feel they could faithfully implement the program because of the usage requirements. Transitions and turnover in school personnel also made it quite difficult for some schools to meet those required usage thresholds.

Big Shoulders Fund appreciates the opportunity to pilot such an impactful product in its schools. Based on the lessons learned, Big Shoulders would recommend a targeted implementation that focuses on schools that have a robust Response to Intervention program that would allow the program to target students who enter schools with specific learning needs and/or students that need additional challenge at a specific point in time. Given the wide range of student cognitive achievement in Big Shoulders Fund schools, the rigorous implementation may be more likely in schools well organized to meet the various needs of students. Currently, Big Shoulders Fund works with several schools that are implementing various levels of Response to Intervention support and these would be most likely to use the investment productively.

About Big Shoulders Fund

Big Shoulders Fund provides support to Catholic schools in the neediest areas of inner-city Chicago. Programs supported benefit the hardest working students in Chicago, providing scholarships, special education and academic programs, instructional equipment, much-needed school facility improvements, faculty support, operating grants and more. https://bigshouldersfund.org.

About BrainWare

BrainWare Learning Company is committed to developing and supporting the most effective programs and tools that further the application of sound neuroscience principles to teaching and learning, transforming learning from the inside out. https://mybrainware.com