

Making a Song and Dance About It: The Effectiveness of Teaching Children Vocabulary with Animated Music Videos

Based on BFI Working Paper No. 2024-15 “[Making a Song and Dance About It: The Effectiveness of Teaching Children Vocabulary with Animated Music Videos](#),” by Ariel Kalil, University of Chicago; Susan Mayer, University of Chicago; Philip Oreopoulos, University of Toronto; and Rohen Shah, University of Chicago

Big Word Club, a digital vocabulary learning program, increases students’ knowledge and retention of words included in the program.

Vocabulary acquisition is a crucial part of developing literacy skills, and measuring the effectiveness of various types of vocabulary-improvement programs can help parents, schools, and states decide how to invest in different approaches. Children’s vocabulary skills are often the target of multisensory programs that aim to educate with music, dance, song, and rhymes using animation, live action, or puppetry. In this paper, the authors evaluate the effectiveness of such a vocabulary program, “Big Word Club” (BWC).

BWC is a classroom-based digital literacy program intended to increase the vocabulary of children in preschool through sixth grade as a supplement to their normal classroom literacy curriculum. The program uses animated books, songs, and dance activities that introduce children to one new word per day over the course of a school year, with classroom materials customized by grade level. Some of the words are “big” in that they are not typically in the vocabulary of such young children. For

Figure 1 • Standardized Post-Test and Follow-up Scores



Note: This graph shows the standardized scores for boys and girls separately on the Post-Test (the first assessment of BWC, in March 2018) and Follow-up (the second assessment, two months later). Scores are shown separately for boys and girls.

example, BWC words at the preschool level include gargantuan, primate, prehensile, equator, and slither.

The authors evaluate the BWC program using a [randomized controlled trial](#). Teachers in 72 preschool and kindergarten classrooms across 47 schools in the southwestern United States volunteered to participate in the evaluation for

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Randomized controlled trial: A scientific study in which participants are randomly assigned to either a treatment group receiving the intervention being tested or a control group receiving a placebo or standard treatment. This method is used to objectively evaluate the effectiveness of a new treatment or intervention.

the 2017-2018 school year. The authors randomly assigned each school to either the treatment or control group. Teachers at schools assigned to the treatment group received access to the BWC website, while teachers at control schools did not receive access. Students in both treatment and control were assessed four months after the intervention began and again two months later.

The authors administered a vocabulary assessment at two periods during the school year, first after 4 months of the intervention in March 2018 and second after 6 months of the intervention in May 2018. The researchers customized the assessment to test for children's knowledge and retention of BWC-specific words. They compare scores between the treatment and control groups, and found the following:

- The BWC program effectively increased students' knowledge and retention of words included in the BWC curriculum. Four months after the intervention began, students in treatment classrooms scored between .283 and .307 **standard deviations** higher on the customized vocabulary assessment than those in control classrooms. This effect

persisted two months later, when students in treatment classrooms scored between .252 and .274 standard deviations higher on the same customized assessment than students in control classrooms.

- To test the impact of the treatment on vocabulary skills more broadly, six months after the treatment began students took a standardized vocabulary assessment covering words not included in the BWC videos. The authors found no statistically significant difference in these scores between the treatment and control groups, though they cannot rule out potentially large impacts.

The results from this study suggest that consistent, light-touch educational media employed in classrooms can produce a modest amount of sustained learning. Given its relatively low cost and ease of use, BWC may be a particularly cost-effective strategy for improving the receptive vocabulary of young children relative to other vocabulary learning programs. Moreover, this classroom intervention could be easily delivered to children at home and could yield even bigger benefits.

Standard deviations: a statistical measure of the dispersion or variability of a set of data points from the mean, representing the average distance of each data point from the mean

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ABOUT OUR SCHOLARS



Ariel Kalil

*Daniel Levin Professor,
Harris School of Public Policy*



Susan Mayer

*Professor Emeritus, Harris School
of Public Policy and the College*



Rohen Shah

*PhD Student,
Harris School of Public Policy*



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