

Examining the Effectiveness of OWL as Used in ERF Projects
Results from the OWL Consortium Project

July 2, 2008

Sandra Jo Wilson, Ph.D.
Principal Investigator
Center for Evaluation Research and Methodology
Vanderbilt University

Ann B. Morse, M.A.
Project Coordinator
Center for Evaluation Research and Methodology
Vanderbilt University

David K. Dickinson, Ed.D.
Consultant
Department of Teaching and Learning
Vanderbilt University



VANDERBILT UNIVERSITY
Center for Evaluation Research & Methodology
Vanderbilt Institute for Public Policy Studies
1207 18th Ave. South
Nashville, Tennessee
37212

Executive Summary

The OWL Consortium Project was designed to bring together the results of a series of independent evaluations of Early Reading First programs all using the same preschool curriculum, *Opening the World of Learning*. The Consortium research team recruited preschool programs to share child assessment data and the results of classroom observations. In addition, Consortium researchers interviewed program personnel and curriculum coaches to gather detailed information about professional development, curriculum implementation, and program operations. Eight preschool programs involving over 100 teachers and 2,000 children participated in the project.

The main findings of the OWL Consortium Project are:

Children's Outcomes

- The children in the eight participating Early Reading First programs begin preschool as low achievers. Overall, the predominantly low socioeconomic status children in our sample start preschool performing well below the national average in receptive vocabulary.
- On average, children achieved positive gains on receptive vocabulary across all eight preschool programs in the sample, with two small exceptions. Two programs did not evidence any gains in their first implementation year.
- Though gains were observed across all programs, the posttest average reached the national average of 100 on the PPVT for only two programs. Although children were achieving gains in preschool, many children in the sample were still low achievers when they entered Kindergarten.
- Boys and girls started and finished preschool at similar levels of receptive vocabulary and achieved similar gains during preschool. Other language and literacy outcomes evidenced a similar pattern.
- Though data were limited, minorities and English-language Learners began preschool achieving below the level of their majority peers. However, all groups achieved gains on average in receptive vocabulary, and other language and literacy outcomes during preschool.
- For programs with more than one year of implementation of *OWL*, second, third and fourth year gains are better than first year gains in all cases. These gains are, in some cases, more than double the gains in the first year of implementation. The larger gains in later implementation years are remarkably consistent and quite robust across the different preschool programs.
- Children also experienced gains Language, Alphabet Knowledge, Print Concepts, and Phonological Awareness in each year of implementation and those gains increased from year to year. This effect is remarkably consistent across the different language and literacy outcomes and parallels the findings for the PPVT.
- Even in the absence of a control group, this consistent finding across all programs with multiple years of data makes it hard to imagine that these differences between first year gains and gains in later years are not due at least partly to the better implementation of *OWL* expected as the preschool programs completed their teacher training and got their programs running smoothly.

The Preschool Teachers and OWL Implementation

- There were no clear differences between programs in average teacher experience, though the range in experience across teachers was quite broad, with some teachers just beginning their careers and others having over 30 years in the classroom. Teacher education varied as well, with some programs having a large proportion of teachers with 4-year degrees, while others had a majority of teachers with two-year degrees or CDAs.
- There were clear improvements in classroom quality from Year 1 to Year 2 of implementation, as measured by the Literacy Environment Checklist of the ELLCO. A ceiling effect in the second year of implementation was also evident, with several (if not most) teachers in each program reaching the maximum score for the instrument.
- Teachers also improved in implementation quality from their first to their second year of implementation, as measured by the OWL Implementation Checklist (NOTE: this data provided by three programs).
- Across the different programs, some administrators rated their teachers' skill in implementing OWL higher than others, though teachers were rated relatively highly overall.

Predicting Children's Gains from Classroom and Teacher Quality

- Observational data from the classrooms and qualitative information from interviews provided strong evidence that implementation of the curriculum improved over time. The interviews suggested that Year Two implementation was improved over Year One, both in terms of the quantity of *OWL* units delivered and the quality with which they were delivered. OWL Checklist and Literacy Environment Checklist scores both increased over time. For programs with more than two years, the improvements in curriculum implementation appear to be sustained in later years.
- For the six programs with two years of implementation, year of implementation was significantly associated with gain on the PPVT, Language, Alphabet Knowledge, and Phonological Awareness.
- Correlations between student gains and classroom/teacher quality varied, but were in the expected direction. The correlation between PPVT gains and OWL Implementation Checklist scores was small ($r=.03$). The relationships between the Implementation Checklist scores and Language, Alphabet Knowledge, Print Concepts, and Phonological Awareness were $r=.06$, $r=.43$, $r=.05$, and $r=.35$, respectively. These findings suggest that better implementation of OWL was associated with larger gains, but sample sizes were small for these analyses and multi-level analyses could not be conducted.
- On the Literacy Environment Checklist, the correlations were also in the expected direction with all outcomes, and larger sample sizes permitted some multi-level analyses. With more liberal significance levels, the Literacy Environment Checklist significantly predicted gain on the PPVT ($p<.10$), but no significance was found for the other four outcomes for which sample sizes were smaller.
- Relationships between OWL skill ratings for teachers and the gains achieved by their students were small and non-significant for all five outcomes.

- With the exception of the PPVT, students of teachers with more education achieved greater gains than students in the classrooms of less educated teachers. However, this does not mean that teachers with more education were necessarily better implementers of *OWL*. Quantitative results were inconsistent on this issue, but interviews with program administrators suggested that teachers with more education had an easier time learning the *OWL* curriculum and implementing it with fidelity.

Conclusions

- For programs with more than one cohort of children, the second, third and fourth year gains were better than first year gains in all programs and all outcomes. These gains were, in some cases, more than double the gains in the first year of implementation.
- Because we do not have an appropriately configured control group against which to compare our *OWL* children, we cannot definitively attribute the gains we observed across the preschool year to the *OWL* curriculum. We can imagine, for example, that other children receiving a *different* curriculum might improve just as significantly as those in our sample. However, we know that implementation in the first funding year was limited in all eight programs, and the clear year-to-year differences we see across all outcomes make a compelling case for *OWL*. As more units of *OWL* were delivered in the second implementation year and/or as teachers gain experience in teaching the curriculum, children's gains clearly increased. While the evidence is quite suggestive that *OWL* has some influence on the gains we observed in the second and third implementation years, we cannot make definitive causal statements about the effects of *OWL* or rule out other explanations for the findings.