What Works Clearinghouse

ies INSTITUTE OF EDUCATION SCIENCES

Elementary School Math April 2009

Bridges in Mathematics

Effectiveness

No studies of *Bridges in Mathematics* that fall within the scope of the Elementary School Math review protocol meet What Works Clearinghouse (WWC) evidence standards. The lack of studies meeting WWC evidence standards means that, at this time, the WWC is unable to draw any conclusions based on research about the effectiveness or ineffectiveness of *Bridges in Mathematics.*

Program Description[1]

Bridges in Mathematics, published by the Math Learning Center (MLC), is an elementary school math curriculum covering kindergarten through fifth grade that focuses on problem solving and skill building, and applies a combination of whole-group, small-group, and independent activities. Lessons incorporate visual models, including manipulatives, to reinforce learning. The program was designed to implement the principles and standards for school mathematics from the National Council of Teachers of Mathematics (2000) and was written and field-tested by teachers. It was developed with initial support from the National Science Foundation.

The WWC identified 23 studies of *Bridges in Mathematics* that were published or released between 1985 and 2008.

Eighteen studies are within the scope of the review protocol and have an eligible design, but do not meet WWC evidence standards.

- Two studies do not establish that the comparison group was comparable to the treatment group prior to the start of the intervention.
- Sixteen studies have confounding factors, such as having only one unit of analysis in one or both conditions, which makes it impossible to attribute the observed effect solely to *Bridges in Mathematics*.

Four studies are out of the scope of the review protocol because they have an ineligible study design that does not meet WWC evidence standards, such as having no comparison group.

One study is out of the scope of the Elementary School Math review protocol because it is not a study of effectiveness.

1. The descriptive information for this program was obtained from a publicly available source: the program's website (www.mathlearningcenter.org/curriculum/bridges/about.asp, downloaded November 2008). The WWC requests developers to review the program description sections for accuracy from their perspective. Further verification of the accuracy of the descriptive information for this program is beyond the scope of this review.

References

Studies that fall outside the Elementary School Math protocol or do not meet WWC evidence standards

Hansen-Powell, P. (2007). Constructing knowledge. *Connect Magazine, 20*(3), 1–4. The study is ineligible for review because it does not examine the effectiveness of an intervention.

The Math Learning Center. (2002). *Bridges case study—grades 2/3: Portland, Oregon*. Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2003). *Bridges in the classroom: Teacher feedback, student data, & current research*. Salem, OR: Author. The study is ineligible for review because it does not use a comparison group.

The Math Learning Center. (2006). *Bridges case study—grade 2: Bend, Oregon.* Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2006). *Bridges case study—grade 2: Cheyenne, Wyoming*. Salem, OR: Author. The study is ineligible for review because it does not use a comparison group.

The Math Learning Center. (2006). *Bridges case study—grade 2: Forest Lake, Minnesota.* Salem, OR: Author. The study is ineligible for review because it does not use a comparison group.

The Math Learning Center. (2006). *Bridges case study—grade 2: Reno, Nevada.* Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2006). *Bridges case study—grade 3: Canby, Oregon.* Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2006). *Bridges case study—grade 3: Eastern Washington*. Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2006). *Bridges case study—grade 3: Fort Bridger, Wyoming.* Salem, OR: Author. The study is ineligible for review because it does not use a comparison group.

The Math Learning Center. (2007). *Bridges case study—grade 2: Middlebury, Vermont.* Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2007). *Bridges case study—grade 2: Peoria, Arizona.* Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2007). *Bridges case study—grade 3: Kodiak Island Borough school district, Kodiak, Alaska*. Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2007). *Bridges case study—grade 4: Bridgeport Elementary, Bridgeport, Washington*. Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2007). *Bridges case study—grade 4: Kodiak Island Borough school district, Kodiak, Alaska*. Salem,

References *(continued)*

OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2008). *Bridges case study—grade 3: Bridges classrooms in Oregon.* Salem, OR: Author. The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.

The Math Learning Center. (2008). *Bridges case study—grade 3: Rainier Elementary, Rainier, Washington*. Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2008). *Bridges case study—grade 4: Bridges classrooms in Oregon*. Salem, OR: Author. The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.

The Math Learning Center. (2008). *Bridges case study—grade 4: Sunnyslope Elementary, Wenatchee, Washington*. Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2008). *Bridges case study—grade 5: Carus Elementary, Oregon City, Oregon*. Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2008). *Bridges case study—grade 5: Charter school of Morgan Hill, Morgan Hill, California.* Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2008). *Bridges case study—grade 5: Evansville Elementary, Evansville, Wyoming*. Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.

The Math Learning Center. (2008). *Bridges case study—grade 5: Newberry Elementary, Wenatchee, Washington.* Salem, OR: Author. The study does not meet WWC evidence standards because the measures of effect cannot be attributed solely to the intervention—there was only one unit of analysis in one or both conditions.