

Staff Facilitation that Supports Family Learning at Exhibits

REVEAL



Findings and Recommendations from the REVEAL Project

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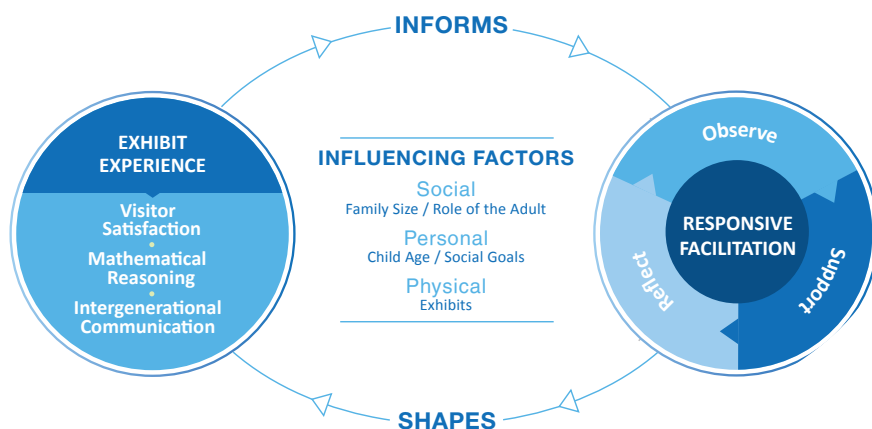
Front-line staff are an integral part of the visitor experience at museums and science centers across the country, facilitating activities and programs, leading classes, and more. But do these staff make a difference for visitor learning? And what are the most effective facilitation strategies and approaches? In 2013, the Oregon Museum of Science and Industry (OMSI) received funding from the National Science Foundation for a three-year study, Researching the Value of Educator Actions for Learning (REVEAL), to begin to address these questions.

Building on the *Design Zone* exhibition, REVEAL focused particularly on staff-facilitated family learning at interactive math exhibits. Over the course of three years, the team worked with expert educators, collected video and survey data from hundreds of staff-visitor interactions, and developed and tested a model of facilitation for supporting family learning and engagement.

REVEAL Facilitation Model

The facilitation model developed through the REVEAL project reflects the ways that we observed expert educators supporting family learning and responding to the unique needs and interests of each group.

As shown in the diagram, the model identifies the team's three interrelated visitor experience goals (*satisfaction, intergenerational communication, mathematical reasoning*), outlines the cycle of responsive facilitation (*observe, support, reflect*) that educators used to support these goals, and highlights the physical, personal, and social factors that influenced the nature and outcomes of the interactions.



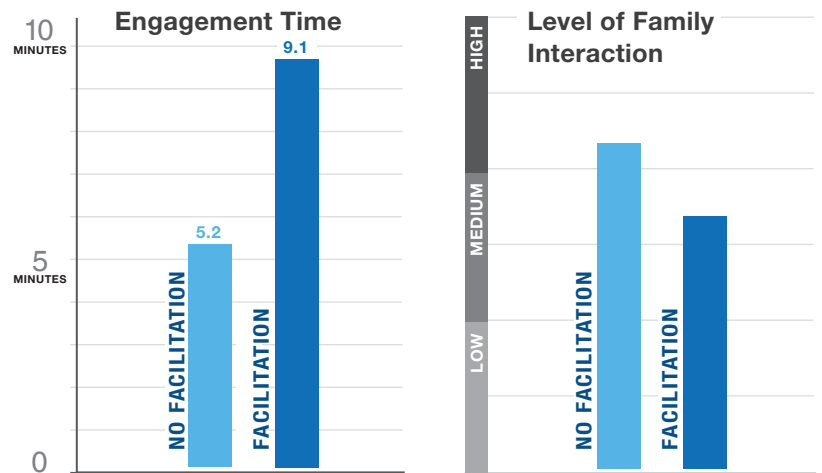
Educators used a variety of support strategies as part of the responsive facilitation cycle, including orienting visitors, providing challenges to guide and extend engagement, explaining key aspects of the mathematics, and showing appreciation.

Study Findings

After developing the model, the team trained four new educators on the REVEAL facilitation approach and conducted a video and interview study with 263 visitor groups at three different exhibits to compare the outcomes of family learning experiences with and without staff facilitation. *Overall, the study found that facilitation had a positive impact on families, although that impact varied by outcome, exhibit, and educator.*

Key findings:

- Facilitation by trained museum educators increased family engagement time and general visitor satisfaction.
- The impact of facilitation on mathematical reasoning varied by exhibit. Facilitation had a positive impact at two exhibits and no impact at the third.
- Facilitation decreased the level of family interaction within each group (intergenerational communication) and had no impact on awareness or enjoyment of the math content.
- The differences in visitor outcomes across the three exhibits and four educators were often as large or larger than the effects of the facilitation condition.



Recommendations for Museums and Educators

- 1 Provide ongoing, quality professional development**—The REVEAL study showed that research-based training for educators can make a difference for family learning and engagement. Like classroom teachers, museum educators need opportunities to reflect on their work, learn from their peers, and try new facilitation strategies and approaches.
- 2 Carefully consider the goals for educators working with families**—This study highlighted how staff facilitation can have positive impacts in some contexts and for some outcomes but not others. Museums should consider where staff are of most value, how to train staff to align with the organization’s educational goals, and when families should be left to engage on their own.
- 3 Find opportunities for educators and researchers to collaborate**—The key to REVEAL’s success was the close collaboration between museum educators and researchers throughout the study, providing unparalleled professional experiences for the educators and invaluable, practical insights for the researchers.
- 4 Design exhibits with staff and families in mind**—Each of the three REVEAL exhibits was developed with specific “facilitation affordances,” which staff used frequently to support visitor engagement and learning. The study suggests that careful consideration of exhibit design is important for ensuring successful staff-family interactions.

Resources

Visit the project website for additional resources, research findings and instruments, and a video-based professional development program for educators: <https://REVEAL.terc.edu>.

Find more information about Design Zone at the exhibition website: <https://www.oms.edu/exhibitions/designzone/>.



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