HERO ELEMENTARY RESEARCH BRIEF: EDUCATIONAL IMPACT

"The program...teaches kids about science in a different way that makes them have a more positive outlook like, "Oh, science isn't only for people that are really smart." Like, "Anybody can do it. It's for anyone that wants to. Anyone that's curious enough can be really good at science."

–Summer School Educator

HERO ELEMENTARY is an educational media initiative focused on improving school readiness in science and literacy for children grades K-2. This transmedia universe ignites children's natural curiosity and broadens their understanding of how the world works and empowers them to make a positive difference in their communities.

Researchers have found that through dynamic narratives, transmedia engages multiple literacies - textual, visual, and media, including multiple intelligences. (Herr-Stephenson, Alper, & Reilly 2013). Thoughtful integration of these digital resources may have a significant educational impact on children. For example, Lorente, Pasnik & Moorthy et al. (2015) found that children participating in a transmedia math program learned more math compared to their peers. Builiding on the strength of transmedia on children's education, the Hero Elementary program integrates TV shows, e-books,digital games and hands-on activities to provide students with a rich and playful learning experience.

INDEPENDENT* STUDIES OF THE HERO ELEMENTARY PROGRAM SHOWED THAT:

Children's understanding of science content and practices improved

Hero Elementary students completed digital and hands-on activities on content aligned to the Next Generation Science Standards. After 8 weeks of the program, students demonstrated learning gains in the following areas:

- Changing motion
- Classifying matter
- Animal parents and their young
- Animal body parts

Children's ability to articulate scientific thinking improved

Hero Elementary students were more likely to provide explanations for classifying animals through behavioral, structural, or lived experiences, compared to their demographically matched peers. .

"I remember a human's eye is like a camera... Also,a bird's claw is like a rake from a garden."

–Hero Elementary Summer School Students

*WestEd conducted independent studies of children's use of the Hero Elementary program over 8 weeks.

Children's attitudes towards science changed

Educators have noticed positive changes in students' attitudes towards science and learning, including:

- Increased student self-concept
- Increased student curiosity
- Positive attitude change towards learning

"I learned to persevere ... when you try and try."
-1st Grader

Children's attitudes towards technology changed

By the end of the Hero Elementary program, students saw technology as a powerful learning tool rather than a device for watching videos.

Children were engaged throughout digital and analog activities

Researchers coded student behaviors in a K-2 after-school program implementing Hero Elementary.

- 94% of observed behaviors demonstrated concentration while watching an episode of Hero Elementary as a group and engaging in educator led co-viewing discussions.
- 96% of observed behaviors demonstrated concentration while independently watching an episode of Hero Elementary or playing a digital game.
- 87% of observed behaviors were on-task and demonstrated concentration while using the e-book and the Science Power Notebook.

"It supports [science learning] by starting early...and then by putting a fun and interesting twist to it... They are obviously learning while they're doing these fun activities, whether it be hands-on or on the tablets."
– After School Educator

Twin cities PBS is a recipient of the Ready To Learn Initiative, supported by the U.S. Department of Education, The Initiative brings educational television and digital media resources to children, promoting early learning and school readiness, with an emphasis on supporting children from low-income, underserved communities.

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