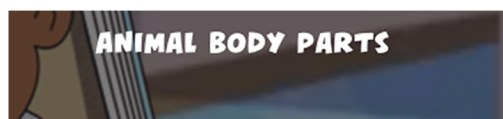


HERO ELEMENTARY RESEARCH BRIEF: EDUCATIONAL IMPACT DURING DISTANCE LEARNING



HERO ELEMENTARY's education program features thematic "playlists" or collections of educational media assets. Each resource embeds grades K-2 *Next Generation Science Standards*. The *Hero Elementary* program was modified to fit the needs of distance learning during school closures caused by the Covid-19 pandemic. The developers of *Hero Elementary* had a unique opportunity to examine the direct impact of the modified distance playlists on student engagement and learning.



1	A cartoon girl with a magnifying glass.	Animal Clues	A blue button with a scissors icon and the word "MAKE".	A white star on a black background.
2	A cartoon boy with a magnifying glass.	Parts of an Animal Body	A blue button with a pencil icon and the word "DRAW".	A white star on a black background.
3	A cartoon boy with a magnifying glass.	Amazing Animal Match-Up	A blue button with a play button icon and the word "PLAY".	A white star on a black background.
4	A cartoon boy with a magnifying glass.	Predicting	A blue button with a play button icon and the word "WATCH".	A white star on a black background.
5	A cartoon boy with a magnifying glass.	Animal Parts Books!	A blue button with a book icon and the word "READ".	A white star on a black background.
6	A cartoon boy with a magnifying glass.	A Tail of One Kitty	A blue button with a play button icon and the word "WATCH".	A white star on a black background.
7	A cartoon boy with a magnifying glass.	My Body	A blue button with a pencil icon and the word "DRAW".	A white star on a black background.
8	A cartoon boy with a magnifying glass.	Animal Copycats	A blue button with a scissors icon and the word "MAKE".	A white star on a black background.

EACH PLAYLIST FEATURES:

- Animated PBS Kids television episode
- Digital or analog game
- Non-fiction e-articles
- Hands-on science activities
- Science Power Notebook
- Educator assets
- Child enrichment resources for parents/caregivers

IMPACTS* OF THE HERO ELEMENTARY DISTANCE PROGRAM ON STUDENT ENGAGEMENT AND LEARNING

The study began with 17 grade 2 teachers doing face-to-face instruction with 407 children. Due to the school closures, instruction transitioned to distance learning two weeks into the study. Participating schools included: (1) at least 40% Hispanic students; (2) 30% English language learners; and (3) 40% students who qualified for free or reduced-price lunch.

The main findings showed that the *Hero Elementary* distance program:

- engaged second grade students in science activities
- connected with all students
- improved students' science knowledge

*WestEd conducted independent studies of children's use of the *Hero Elementary* program over 12 weeks.

HOW DID THE HERO ELEMENTARY DISTANCE PROGRAM IMPACT CHILDREN?

EXPOSED STUDENTS TO SCIENCE

Hero Elementary gave students the opportunity to be involved in scientific activities to which they typically would not have exposure as science is often introduced in third grade.

"Because they don't do science, at all, I think it's great, because it has a lot, it's teaching them the scientific method, all the steps. It's a fun way. I feel like that's awesome. Even like the vocabulary that they're using, I feel like it was age appropriate, especially, for the demographic that we're in, that they're able to relate to and they're able to understand." -Grade 2 teacher

"Before I started with the *Hero Elementary* playlists, it was a lot of a little bit here, a little bit there. There's not a lot of these big units like the *Hero Elementary* has been providing, so it's definitely been helpful for me as a first-year teacher." -Grade 2 teacher

IMPROVED STUDENTS' SCIENCE KNOWLEDGE

Teachers appreciated that the videos provided clear definitions of science concepts.

"With the distance learning, when I would send them the hands-on activity video, I love that that was a really common thing that [the video] always said, "We're going to use our Superpowers of Science," because... I think that was when the dots were starting to connect, with each activity we do is building on the next. I think that was definitely educational, those Superpowers of Science." -Grade 2 teacher

Students who participated in the *Hero Elementary* program performed better on a NGSS-aligned science assessment,* even during the pandemic.

CONNECTED WITH ALL STUDENTS

"My brain works differently, too, so I really like AJ." -Grade 2 student with autism

"I have a couple of students with IEPs who, academically, are at least two grade levels below, and they did an excellent job engaging with the activities. They were able to access everything you can say even with the eBooks, having it read, they were able to fully be a part of almost every science activity we did without really even having to differentiate anything. Which was really cool for them because they were fully engaged in the whole activity that the rest of the class did." -Grade 2 teacher

"They liked that there was Spanish speaking or Spanish characters." -Grade 2 teacher

ENGAGED STUDENTS DURING IN-PERSON AND VIRTUAL IMPLEMENTATION

Students found the episodes and games to be interesting, engaging, and easy to use during in-person and distance learning.

"[The] Movie Theater Meltdown [episode] was hysterically funny. They [students] asked to see it again. They thought it was just funny, funny, funny." -Grade 2 teacher



*These differences in scores were positive, but not statistically significant.

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. The contents of this document were developed under a cooperative agreement from the U.S. Department of Education Award Number U295A150012). However, these contents do not necessarily represent the policy of the U.S Department of Education, and you should not assume endorsement by the federal government



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