

Utilizing the Library System and Virtual Reality Learning Experiences To Engage Rural and Latiné Communities in Polar Research | AWARD 2116046

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Project Description

Expedition VRctica will work with rural librarians, bilingual science communicators, polar scientists and a technical team to create a series of five bilingual virtual reality (VR) experiences, engaging users as polar explorers of exotic and extreme environments to enhance STEM understanding and appreciation.

Key Achievements

- Created librarian cohorts, with particular focus on forming implementation strategies to engage with the Latiné population in rural Wisconsin
- Shown VR experiences can increase empathy, create embodiment and facilitate informal learning
- Created public deployments of created content, capturing high-frequency logging of events for secondary analysis

Audience & Settings

Audience: Underserved rural communities in Wisconsin, particularly the Latiné community.

Disciplinary area: Research in the polar regions is the primary driver of the content. Other research questions will be motivated from the fields of computer science, virtual reality and education.

Learning environment: Libraries and other informal learning spaces/events

Access and Inclusion

The project will create a new channel for disseminating polar science, working first with underserved rural Latiné communities in Wisconsin to create a new network between rural communities and university researchers. Involving rural librarians in the co-design process will produce new ways for rural libraries to engage their local communities and their growing Latiné populations with polar science learning experiences



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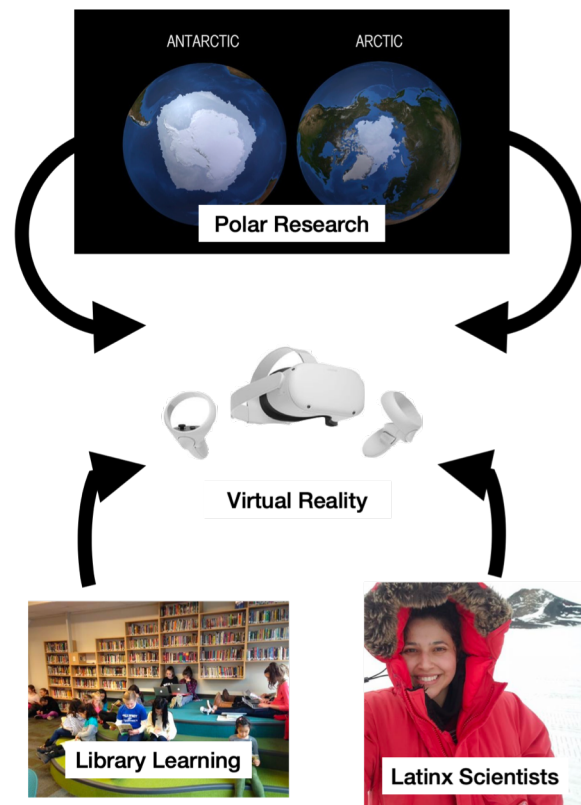


Figure 3: Shows the average for participants ability to identify major life events and challenges for Adélie penguins pre and post their virtual experience.

Figure 1: (Left) Shows the concept for the project at large. (Right) Shows a poster for one of the developed experiences that showcased at library outreach events around the state of Wisconsin.



Figure 2: Shows various aspects of the virtual penguin experience. From left to right, the user sees themselves as a penguin in a mirror, picks up rocks with their beak to build a nest, does a matting dance and defends the nest from a Skua attack.

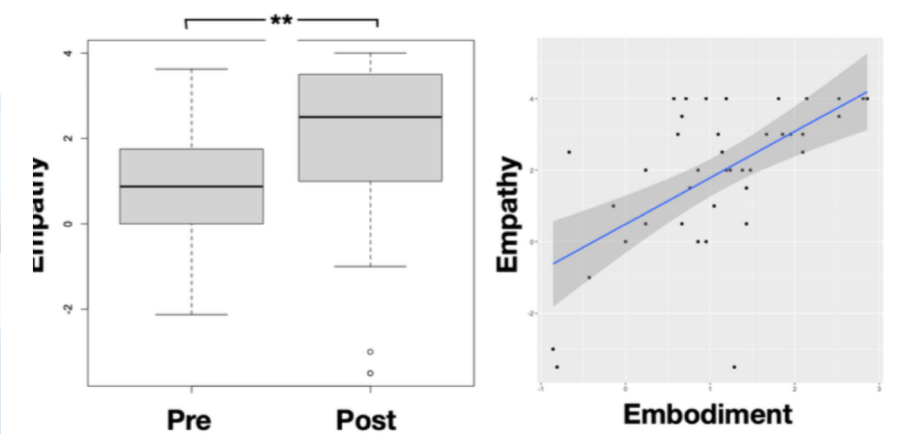


Figure 4: (Left) Shows the significant change in empathy pre and post experience. (Right) Shows the significant correlation between empathy and embodiment.