WELL-BEING BY DESIGN FELLOWSHIP 2025

CASE STUDY

The 2025 Well-Being by Design Fellows participated in a four-month professional development program for designers and producers of interactive kids' technology and media. They met online to workshop their current projects, network with other fellows, and gain insights from research and industry leaders as they worked to incorporate principles of well-being into their designs. We are delighted to share highlights from each fellow's experience.

Danny Pimentel

Danny Pimentel is an Assistant Professor of Immersive Media Psychology and Director of the Oregon Reality Lab at the University of Oregon where he develops immersive storytelling experiences that address social/environmental issues. His projects have been supported by Meta, Snapchat, Unity 3D, and National Geographic, among others.

Growing up in Miami, the ocean has always been more than just water to me—it's tied to my culture, community, and well-being. That connection drives my passion for protecting it. One of the most important ways to do that is by investing in a STEM workforce that reflects the diversity of our society. Yet, despite ongoing efforts, the number of scientists from underrepresented communities remains stagnant due to various factors:

+ **Identification:** Students may not personally know a marine scientist, or fail to identify with their depictions in media, in part because they don't look like them or share similar cultural identities, a gap adversely affecting interest in science careers.

+ **Experience:** Access to the ocean and experiential science activities, such as diving, are limited due to socioeconomic and geographic barriers, limiting students' ability to understand marine science career pathways.

UNIVERSITY OF OREGON

PRODUCT: VESL (Virtual Excursions for Science Learning)
TARGET AGE: US teens (13-18)

→ **OREGONREALITYLAB.COM/DANNY-PIMENTEL**

VESL (Virtual Excursions for Science Learning) is a social virtual reality (VR) marine science career simulator. Users step into the shoes of a marine biologist and embark on a marine science excursion deep in the Pacific ocean, working together to study marine food webs. Based on a real-world marine science excursion, users gain experiential knowledge about marine science careers, key concepts in marine biology, and the unique instruments and processes used by actual scientists to study the ocean.

+ **Science Identity:** Without identification and experience, views of science can sour, interest in STEM careers can decline, and science as a whole becomes less a part of a person's identity.

OUR PROJECT

VESL was developed to address this gap, and provide youth with an opportunity to build their science identity and connection to the ocean through social, experiential learning in VR.

> *Learning from industry experts, researchers, and youth design teams allowed me to improve my approach to both re-designing VESL, and implementing immersive storytelling more broadly, ensuring that the unique considerations of emerging technology are leveraged to add value to our end users' lives.*

WHAT COMPONENTS OF WELL-BEING DOES MY PROJECT ADDRESS?

VESL currently addresses several dimensions of the RITEC framework, namely **identities**, **competence**, **relationships**, and **autonomy**. By enabling users to design their virtual avatar, and embody it during the mission, users quite literally see themselves as a marine biologist (identities). Once aboard the ship, users must collaborate with other users (relationships) to maneuver the ship, deploy real-world scientific instruments, and gain hands-on experience conducting marine biology research (competence). Through this process, users gain points, unlock achievements, and discover various species of plankton (autonomy) as they beat the clock.

HOW CAN MY PRODUCT BETTER ADDRESS CHILDREN'S WELL-BEING?

Based on feedback from WBxD fellows, staff, alumni, and the Youth Design Team, we identified three improvements that would enable VESL to more effectively contribute to well-being outcomes.

+ **Increase Character Customization:** Scientists have personalities too, and what people wear - even at work - can reflect identity and support well-being. Currently, users choose between four roles and four colored vests and hard hats. We're expanding avatar customization to let users express themselves and feel more connected to their scientist role.

+ **Improve on-boarding:** Users can feel lost in VESL as they orient themselves to the world. Text instructions alone don't work well in immersive environments. We're redesigning onboarding to build confidence and clarity—starting the journey in a briefing room, adding voice-over narration, and providing clearer descriptions of each role and its duties.

+ **Incentivize exploration of ship:** While users tour the ship during onboarding, there's little reason to revisit areas like the mess hall or dorms during the mission. To encourage exploration and connection, we're adding achievements and designing mission moments that bring players together in these areas before, during, and after gameplay.

REFLECTION

Feedback emphasized making VESL more welcoming, accessible, and reflective of the full experience as a marine biologist. Specifically, two key takeaways are significantly shaping the future of VESL:

+ **Humanize Scientists:** Real scientists don't work nonstop—they rest, connect, and recharge. Players want the full story, so we're integrating moments of play, socialization, and downtime as essential parts of the mission, not just optional extras.

+ **Support Cross-Platform Access:** Not all students want—or are able—to use VR. To ensure inclusivity, we're expanding access across platforms so users can engage meaningfully whether they're in a headset, on a desktop, or using other devices.

HOW CAN MY PRODUCT BETTER ADDRESS CHILDREN'S WELL-BEING?

+ **Accessible Experiential Learning:** VESL validates and positions social virtual worlds as viable tools for simulating STEM careers in ways that are otherwise impossible for most youth. I hope that more designers lean into this space, and leverage social VR as an informal learning tool across STEM disciplines.

+ **Best Practices:** In social VR, users share virtual space but come from varied physical settings—noisy homes, limited space, or shared environments. Designers should support flexibility with seated modes, adjustable audio, and inclusive onboarding to ensure all players can participate fully, regardless of their real-world circumstances.

+ **Pathways to Science:** A player's first marine science expedition in VR can spark lasting interest. Designers should leverage this momentum by offering follow-up resources, such as real-world crew bios or links to local programs that help them see a viable pathway to their place in the scientific community.

LOOKING AHEAD

VESL's next phase of development focuses on (a) expanding accessibility across platforms, and (b) redesigning the experience to better address user well-being. Overall, we want social VR experiences like VESL to function as accessible informal science education, and playspaces where youth can experiment with various science careers and mold their STEM identities.

Thanks to the insights gained through this fellowship, I am now working with HTC VIVERSE to adapt VESL to their platform, allowing users to access the experience on both mobile devices and VR headsets By redesigning VESL on VIVERSE, I will be able to leverage the RITEC framework intentionally from the ground up, and implement the changes noted previously to better meet the needs of our players.

VESL was envisioned as a hub to simulate dozens of marine science careers in a playful, social way. We hope this redesign will allow us to expand our offerings beyond our single marine biology cruise to other career pathways in the ocean sciences. As such, we are eager to connect with industry and academic partners that can help bring our vision to life, whether through subject matter expertise, development assistance, or research collaborations.

SESAME WORKSHOP

Joan Ganz Cooney Center

For more information about the Well-Being by Design Fellowship program, please visit joanganzcooneycenter.org/fellowship2025