



Studio Xplorer: A VR Learning Tool for XR Onboarding

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Abstract. Studio Xplorer is a virtual reality (VR) learning tool designed to lower barriers to entry for new XR users and introduce them to Studio X, the University of Rochester Libraries' hub for extended reality (XR). Rooted in Studio X's mission to make XR accessible, the project began as an undergraduate fellowship and evolved into a collaborative effort involving staff, students, and faculty. The application features a digital twin of Studio X and uses a playful escape room experience to teach users how to operate VR headsets, navigate XR environments, and explore Studio X's resources. Over two years, Studio Xplorer progressed from concept to working demo, requiring a multidisciplinary team, diverse skill sets, and resources including software tools, technical expertise, and creative design. This presentation will share the inspiration behind Studio Xplorer, its alignment with Studio X's mission, and its iterative development process. I will discuss the timeline, the roles of the project team, and the resources and skills needed to bring the project to life. Additionally, I will share insights into the ongoing assessment of Studio Xplorer, focusing on its effectiveness as a learning tool and its role in fostering equitable access to XR. By highlighting the challenges and successes of this project, this presentation aims to inspire the development of impactful tools for XR education.

Keywords: XR Education, Virtual Reality, Digital Twin, XR Introduction, Interactive Learning.

1 About the Project

Welcome to Studio Xplorer! Step into the role of our newest robot employee as you embark on your first shift. Start by tidying up the space and getting familiar with the VR controls—but watch out, Quad Fox might be up to no good! In this fun and playful game, you'll explore unique worlds while learning all about Studio X. Feed a dragon, shake hands with King Ground Boi, and imagine new realities with Studio Xplorer! Studio Xplorer is an educational VR project developed by staff and students, originally launched as part of an undergraduate fellowship. Featuring a digital twin of Studio X's physical space, the application introduces users to XR, Studio X, and VR hardware through an engaging escape room experience.

1.1 Learning Goals

Studio Xplorer aims to introduce new users to XR and Studio X, inspire further engagement with the space, and highlight the impact and relevance of XR technology.

1.2 Project Timeline

Development of Studio Xplorer commenced in fall 2021 when an undergraduate fellow initiated the creation of a digital twin of Studio X's physical space, emphasizing narrative development, scene construction, and immersive design. This work continued through spring 2022 and fall 2023. In spring 2023, the existing VR onboarding experience, Meta's First Steps, was evaluated with six new VR users. A structured brainstorming session utilizing "How Might We..." statements identified key areas for improvement. The project was subsequently presented at Rochester Institute of Technology's Frameless XR Symposium, where 11 users participated in testing. During this phase, the first and second iterations of the user interface (UI) were developed. By spring 2024, four additional users tested the experience, refining game pacing and enhancing UI elements such as task indicators and icons. However, development slowed following the departure of the primary developer. Despite this setback, informal playtesting continued, revealing persistent bugs and usability challenges. In fall 2024, a new developer joined the

team, resuming formal research with a focus on usability and playability as the project neared completion. Additional interviews were conducted, and 13 users tested the experience at the Frameless XR Symposium. By spring 2025, another developer was onboarded, successfully addressing most major bugs.

1.3 Future Directions

In fall 2025, Studio Xplorer will be integrated into two undergraduate courses taught by PhD candidates from the Warner School of Education. This phase will include a structured evaluation of the application's effectiveness through a formal assessment framework. A pre- and post-survey will be administered to measure user engagement, learning outcomes, and the overall impact of the experience on students. Additionally, qualitative feedback will be collected to identify areas for further refinement. The findings from this study will inform the next stage of development and contribute to broaden discussions on the role of XR in education. The results will be synthesized into a scholarly publication, with the goal of disseminating insights to the academic community and advancing research in immersive learning environments.



Fig. 1. Screenshot of the Studio Xplorer application displaying a digital representation of Studio X.

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References

1. Studio X Homepage, <https://www.library.rochester.edu/spaces/studio-x>, last accessed 2025/3/25.
2. Studio Xplorer Homepage, <https://www.library.rochester.edu/projects/studio-xplorer>, last accessed 2025/3/25.