THE USC ANNENBERG NORMAN LEAR CENTER
MEDIA IMPACT PROJECT

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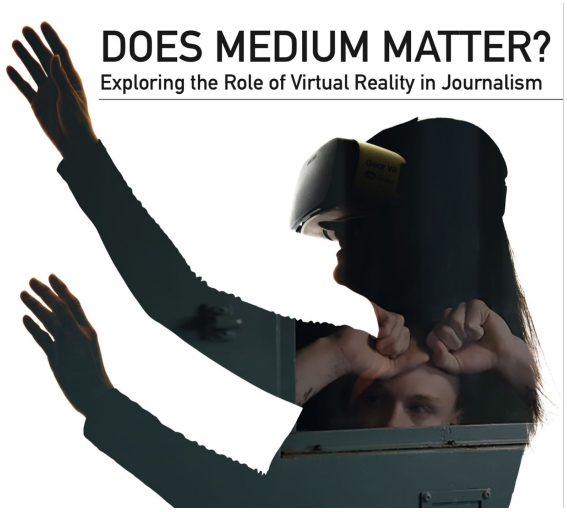
USC Norman Lear Center and FRONTLINE Explore Best Uses For Immersive Technologies in Journalism



Los Angeles, CA--: As news organizations explore the power of virtual reality for journalism, the USC Annenberg Norman Lear Center's Media Impact Project (MIP) released findings today that point to best practices in the field. Key among the results are that VR is the most effective way to create a feeling of "being there," but the novelty of the experience could distract people from absorbing the facts of the story.

In a new study with FRONTLINE and Emblematic Group, MIP researchers compare the effects of viewing the same material over separate platforms, including room-scale VR with headset, 360 video, 360 immersive video and 2D. The researchers sought to determine whether viewers take away different knowledge, attitudes or behaviors after experiencing the same materials on different platforms, and to learn what types of stories are best-suited for the relatively expensive and labor-intensive immersive technology.

Viewers watched two separate VR journalistic pieces: *After Solitary,* an intensely personal account of a man's journey in solitary confinement; and *Greenland Melting,* an action-packed ride over and under the earth's glaciers with scientists exploring climate change. The stories were produced by FRONTLINE and Emblematic Group, the pioneering VR production studio. The study was funded by the John S. and James L. Knight Foundation through a grant to investigate best practices and the ethics of immersive virtual reality journalism. MIP is a media research project based at the University of Southern California Annenberg's Norman Lear Center, whose mission is both to study the impact of media on viewers and to offer recommendations on how to improve media for the social good.

To conduct the research, participants were randomly assigned to experience stories in room-scale VR or a comparison group, such as 360 video or 2D video. They were given a pre- and post-survey to ask about their experience as well as to measure changes in knowledge, attitudes, and behavioral intention. *Greenland Melting* participants were shown a second version after the post- survey and asked to compare their experiences in small groups. These studies had relatively small samples that do not fully represent the U.S. population yet, they are a promising

step in understanding how VR technology can be leveraged to enhance the impact of journalistic content.

The Findings

Key among the findings were that VR helped people become immersed in the subject, but at times the immersion caused them to focus more on engaging with the environment and, compared to the same experiences on other platforms, remembered details of the story less accurately.

In *After Solitary*, participants gained a personal understanding of the prison inmate (Kenny), his physical state and emotional journey. In *Greenland Melting,* the environment helped illustrate key scientific concepts, such as ducking underwater to see firsthand how warmer ocean currents help erode the base of a glacier. Other findings indicate the presence of a guide or central character gave participants context for the physical experience and was extremely valuable. Although participants wanted appearances to be more naturalistic, the benefits outweigh the costs and provided some of the most striking moments of both *After Solitary* and *Greenland Melting*. VR experiences absorb users' attention for short, intense periods of time. VR inspires users to seek more information afterwards, but is not the most effective medium to commit facts to memory.

Novice users appreciated VR experiences and were inspired to look for more content afterwards, although they did not foresee easy access to the hardware in the near future. For VR producers, this means users may not have access to hardware in everyday life. Distribution will remain a challenge, and research indicated that live events could be an effective way to build excitement for VR experiences or capture gatekeepers' attention. Still, web-based, sharable content remains the bulk of any piece's audience.

Researchers offer the following recommendations to VR journalists:

- Use Room-scale VR to create a feeling of "being there," promoting understanding and perspective.
- Balance incentives to explore the space with the need for participants to absorb information, as the exploration presents potential for distraction from complex narratives or information-dense sequences.
- Give participants total "agency" to explore and discover the virtual world, and reward their curiosity about the environment. Design the freedom to explore and discover information, without working at cross purposes to the information you want to impart.
- Clarify the "rules" of the environment. Visual cues about spatial environments, such as where the horizon is or where the walls of a room meet, or using controllers to represent a participant's hands, can be used to help participants stay oriented between scenes.
- Include realistic guides that can provide context and information to the story.
- Improve technical and narrative aspects that interfere with immersion to improve participants' ability to stay with the flow of information and not feel like they were "missing out."
- Use VR experiences to absorb users' attention for short, intense periods of time and know it is not the most effective medium to commit facts to memory.