

## Classification of Virtual Reality Fashion Shows: from the Perspective of User Experience

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Keywords: Classification, Fashion show, User experience, Virtual reality

**Introduction & Purpose:** According to Fortune Business Insights, the global virtual reality (VR) market will grow from \$166.7 billion in 2022 to \$2273.4 billion in 2029. Considering the rapid growth momentum of VR applications, it is important to understand the specific classification of virtual fashion shows in the fashion industry as a promotional tool since fashion shows are central to fashion advertising and promotional activities (Lau & Lee, 2015). Choosing the right type of VR fashion show can help designers, producers, and merchants present their clothing collections more effectively. Researchers can use the taxonomy of VR fashion shows as a framework to assess how various VR experiences affect user engagement, satisfaction, and buying intention. Thus, the purpose of this study is to classify the existing VR fashion shows from the perspective of user experience by examining the fashion shows' features that are currently accessible in accordance with how "clothes" and "fashion" are presented in VR. While the application of VR technology in the fashion industry has steadily grown and garnered more attention, articles about VR technology in the fashion industry have only recently appeared, and there is no fair distinction between the categories of VR fashion shows. From the perspective of consumer experiences, this study aims to classify current VR fashion shows into distinguishable categories.

**Literature Reviews:** In VR fashion shows, consumers can encounter apparel products in a more experiential way by interacting with computer-simulated images in real-time (Khor, et al., 2016; Villena-Taranilla et al., 2022). VR is being used in fashion shows to provide users with a comprehensive experience based on unique characteristics, including immersion, telepresence, and interactivity (Ahn, Bea & Kim, 2023; Zhao, Cheng, & Lee, 2023; Abbas, et al., 2023). Immersion refers to the sensation of becoming fully immersed in the mediated world while ignoring the true world (Fang et al., 2018). Consumers can achieve total immersion by interacting in real-time with the virtual environment via three-dimensional images displayed on the headset's screen. In recent literature, telepresence refers to the overall perception of the surrounding world, including automatic and controlled mental processes (Zhao, Cheng, & Lee, 2023; Lee, 2007). The computer-mediated world is distinguished by its interactivity which is reflected in the fact that the user, acting as an avatar, interacts with the environment in the VR fashion show (Suryani, et al., 2020).

**Method:** To gather information on the existing VR fashion shows, data were collected from multiple data sources including VR fashion shows mentioned in academic journals, company

websites, and other internet sources. A keyword search of “VR fashion show” was conducted on Google and university library databases to retrieve all videos related to VR fashion shows. A total of 78 VR fashion shows were retrieved. Each video was reviewed and classified in terms of consumer experience (immersion, telepresence, and interactivity) and key features of VR fashion shows, including the type of model (real vs virtual), scene environment (real scene vs fictional scene), VR headset requirement, and platform hosting the VR fashion show. Examples of fashion retailers using each type of VR fashion show were also provided.

**Results and Discussion:** Based on consumer experience in terms of immersion, telepresence, and interactivity, four types of VR fashion shows were identified, including fully immersive VR fashion shows (Type 1), Exclusive VR fashion shows (Type 2), Semi-immersive (Type 3), and Naked eye VR fashion shows (Type 4). Table 1 depicts the distinctive features of each category.

**Table 1.** Summary of VR fashion show types (characteristics and examples).

Type	Characteristics and examples
Type 1 Fully Immersive VR fashion show	<ul style="list-style-type: none"> <li>Platform: Metaverse Live Platform</li> <li>Equipment: VR headset</li> <li>User participation: Attend the VR fashion show as a model or audience in the form of a custom avatar. Users can control the viewing direction and communicate with other models or audiences at the scene by typing.</li> <li>Scene: The scene is hosted by a host(s), who also controls the music. Every scene is 3D 360° virtual. The user is at the scene.</li> <li>Characteristics: High telepresence, high immersion, high interactivity.</li> <li>Ex. Decentral and Metaverse Fashion Week.</li> </ul>
Type 2 Exclusive VR fashion show	<ul style="list-style-type: none"> <li>Platform: Independent brand’s VR fashion show channel (Brand’s subsidiary website &amp; YouTube)</li> <li>Equipment: VR headset</li> <li>User Participation: The user watches multiple models from the audience’s first perspective and models walk the show eye to eye with the user as the center. Users can control the viewing direction.</li> <li>Scene: Human model, 3D 360° real scene. The user is at the scene.</li> <li>Characteristics: High telepresence, high immersion, moderate interactivity.</li> <li>Ex. Prada VR Spring/Summer 2021 Womenswear Show</li> </ul>
Type 3 Semi-immersive VR fashion show	<ul style="list-style-type: none"> <li>Platform: YouTube &amp; Facebook</li> <li>Equipment: VR headset</li> <li>User participation: The user watches from the audience’s first perspective, and can control the direction of sight to observe other audiences on the scene, but cannot communicate. Models have no eye contact with the user.</li> <li>Scene: real person or avatar model, 3D 360° real scene or virtual scene. The user is at the scene.</li> <li>Characteristics: Moderate telepresence, moderate immersion, moderate interaction.</li> <li>Ex. Dior RTW SS16 - 360 VR Video</li> </ul>
Type4 Naked eye VR fashion show (virtual fashion show)	<ul style="list-style-type: none"> <li>Platform: YouTube &amp; Facebook &amp; Brands’ official website</li> <li>Equipment: no VR headset is needed</li> <li>User participation: Users watch devices such as computer screens or mobile phone screens, not in the fashion show scene.</li> <li>Scene: real person, avatar model, or only clothing model, 3D real scene, or virtual scene.</li> <li>Characteristics: Low telepresence, low immersion, and low interactivity.</li> <li>Ex. Marvelous Designer / CLO3D Show Reel 2021 Ebrahim Cattan</li> </ul>

**Conclusions and Implications:** The distinct classification of VR fashion shows from this study can lend strategic implications to fashion companies in their promotion and advertising efforts aiming to enhance the consumer experience with VR fashion shows. The classification also lays a foundation for researchers to conduct in-depth research on VR fashion shows from the perspective of user experience in the future. However, the classification was only based on the 78 VR fashion shows identified through the data collection process that occurred as of the end of 2022. There might be other VR fashion shows that were missed in the data collection process. Furthermore, as VR technology is developing rapidly, new types of VR fashion shows might have emerged after the data collection of this study. Therefore, it is imperative for future studies to update and further integrate the taxonomy of other potential VR fashion shows.

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