



Virtual Reality (VR): Is this new Technology viable for Fashion Retailers?

Angelina D'Sousa
Doris H. Kincade, Ph.D.
Peggy P. Quesenberry, Ph.D.
Virginia Tech, Blacksburg, VA

Keywords: Virtual Reality, VR, Retail Technology

The retail landscape is constantly changing, and retailers are desperately seeking new ways to reach customers and new ways to be competitive. Gone are the days when consumers will wait weeks for new designs to appear in brick-and-mortar store windows; instead, consumers want immediate engagement with a constant flow of new fashion products (Orendorff, 2019). The old ways of marketing fashions (e.g., runway shows six months before season) and engaging consumers (e.g., ads in print magazines) will not work (Goldston, 2018). Virtual reality (VR), with its immersive, computer-generated images, seems ready-made for fashion marketing as it uses images and sounds to simulate a virtual environment and can be true to color (Jiang, 2017). This new technology can show the consumer images of fashion products that have yet to be produced. With an identified need for speed (Hunter, Marchessou, & Schmidt, 2018), retailers should benefit from information about VR and its ability to engage the consumer in fashion marketing; however, retailers and other fashion marketers have questions about the veracity of VR for fashion marketing (Jiang, 2017). With more knowledge about the VR technology and an insight into best applications for consumers' use of VR, retailers could more seamlessly and profitably implement VR into their fashion marketing.

Although VR is widely discussed in sports and gaming situations, the topic has received limited academic study in fashion retail disciplines. From the point of view of consumer usage, researchers have examined consumers' knowledge and acceptance of VR (a) in general retail spaces with mall characteristics but unspecified products (e.g., Lee & Chung, 2008) and (b) with a few branded products, many of them not apparel items (e.g., Van Kerrebroeck, Brengman, & Willems, 2016). In fashion-related but not VR-specific academic studies, researchers have examined effects of image interactivity technology (e.g., virtual try-on, augmented reality; e.g., Yaoyuneyoung, Foster, & Flynn, 2014), but these technology-use studies may be fashion related are not about VR as no headset is required (Huang & Liao, 2015). Although VR appears often in fashion-industry articles and in non-fashion academic research, academic study of VR usage has not been specifically studied for fashion retail nor reviewed as a tool for fashion marketing.

Management theory with research on innovation adoption and firm performance states that companies must have research-based information to operate effectively and efficiently with technology adoption (Artz, Norman, Hatfield, & Cardinal, 2010). Retailers, scanning their market environments and making marketing plans, need viable information for adjusting their retail strategies (Kazantsev & Gomonko, 2016). Thus, management theory framework, indicating the importance of information about a new technology, was used to guide the research. The

Page 1 of 4

Published under a Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ITAA Proceedings, #76 - <https://itaonline.org>

binary goal of this exploratory study was to provide information about VR as a fashion marketing tool and to give usage suggestions for fashion retailers. Using a two-part, mixed-method research, this study included (a) background research to provide information about VR activities and costs for fashion retailers and (b) a multi-generational consumer survey to explore consumers' knowledge and acceptance of VR with implications for fashion retail use. Both parts of the study inform retailers about VR and its potential in fashion marketing.

In part one of the study, a review of trade literature revealed VR in fashion industry use for runway shows as well as in-store immersion use. Examples of runway usage include Rebecca Minkoff's fashion show with her logo on Google Cardboard headsets (Litsa, 2017), Dior in partnership with Digitas LBi for a backstage look at fashion ("Dior Eyes," 2015), and Top Shop (Fagan, 2018) for a backstage look at fashion. Examples of consumers' usage of in-store immersion include Gap with Avametric to create a digital dressing room and Coach with VR headsets in store for viewing new product (Jiang, 2017). In addition, TOMS with VR headsets in partnership with AT&T and Merrel in partnership with Oculus Rift provide customers with a VR-immersion walk (Bashara, 2017; Fagan, 2018). As with other fashion experiences, creation of a VR experience starts with the merchandising story for the product line. Then, the retailer must determine the VR experience, for example walking through a store or watching a model on the runway. Project costs to develop the fashion experience can range from \$300 to \$3,400 and typically take 3-10 days; however, development of an entire VR-simulated store may take over a month of programming ("How much does," 2018). For fashion shows or in-store immersion, the VR experience also requires a headset, which can be a major cost in implementing VR. Headsets range from \$15 for the Google Cardboard to over \$1,000 for an Oculus Rift (Robertson, n.d.). Quality varies with cost. If a retailer offers VR as an app, the consumer bears the cost of the headset. In addition, retailers will need to consider the base station for their VR in-store experience including decisions of whether to use computer-based VR vs mobile-based VR and where in the store the headsets will be utilized.

Part two of this study involved an IRB-approved survey of consumers to determine acceptability and usage for fashion marketing. Fixed-response questions of consumers' acceptance and usage of VR, based on previous VR research (e.g., Lee & Chung, 2008) and the findings from part one of the study, was posted to multiple social-media outlets (e.g., Facebook, Twitter, Instagram). Fifty responses were garnered in six days. The age of the respondents ranged from 18 to over 72, with a 51%/49% male/female split. Of the respondents, 88% of them said they knew something about VR and 95% had some level of interest in VR. Among the respondents interested in VR, 48% owned their own headsets, 35% had experienced VR in stores, and 26% in theaters. Most respondents preferred using VR at home (80%) in comparison to use in a store (35%). However, few (9%) were willing to pay for top quality headsets. In relation to fashion, respondents chose the top three virtual activities for using VR as: (a) trying on clothing (63%), (b) shopping in a store (56%), and (c) watching fashion runway shows (25%). Respondents expressed that they would more likely shop in a store that advertised the VR experience (46%), and they would try a VR experience if they saw it in a store (81%). When asked to visualize new uses for VR and fashion, respondents proposed being able to try out a

product in use (e.g., a VR experience allowing them to simulate trying on a bathing suit and then simulate swimming in a pool).

The results of the survey showed that some consumers are very interested in VR and would be willing to use a VR headset in a fashion retail store, confirming success of VR usage for fashion retailers. The findings also show that the VR experience has potential to engage consumers – not only draw them into a store but also interest them in merchandise when online. However, when VR experiences are viewed at home, or online, retailers will have limited control over the quality of the viewing experience because of the high cost of quality sets and consumers are unwilling to buy quality headsets. In consideration of these findings, using VR to entice the consumer into the store may be more effective for successful fashion marketing than providing consumers with VR through an app for online shopping at home. Future research with a broader consumer respondent base is recommended to verify the results.

References

- Artz, K., Norman, P., Hatfield, D., & Cardinal, L. (2010). A longitudinal study of the impact of R&D, patents, and product innovation on firm performance. *Journal of Product Innovation Management*, 27(5), 725-742. DOI: 10.1111/j.1540-5885.2010.00747.x
- Bashara, R. (2017). Merrell demonstrates power of VR with Trailscap. *VR Fitness Insider*. Retrieved from <https://www.vrfitnessinsider.com/merrell-demonstrates-power-vr-trailscap/>
- Dior Eyes. (2015, May 22). *Labs by Digitas LBi*. Retrieved from <http://gigitaslabssparis.com>
- Fagan, S. (2018, September 14). Virtual reality takes the marketing world by storm. *Digital Marketing Strategy Trends*. Retrieved from <https://connectivitystrategy.com/virtual-reality-takes-the-marketing-world-by-storm/>
- Goldston, N. J. (2018, February 22). New York Fashion Week is changing and this is why it matters in the marketing landscape. *Forbes*. Retrieved from <https://www.forbes.com/sites/njgoldston/2018/02/22/new-york-fashion-week-is-changing-and-this-is-why-it-matters-in-the-marketing-landscape/#3a6bd2d241ec>
- How much does VR development cost? Best Virtual reality price overview. (2018). *Thinkmobiles*. Retrieved from <https://thinkmobiles.com/blog/how-much-vr-application-development-cost/>
- Huang, T-L., & Liao, S. (2015). A model of acceptance of augmented-reality interactive technology: The moderating role of cognitive innovativeness. *Electronic Consumer Research*, 15, 269-295.
- Hunter, E., Marchessou, S., & Schmidt, J. (2018, March). The need for speed. *McKinsey & Company*. Retrieved from <https://www.mckinsey.com/industries/retail/our-insights/the-need-for-speed-capturing-todays-fashion-consumer>
- Jiang, E. (2017, February 28). Virtual Reality: Growth engine for fashion? *Business of Fashion*. Retrieved from <https://www.businessoffashion.com/articles/fashion-tech/virtual-reality-growth-engine-for-fashion>

- Kazantsev, A. V., & Gomonko, E. A. (2016). Strategic choices for retail development in the context of marketing management. *Vestnik Voronežskogo Gosudarstvennogo Universiteta Inženernyh Tehnologij*, 355-362. DOI: 10.20914/2310-1202-2016-4-355-362
- Lee, K. C., & Chung, N. (2008). Empirical analysis of consumer reaction to the virtual reality shopping mall. *Computers in Human Behavior*, 24(1), 88-104.
- Litsa, Tereza. (2017, September 12). How Are Brands Using Virtual Reality in Their Marketing? *ClickZ, ClickZ*. Retrieved from www.clickz.com/how-are-brands-using-virtual-reality-in-their-marketing/112778/
- Orendorff, A. (2019, January 10). The state of the ecommerce fashion industry: Statistics, trends & strategy. *Shopify*. Retrieved from <https://www.shopify.com/enterprise/ecommerce-fashion-industry>
- Robertson, A. (n.d.). The ultimate VR headset buyer's guide. *The Verge*. Retrieved from <https://www.theverge.com/a/best-vr-headset-oculus-rift-samsung-gear-htc-vive-virtual-reality#highendoption>
- Van Kerrebroeck, H., Brengman, M., & Willems, K. (2017). When brands come to life: Experimental research on the vividness effect of Virtual Reality in transformational marketing. *Virtual Reality*, 21, 177-191. DOI: 10.1007/s10055-017-0306-3
- Yaoyuneyong, G., Foster, J., & Flynn, L. (2014). Factors impacting the efficacy of augmented reality virtual dressing room technology as a tool for online visual merchandising. *Journal of Global Fashion Marketing*, 5(4), 283-296.