Augmented Reality and Virtual Reality in Apparel Retailing: Examining Retail Strategies to Enhance the Customer Experience

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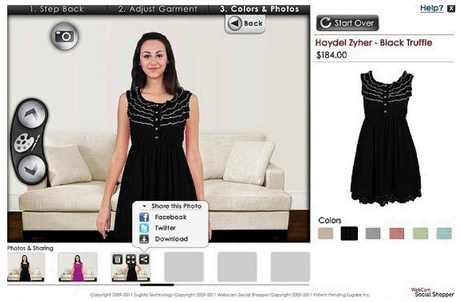
Introduction

- According to the McKinsey Global Fashion Index, the Apparel Industry is now worth and estimated $2.4 trillion and has grown at 5.5 percent annually (Amed, 2017).
- Recently introduced to the industry was Augmented Reality (AR) and Virtual Reality (VR).
- Augmented Reality is formally defined as "an enhanced version of reality created by the use of technology to add digital information on an image of something" (Mohr, 2017).
- Virtual Reality is defined as "the use of computer technology to create a simulated environment" (Mohr, 2017).
- These technologies have the capability to create a simulated world and makes these simulations feel *real* to the user.
- These concepts are still regarded as developing technologies, which leaves much room for research to be done to analyze the effects of AR and VR on Consumer Experience and behavior.
- Global Luxury Apparel Brands like Dior, Gucci and Prada are integrating the use of AR and VR technologies to fully immerse consumers in the new retail experience (Hendriksz, 2018).

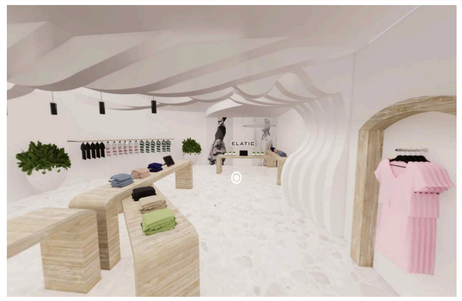
Objective

- The objective of this research is to determine the effects of Augmented and Virtual Reality technology on the consumer experience and how buying behavior might be altered by the integration of AR or VR on a platform which is not the typical brick-and-mortar store.
- Augmented and Virtual Reality have been used in stores for experience based use, like taking users wearing a VR headset to designer fashion shows in Paris.
- The technologies are not commonly used for allowing customers to virtually try-on clothing from their homes using their computer cameras. This research records the responses of users after using the technology and how it has impacted their opinion on shopping with Augmented and Virtual Reality.

Method



AR Simulation

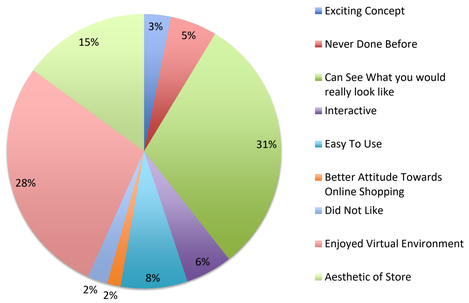


VR Simulation

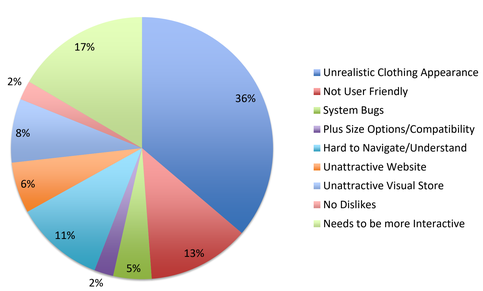
Data Collection: 196 undergraduate female students participated in the experiment surveying the effects of this technology shown above. Some participants interacted with the VR site (shown on right), which was made using a 3D modeling program. The other participants interacted with the AR site (shown on left) which used existing virtual try-on software. Participants then completed a survey where they detailed their response/experience.

Data Analysis: After all responses were collected, they were categorized into 9 main concepts identified by participants. Those categories are seen below in the pie charts. After grouping every response for questions asked, the data was converted into charts shown below to better visualize the results.

Results



- Participants were asked what they liked most regarding the Virtual Try-On
- 98% of participants enjoyed using technology and noted they were excited for the potential it has
- Specifically, participants enjoyed the ability to use this technology from the safety of their home since some have negative experiences with in-store shopping



- Participants were asked what they liked least regarding the Virtual Try-On
- 36% of participants noted the unrealistic appearance of clothing
- Most "dislikes" can be fixed, like the aesthetics of store and website.
- Main concerns from participants include system bugs, navigating the technology, and user-friendliness of the programs

Overall, 72% of participants indicated the technology would have a positive effect on their shopping experience. 19% said the technology had no effect on them, and 9% cited a negative effect using the AR and VR technology.

Conclusion

- After analyzing data from the Augmented Reality and Virtual Reality study done at Oklahoma State and a thorough literature review process, it can be concluded that Augmented and Virtual Reality have an overall positive effect on the customer experience
- The technology gives customers a "piece-of-mind" experience where they can online shop and eliminate the risk of not being able to try clothing on from home.
- The Augmented Reality and Virtual Reality technology is fairly new when it comes to software made for use in the apparel industry. While minor issues and kinks exist, it is believed that those can certainly be ironed out and thus create a seamless, realistic experience for a customer.

Future Direction

- The future potential of Augmented and Virtual Reality technology in the apparel industry is seemingly limitless at this time.
- In a time like this, when a global pandemic has locked people inside their homes all over the world, the apparel industry has been suffering greatly. Technology like this might allow customers to feel more "normal" when they can try-on clothes from home and order accordingly.
- As in-store sales continue to decrease, this technology can also be used in stores to drive sales. Customers can be encouraged to shop in store with AR/VR technology promotions (similar to taking customers to exclusive designer fashion shows) rather than online.

References/Acknowledgements

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