



Augmented and Virtual Reality and Its Effects on Social Responsibility and Fair Trade in the Apparel Industry

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Introduction and Literature

Augmented and Virtual Reality (AR/VR) are projected to be more commonly found in retail environments in the next few years, making it a key point of observation between customers and researchers alike (Alexander, Salavati, & Watson, 2018). Overall literature and research surrounding the topic has shown a lack of education on AR/VR technology and how it could be used in the fashion retail industry (Bonetti, Warnaby, & Quinn, 2018). If both businesses and consumers could learn how to implement AR/VR in their daily shopping lives it would create a substantial impact and upgrade the shopping experience. Now more than ever retail stores are looking for different ways to set themselves apart from their competition (Grewal, Roggeveen, & Nordfält, 2017). Despite the fact that research has examined the impact of AR/VR on user engagement and the increased concern of ethical shopping habits, research into the motives of Fair Trade consumption is comparatively meager (Ladhari & Tchetsna, 2014). The purpose of the study is to reveal what underlying values must be focused on in order to increase Fair Trade and social responsibility consumption by Generation Z consumers in the apparel industry through possible implementation of AR/VR.

The Garment Worker Diaries, a series of three reports from Bangladesh, Cambodia, and India, collected data from a total of 540 female garment workers, 180 workers in each city (Fashion Revolution, 2018). The reports found that many women within the Bangladesh study seemed caught up in debt cycles- taking on, paying it off and repeating the process again; which led to high levels of food insecurity and stress (Bangladesh Report, 2018). In the factories of Cambodia there are reports of discrimination and violence against women in labor unions; as a result, 64% of the garment workers shadowed felt somewhat safe in factories and 11% did not feel safe at all (Cambodia Report, 2018). Garment workers in India have things comparably easier; but it was clear that the women in the report still struggled (India Report, 2018). The purpose of these reports is to expose how the fashion industry is treating its garment workers and provide consumers knowledge and a sense of social responsibility in order to call upon the industry for change. With the implementation of Fair Trade and VR in a fashion retail store, the stories of workers like the ones in Bangladesh, India, Cambodia and other third world countries can be both seen and heard. A perfect example of this is shown through the Mexican based retailer, Someone Somewhere, who implements VR in their traveling pop-up shop to allow consumers to experience the life of an indigenous garment worker in Mexico (Ejiofor, 2017). AR and VR have a future in retail as retail continues to evolve at a rapid pace due to the need for both technology and experience (Grewal et al., 2017). Understanding how Gen Z would affect this business is essential due to the fact that they are the most socially and environmentally

conscious generation and control a great deal of a family's purchasing power, on top of their own (Amed et al., 2019). This generation also values individual expression and communication; and they want to be entertained by a brand (Francis & Hoefel, 2018). Integrating technology to promote social responsibility within a store would draw the attention of this generation. Knowing this, the implementation of AR/VR technology to promote Fair Trade and social responsibility would be beneficial in the apparel industry which has a growing concern for social sustainability.

Hypotheses and Model

Based on the literature and previous research, the following hypotheses and study model (see Figure 1) are presented concerning social responsibility concern, knowledge of fair trade and purchase intention moderated by use and perception of AR/VR among Generation Z:

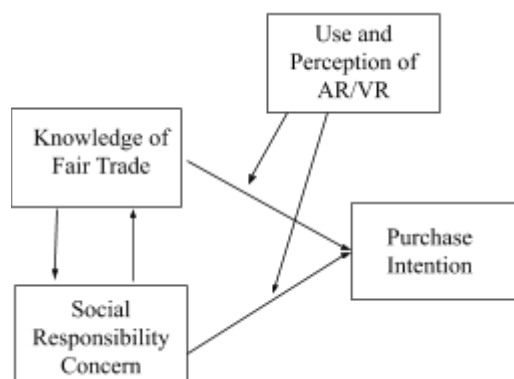
H1: Social responsibility concern has a positive significant effect on knowledge of fair trade.

H1a: Knowledge of Fair Trade has a positive significant effect on social responsibility concern.

H2: Knowledge of Fair Trade has a positive significant effect on purchase intention, with the moderating effects of Augmented and Virtual Reality.

H2a: Social responsibility concern has a positive significant effect on purchase intention, with the moderating effects of Augmented and Virtual Reality.

Figure one. Model of the study



Methodology

An online survey was conducted through Qualtrics to better understand the use and perception of AR and VR and how that moderates the effects of knowledge of Fair Trade leading to social responsibility concern and vice versa determining purchase intention. A total of 32 questions regarding the use and perception of AR and VR used 10 items from Reiter (2015), knowledge of fair trade and concern for social responsibility was measured using Dickson's

(1999) knowledge (4 items) and concern with apparel social issues scale using 11 items, and 2 items from Hyllegard, Yan, Ogle, and Lee (2012). A regression was run to understand the relationship between knowledge and concern and the moderating effect of VR and/ or AR on Purchase intention using SPSS 24.0. Due to the survey pool being a convenience sample from a large Midwestern University, many participants in the survey were female and in the 18 to 23 years old age range; therefore, they are a part of generation z.

Findings

A total of 214 respondents from a large Midwestern University took part in the survey. A majority was female (89.3%, n=191) and 18 years old (64.5%, n=138) followed by 19 (n=47), 20 (n= 19), 21 (n= 4) and 22-23 (n=1). A few additional questions were asked regarding the shopping behaviors and familiarity with AR and VR. It was split regarding their past use of AR and VR with 50% saying they've had a previous experience with it (n=107). A majority of participants said they prefer to shop in store (63.6%, n=136) compared to online (n=78) and would use AR or VR to enhance their shopping experience (78.0%, n=167). When asked to be more specific a majority said they would use both AR or VR in the retail experience (46.7%, n=100) followed by VR being the second choice (n=76) compared to AR (n=37). when asked if AR and VR will be as common as mobile devices by 2025 a majority agreed (68.2%, n=146). All scales were found to be reliable with Cronbach's Alpha being $>.7$. A linear regression was conducted with the moderating variable of AR/VR use and perception between concern and purchase intention. It was found that concern of social responsibility issues is significant ($F(2,209)= 6.057, p=.003$) on purchase intention and the moderator, use and perception of AR/VR was also significant ($F(3,208)= 4.297, p=.006$). Standard correlations were conducted between knowledge and concern posing a non-significant correlation between the two, with a small strength of relationship ($r=-.102, n=149, p=.217$). Additionally, knowledge of social responsibility issues is not significant ($F(2,145)= 2.840, p=.062$) on purchase intention and the moderator, use and perception of AR and VR was not significant ($F(3,144)= 2.083, p=.105$).

Conclusions

Looking at the results of this study knowledge does not play a strong role in the use of AR/VR moderating purchase intention. However, focusing on concern of social responsibility in apparel production when using AR and VR and its impact on purchase intention is quite meaningful. As retailers continue to use this type of technology to encourage consumers to purchase their products, sustainable retailers should utilize the concern level of their customers and play upon that in an AR/ VR in store or online experience. Understanding generation z's reasoning for concern and their ability to create empathy for those that make their clothes is the target for retailers and industry partners. Academics could begin to find ways to employ AR/VR experiences in their classrooms when trying to convey to future gatekeepers how choices in the apparel industry affect individuals all around the world.

Implications and Future Research

This type of technology integration has the possibility to emphasize learning within a classroom or retail shopping experience. Since gen z grew up with technology they have become better visual learners; VR and AR technology has the ability to visually teach students by providing insight into a variety of scenes and issues that they have never interacted with before such as social responsibility and concern for how garments are made. Additionally consumers can become more aware about the clothes they buy and how they are made including the treatment of workers who made them Future research into this topic could broaden the survey to reach a bigger age gap of gen z participants, and possibly millennials as well, since they are influenced by gen z (Amed et al., 2019). Future research also indicates that AR/VR programs regarding clothing responsibility should be of focus and ways of applying them in the retail and classroom setting can be fruitful.

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