PalArch's Journal of Archaeology of Egypt / Egyptology

THE INFLUENCE OF AUGMENTED REALITY (AR) ON MARKETING STRATEGIES OF FASHION RETAILING GOODS, THE EFFECTS ON CONSUMER TASTES, CONSUMER VIEWPOINTS ON AR INSTRUMENTS

Anubhav Solankey

Student, Symbiosis Institute Of Management Studies, Symbiosis International University (Deemed University), Pune, India

Anubhav Solankey, The influence of Augmented Reality (AR) on marketing strategies of fashion retailing goods, the effects on consumer tastes, consumer viewpoints on AR instruments-Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(12), ISSN 1567-214x

Abstract

Introduction:

The primary goal of this research is to carry out empirical analysis to determine the various aspects and techniques of the digital customers ' experience related to the retail mode industry. In order to achieve this end, this work has produced few aims to collaboratively and independently detail each element specific to the chosen subject.

Objectives:

The key objectives of the current study are, thus, to determine the influence of the tools of Augmented Reality on marketing strategies of fashion retailing goods, the effects on consumer tastes, consumer viewpoints on Augmented Reality instruments and their benefits as well as the drawbacks of these goods.

Research methodology:

In this regard, secondary data from a variety of literary sources were collected by this research work and presented them in several areas so as to explain and discuss every possible aspect of the research topic.In addition, the chapter of research methodology was developed in which

pragmatic paradigm was selected and detailed in this research work; an inductive research approach and exploratory research design were developed.

Findings:

The findings indicate that the increasing truth has been generally appreciated in the digital age because the companies have meritorious features and the atmosphere convenient for consumers to use. Finally, the study has also outlined a few guidelines that will enable organisations in the fashion retail industry to use Augmented Reality Tools in digital marketing practices.

Chapter 1: Introduction

Augmented reality (AR) can be described as an area in the actual world where a layer of visual knowledge can increase the physical perception of individuals. Enhanced reality allows a physical world's real-time environment immersive by incorporating and integrating real and virtual knowledge. Application in the areas of advertisement, entertainment, schooling and navigation of increased truth is commonly seen (Carmigniani et al , 2011).

Innovative techniques and technology of increased realism transform dramaticly the way promotion and advertising in the apparel retail sector is practised. With the aid of this tool, fashion retailers build virtual experiences to give digital consumers more engaging engagement and offer customers new ways to experience a fashion product through digital means. Maintaining the experience of digital and web consumers has long been a challenge for retailers and advertisers worldwide. This augmented reality will address this void by combining simulated and real-world worlds, as it offers the digital consumer journey. Customers may experience cloth fittings on a digital basis and pick a successful option for them using AR software offered by retail apparel stores (Scholz and Smith , 2016). Similarly, the research study explored the role of enhanced reality in growing the digital experience of consumers in the apparel retail industry.

Background

The enhanced truth has been seen to be a leader in enhancing the web experience of consumers in the apparel retail market. The expanded usage of AR as an immersive marketing platform has helped numerous fashion firms. Two of the most important advantages of reinforced fact were the prosperous consumer loyalty and increased customer service. In developing an enjoyable user experience, interactivity is one of the most important concerns, and the AR marketing platforms have generated that interactivity by offering a consumer-friendly environment to encounter a fashion product in real time (Paris, Guinan and Kafka, 2016).

The emotional relation and fascinating encounter is important for an active participation of customers in a certain fashion dealer. This artificial reality has the potential to build consumer opportunities that keep consumers happier and happier to connect effortlessly with a commodity delivered by a fashionable retailer. In addition, with the help of increased reality, mode retailers

will provide consumers with digitally checked rooms for checking various fashion pieces digitally and selecting the goods as they want (Kohler et al, 2011). This research study has therefore been conducted to investigate the role of increased realism in improving digital consumer engagement in the retail fashion industry. This study is also focused on the general effect of expanded realism on selling strategies used for consumer interest in their mark and goods through apparel retailers.

Research Aim and Objectives

Aim

This research aims at finding opportunities to boost the experience of digital customers in the fashion retail industry through the assistance of technologies from augmented reality. Taking this analysis goal into consideration, this research study looks on the present scenario of the interactive interactions of consumers in the fashion retail field to investigate further the effects of increased reality instruments to improve the customers ' overall experience.

Research Objectives

In accordance with the aforesaid research goal, the main objectives of the research study are discussed below:

- To consider the effect of technologies and strategies used to sell apparel retail goods and to affect consumers' tastes, choices and perceptions.
- To identify the opportunities and the positives and drawbacks involved with the expanded reality resources of consumers.
- To link the marketing and interactive marketing tools of Augmented Reality.

Research Question

"The research question for this research study is stated as," How is augmented reality supportive of enhancing the digital consumer experience in the retail fashion industry?

Research Significance

The primary aim of this research study is to explore the role of augmented reality in the fashion retail industry in improving the digital consumer experience. A significant number of luxury designers and manufacturers are utilising virtual reality instruments in today's emerging environment to have a greater consumer user experience and to achieve a strategic edge. Customers prefer the digital touch they feel when browsing on an online and digital channel for fashion items. The issue of virtual reality and its role in the fashion retail industry is a very fascinating topic and has good potential for more study as much study has not been carried out in terms of AR’s involvement in the fashion retail industry.

In this context, this study examines the role of virtual reality in the advancement of digital consumer service in fashion businesses around the world. In addition, by presenting comprehensive and applicable details on the topic of the study, this study would also address the current research holes. In multiple ways, this research review would have important and multifaceted consequences. Next, in order to improve the overall digital consumer experience, it would be beneficial for apparel retail organisations to provide successful incorporation with virtual reality-based activities. In addition, for prospective scholars, the thesis study findings would be very knowledge-enhancing. Future researchers will be issued new directions for doing more study on this research subject in a related framework or in another specific context.

Chapter 2: Literature review

Chapter Overview

In the literature review, the theoretical principles and history studies related to the objectives and priorities of this project will be addressed. The literature would be reviewed and used as a forum for primary research production and for assessing its importance. In this portion, the main areas of literature are how to boost shopping experience, how technology affects customer behaviour, and how AR can be implemented throughout the style retail market.

Enhancing the customer shopping experience

Google's hypothesis Zero Moment Of Reality (ZMOT) claims that knowledge has not simply relied on the worth of a commodity or the service it offers. The consistency of a consumer service is dependent on ZMOT, a point between the customer's product research and the buying of a product based on the usable knowledge. The enjoyment of online shopping may be improved prior to shopping utilising sensory enablement technologies (STTs), such as AR. AR is capable of simulating 3D pictures of goods and helps users to digitally try goods. In addition to developing sensory environments for online consumers, AR may be used in many ways for constructing experiential qualities including: esthetic (sensory), playfulness, AR use to develop better service, and lastly ROI for customers. Huang & Hsu Lju (2014) illustrates how ARIT can be used to better consumers' consumer experience, and how the application can be use in different ways such as clothes retail. The economic history shows that utilitarianism becomes obsolete, as the roles of goods are moved away from history (Bulearca and Tamarjan 2010). This shows how user and actions can rely on the usage of AR in future.

Consumer Behaviour

The decision making process and motivation.

Brands ought to consider the attitudes of customers if AR wishes to positively affect customer engagement, and this would shape the marketing plan for AR's potential growth and profitability. The method of customer decision making consists of five main phases: Solomon (2013)

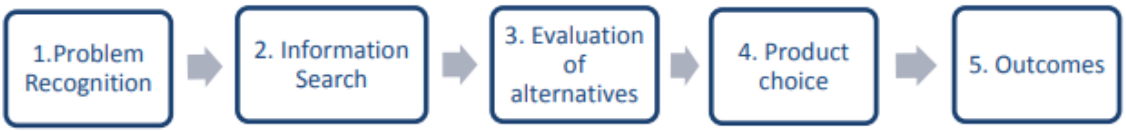

Figure 1: *The decision making process* (Solomon, 2013).

The ZMOT hypothesis indicates that customers are looking for knowledge and comparing alternatives, then making choices depending upon whatever knowledge is accessible (Lecinski, 2011). This is consistent with these five measures. Furthermore, the use of AR in fashion retail, increased market preference and lowered return rates were noticed by Pachoulakis and Kapetanakis (2012). This indicates that AR more definitely affects before buying actions. In addition to having positive results after purchase, for example, during ZMOT (Stades 2&3) that affect buying decisions, decreased return rates and evangelism (Pachoulakis&Kapetanakis, 2012).

The method of customer decision-making indicates that purchasing choices are reasonable and practical. Not all spending choices however are reasonable, e.g. for pumping and purchasing without any utilitarian consideration, the decision making method is not applicable. The modes of decision making indicate two opposing consumers who are dominant in consumerism and hedonism. As AR focuses primarily on raising interactivity and generating sensory experiences, consumers who take decisions using hedonic motivations are the kind of consumers with which AR would be the most dominant. This underlines a misdefinition of the word "experience" Caru and Cova (2003) find that experience creation happens across customer immersion and marketing partnerships. This is confirmed and illustrated by ARIT, since the use of ART as a storey requires user psychological engagement by incorporating interactivity.

However, methods such as AR may be claimed for generating an experience and not just affect hedonic incentive in the decision-making phase. Schmitt (1990, p.60) claims consumerism is part of a "holistic," subjective and logical experiment. The usage of AR for the interactive display of the commodity and the development of true products simulations are logical considerations (Shen, 2013). AR therefore has the potential to boost comfort and reduce the perceived risks of experiential components of AR which contribute to customer decision-making.

A big study focussing on the usage of AR for decision-making is that this technology is to be adopted by all consumers.The distribution of innovation theory looks at ways in which all forms of innovation will spread across a social system and how new technology will be used at what rate by consumers (Vishwanath and Barnett, 2011). The hypothesis indicates that invention diffusion has a life-cycle of technological acceptability based on five separate categories of users: "innovators, early adopters, early majority, late majority and laggards" (Egan, 2007, p. 40). Both customers can use contact networks to either accept or deny a technology, as seen below.

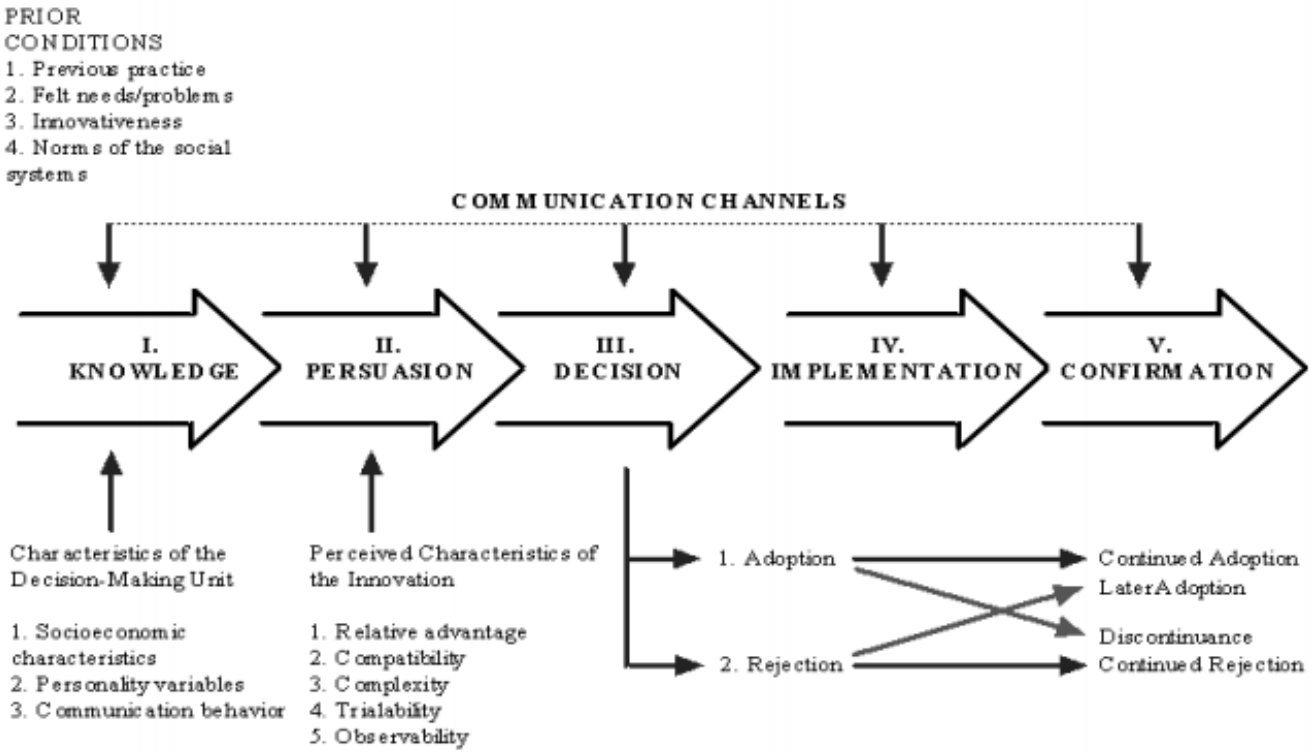

Figure 2: *Communication channels & innovation adoption* (Rogers, 1995, p. 163).

The diffusion of the philosophy of creativity indicates that users accept or oppose creativity at the decision-making stage. Therefore, the fundamental reasons that lead customers to resist a technology must be exposed in order for AR advances in retail styles to be effective. Factors such as actions and subjective standards will lead, according to the Theory of Expected Actions (TPB), to unwelcome purposes, culminating finally enactment in refusal (Ajzen, 2005). TPB implies that the behaving user (acceptance) relies on behavioural regulation (Ajzen , 2005).

This is closely linked to the retail adoption of AR, as perceived behavioural management components are focused on the ease of usage of AR from the consumer 's viewpoint (Kim and Forythe, 2009). It demonstrates that if customers are assured that they can access the technology effectively, customers will be more willing to use AR, so the brands must ensure that they can

keep the technology easy while implementing AR, so the customer needs very little knowledge in order to make technology function.

Innovation and early acceptance are technology leaders, developers and visionaries, while the late majority of adopters and laggards are customs that are most prone to be suspect of innovations. (Egan, 2007). This underlines the value of knowing the customer voyage through multiple contact networks, which directly affects whether customers want to use AR in retail contexts, particularly the networks of information and persuasion, as shown in Figure 2.

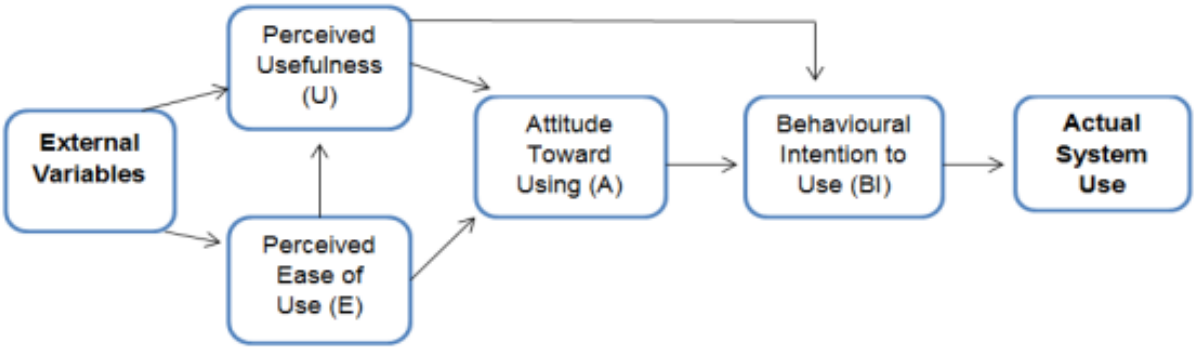

Figure 3: *TAM* (Davis, 1989)

Davis (1989) has established a technical adoption paradigm which summarises the problems addressed in terms of perceptions which behavioural motives in relation to customer behaviours. In comparison, the technology adoption model (TAM) takes into account important external factors that impact the user decision-making mechanism while deciding to implement and embrace emerging innovations, though, as compared to the diffusion of innovation theory. The technological adoption mechanism and influences influencing customer behaviour are seen in Figure 3.

The TAM demonstrates that the perceived utility and ease of usage of a technologies are crucial external variables that affect technological adoption (Davis, 1989). This indicates that brands must ensure that they accurately explain what advantages customers would derive from the usage of AR in their purchased practises if they incorporate AR in a fashion retail setting. AR must be structured in a manner that promotes optimum interactivity, thus needing little knowledge from the customer, such that customer comportement can be converted into real device use.

This principle still holds in the light of recent studies, which examines the entry of AR technologies into commercial circumstances within the TAM System , despite the scientific definition of TAM being established in 1989. Huang and Liao (2014) define AR as a compelling technology and the adoption of AR depends on the degree of market innovation, which encourages the propagation of the theory of innovation further.

Huang and Liao (2014) studied the adoption of AR technologies for mode retailers and the use of AR for online transactions. This study established five main factors which can be used to assist customers in the adoption and development of sustainable relationships with AR:

1) Accessibility facility

2) Utility

3) Excellence in Operation

4) Aesthetics

5) Playability (Huang and Liao, 2014, no pagination).

These factors relate to the external TAM variables and often improve the link between user activity and behaviour. This suggests that AR is a design-based program that focuses on the customer. However, these inquiries concentrate principally on online mode retailers, and therefore don't provide the holistic understanding of how AR can be utilised in terms of the usage of AR across various platforms in fashion retailers to improve customer engagement and affect behaviour.

Channels of application and the potential benefits to brands.

In the past, AR was used simply as a sales weapon (Blakeman, 2014). But other research shows that AR can be used in the apparel retail industry for various purposes. The manner in which AR is implemented differs even because of the manner brands utilise different platforms to incorporate AR into their business models. In addition to improving the buying experience of customers, marketers must also discover the possible advantages that they can reap by using this sort of technology and from multiple implementations.

Online

As suggested by Blakeman (2014), online marketing (ecommerce) items, AR may be used for promotional purposes. An significant challenge that many apparel distributors face in attempting to market goods online is that customers sometimes find it challenging to comprehend what a product looks like because only a two-dimensional image and text summary can be presented (Shen,2013). In terms of consistency and the output, AR's technology continues to advance. This helps marketers to construct a visual environment so customers can see fine information such as a fabric 's shape (Shen, 2013). This indicates that AR can be used for displaying the product attributes on e-commerce websites, thereby minimising danger in shopping choices. As a consequence, brands can gain from increased purchases that can boost profitability in turn (Shen, 2013).

AR is now applied digitally by the usage of Practically Fitting Rooms (VFRs) VFR's allow customers to use their webcam and multi-sensor bars to try clothes and accessories for their

body. Fit.me is a London-based business that utilises AR technologies to build VFRs. The usage of AR gives greater standard of service and a customised shopping experience to customers.

Mobile

It is also possible to reach AR through smartphones and tablets, such as handheld computers. In forms close to web technology approaches the Smartphone Augmented Reality (MAR) may be used. However, the value of utilizing MAR is the ubiquitous measurement method that enables users to use MAR at all times and everywhere (Olsson et al , 2013). Smartphone's power allows customers to utilize AR without add-ons like webcams or sensor bars on the go (Shen, 2013). Mar is a simple option for consumers so that they can enjoy an uninterrupted 'on the go' The increased customer experience will also benefit from Brand Awareness and better sales in this direction. MAR can be used for market analysis, revenue raise and device download promotion as a data collection tool. This approach often provides numerous commercial advantages by examining the goods buyers try on and purchase, such as an insight into customer tastes.

In-store (offline)

The most common cases where AR technology is used in a physical shop have been Kipper and Rampulla (2012) found to provide consumers with further product information or as a VFR installation feature utilizing static kiosks, digital signage and interactive window displays in storage static kiosks. Pachoulakis and Kapetanakis (2012) suggest that while AR is used for VFR modeling across different channels, consumers use AR online to solve fit problems, while AR is mainly used to render traditional shopping enjoyable. A brand's strategic objectives will assess which medium is most appropriate for AR implementation. Brands can often use AR for informing and educating customers, or to motivate consumers to visit a shop. Hugo Boss has adopted AR, developing media walls that include simulated templates.

Key Issues

In addition to highlighting some of the essential problems and discrepancies, the pre-existing literature relating to and concerning AR offers a framework for more study. First, though literature on how AR can be used to optimize the experience of pre-buying is visible, it doesn't explicitly include consumers how AR can be used to enhance their own shopping experiences. In addition, the literature implemented a framework of five major factors that affect the acceptance or use of AR in customer decision-making (Huang and Liao, 2014). Research looked at how AR could be incorporated through multiple networks and how brands profit from its implementation. The research looked at fashion retailing as an example of how brands could profit from AR implementation. It found little research on how AR can be used in the retail environment.

Chapter 3: Research Methodology

Research Paradigm

Studies are a framework for study design, since they are the basis of authors' expectations and audience views (Malhotra & Birks, 2007). The study ideology will adopt one of the six approaches according to Saunders, Lewis and Thornhill (2007): positivism, realism, interpretivism, subjectivism, objectivism and pragmatism. Positivism has been the key subject for the emergence of modern marketing theories (Malhotra & Birks, 2007). An positive conviction is that purchasers can be studied with promotional phenomena in the natural sciences style. Those marketing professionals adopt a technique of natural sciences (Malhotra & Birks, 2007). Study must be restricted to what we can perceive and calculate objetively, according to Welman, Kruger and Mitchell (2005). The constructive method was taken in our analysis because it encourages one to use and build theories on current theory. Marketing Analysis strategy is to find causalities that cause AR to be predicted and clarified.

Research Design

The study architecture is a structure or a model for carrying out a marketing research, according to Malhotra and Birks (2007). Designs of analysis may be called exploratory or definitive. Conclusive and, most particularly, causative – and also named explanatory – nature is extended to the needs of our study. As the name suggests, cause-and-effect interactions are the focus of causal analysis (Robson, 2005). The causal analysis is optimal for examination and determination of the essence or consequence of the interaction between the causal variable (Experienced RA) and consumer effect (buying intention). The research architecture is often suggested to test hypotheses (Malhotra & Birks, 2007). The architecture may be either transversal or longitudinal with respect to the time horizon (Saunders et al., 2007). As our goal is not longitudinal, the cross-sectional is of a more fitting sort since analysis is time constrained. Data from a certain population sample is only obtained once.

Research Approach

Two key methods to science exist: inference and reasoning. A hypothesis and theories are established with deductive method and a testing technique to evaluate the hypotheses is developed. Although primary data are collected with an inductive method and analytics establish the theory. The deduction is a good feature as it follows the transformation from theoretical to data setting. It is important for our studies. This master thesis focuses on literary theories and builds on their continuous development. Generalizing facts is always a deduction (Malhotra & Birks, 2007). The findings of this study demonstrating regularities of customer conduct for the given population can then be statistically extended. A appropriate number and equivalent characteristics of the sample must be selected for this reason (Saunders et al., 2007). In the next part, the selected sample for our usage is identified. Finally, a significant aspect of deduction is the need to operate principles and organize methodological procedures. This allows for

quantitative measurement of evidence. In order to quanstify the data and to need mathematical interpretation, the quantitative approach to the processing of primary data is distinct from the qualitative. The quantitative analysis offers more exact findings than qualitatively, according to a report by Curwin and Slater (2007) A questionnaire is considered an effective approach to the goal of deepening awareness in this field of study. We used a mixture of approaches to gather quantitative data – the community research survey sample and the online test population survey.

Data Collection

Both main and secondary data was used for the study. This combined data recovery technique provides a more precise research basis (Saunders et al., 2007). Secondary data were first used during the analysis. These data is generated in the past and contain both raw and written summaries for their own purposes. We also used secondary data in advance for exploring the previous research applicable to our topic, carrying out a literature review, and building up expertise, and in particular our research model. The secondary data was obtained predominantly from the Google Scholar Service and the online library of the University of Jönköping. These methods have brought us a variety of research papers, journals and books. To access literature references, search terms such as "enhanced reality" or "AR," "virtual reality," "interactive technology," "consumer perception," "intention to buy," "advertising," "marketing," were used. However, primary data were collected because previous study to address our questions was insufficient (Ghauri&Grønhaug, 2005). It represents the researchers' initial expertise for testing purposes (Saunders et al., 2007). The collected key data helped us to gather insight into factors that related to the purchasing purpose of the consumer. It permitted results that could not be accessed through secondary information.

This study approach has been selected by the authors and the primary form of causal research is called experiments (Winer,1999). The aim of our research, which addresses the criteria of this methodological technique, is another explanation why this protocol is chosen. An experiment aims to analyze causal relations, if a distinction in an independent variable affects the dependent variable (Hakim, 2000). Two groups must be identified and participants allocated to them to examine the causality between AR and the purchasing intention (Saunders et al., 2007). 100 consumers who buy apparel items for retail shopping online in order to get an idea about their thoughts, desires and other problems when shopping online. In India, men and women of 18 to 60 years of age will be targeted, who generally shop through digital platforms. Google format questionnaires will be given to the chosen specimen community in order to engage in the survey online and to try the questions quickly. For the collection of the survey population, a random sampling method is used to eliminate the likelihood of partiality and to collect trustworthy results.

Questionnaire Design

An online Google survey method was used to administer the questionnaire. In the experimental and control classes, the questionnaire was focused on comprehensive ratings scales. In particular, we primarily used questions in the 7-point Likert scale varying from quite different to highly accepted statements. The text of the questions was revised and adapted to reflect the condition of each party, both on the AR experience and on its foreign shopping experience. However, several initiatives have incorporated both constructive and negative aspects to ensure that people carefully perceive and tick. The sense of the queries, however, has been retained. The type structure and the intent of the questionnaire were clearly explained in order to optimize the reply rate, relevance and efficiency of each questionnaire.

The following questions discussed the beneficial and hedonic principles of the respondent and the easy-to-use perceived. They were based on Davis (1989)'s initial TAM design but the papers were influenced by Childers et al (2001)'s queries, who had measured the architecture while online shopping. The four pieces of Park, Jung and Lee (2011) were tailored to ego involvement, adapting the self-identity building of Conner, Warren, Near and Sparks For ego involvement (1999). Telepresence was also assessed in an online shopping setting with a five-point scale by Fiore et al. (2005a). The objects were additionally decreased to a 7-point scale from the initial Likert 9-point scale to preserve their credibility and other queries. The assessment of technology anxiety consisted of nine elements from Meuter et al (2003). Four parts adapting from Papagiannidis' et al. (2014) research on the simulated test drive in game worlds were also used to determine the buying intent of participants. In a 5-point responsibility level, respondents first shared their viewpoints and then tested their compliance with three claims. Finally, the last checked construct is product awareness. We also continued to include an online questionnaire focused on Schwartz's (2011) methodology, to detect product attributes that are important to customers while purchasing a sleeved chair, beside price and name. Thirty-one citizens who did not belong to the study party or control group but belonged to the same community had selected the key variables from a survey on the buying of furniture (Furniture World, 2004). The product characteristics were then used to assess subjective product awareness in the research and control group questionnaire. Participants were then invited to convey their degree of detail concerning the chair in terms of general evaluation, comfortability, efficiency, design, versatility and height. Finally, a variety of community questions determining gender, age, ethnicity and the rate of education were part of the questionnaire. These characteristics were introduced to ensure that the sampling parameters were preserved and that future effects on the model constructions were managed.

Data analysis

We use IBM SPSS mathematical tools to evaluate the quantitative data obtained from the trial. Prior to the actual study, data was transmitted from Google form to Excel to translate the responses to numerical data from the participants and to convert each query to the element it

calculated. The data is then transmitted. The data were then imported into SPSS and checked to ensure the proper transmission between phases for outliers and loss of values. As a consequence of a program mistake at the outset of the data collection, 3 experimental population participants and 35 control group representatives missed questions about simple use. Although no random information (MCARs) were visible, cases were only excluded if missing data was needed in parallel for the following tests for the proper review. The grouping, frequency and exploratory approaches were used first to obtain an overview into the general characteristics of the study. The control group has been checked to make sure that all respondents belonged Y generation as a correct population sample has already chosen. These small formula changes contribute to an examination of the effectiveness of scales with the analysis of variables, as certain scales have been focussed upon previous research (FA). In analytics (Velicer& Jackson, 1990) the PCA is most widely used to evaluate if the objects reflect a good machine expression and can therefore be combined with the description scale. Firstly, it established and performed a sphericality examination of Bartlett to ensure the adequacy of the test for the Kaiser-Mayer-Olkin (KMO) parameters. The KMO adequacy measurement was 833, higher than minimum .6 for effective factor analysis (Tabachnick&Fidell, 2001). The sphericity test in Bartlett was also statistically relevant and proved not to be an identity matrix. In order to encourage awareness, all factor loads below .4 that explain the variations in architecture have been removed (Ahmed & Salas, 2008) leading to certain cross loads. All elements having loads above .45 (Hair, Tatham, Anderson, & Black, 1998) were in reality considered for the components and the underlying systems, and there were not higher cross loads on other components. Apart from simple function and telepresence, all elements initially loaded into the building are used on the associated summed scales. The first item and the fourth installation in use were however excluded. Cronbach alpha has also been evaluated for durability in size. The internal consistency checked in the scale indicates that all components assess the same basic trait and refer to the classifications "joint" (Pallant, 2005). In comparison, alpha over .7 indicates a stable scale (Nunnally, 1978). The alpha of the Cronbach for all the scales used was between .744 and .923; (Table 1). The products that have been determined by the PCA and have been shown to be accurate were then grouped and marked according to their nature into a sizeable mean scale.

	Purchase Intention	Attitude	Utilitarian Value	Hedonic Value	Telepresence	Ease of Use	Technology Anxiety	Ego Involvement
Cronbach's alpha	.755	.886	.876	.924	.853	.827	.878	.745
N	4	4	4	8	4	3	9	4

Table 1: Reliability of scales

$$\text{Eta squared} = \frac{t^2}{t^2 + (N1 + N2 - 2)}$$

Figure 4: Eta squared calculation (Pallant, 2005)

Cohen (1988) says that eta squared can be translated as the scale of the effect, while .01 is small, .06 a modest and .14 a major effect between variables.

Furthermore, we analyzed the associations between the variables to obtain initial insight into variable relationships. The relation was evaluated using non-parametric rank order correlation from Spearman rather than the product-time test from Pearson, as most variables have not typically distributed ratings (Pallant, 2005). The connection between variables demonstrate both the orientation of the relationship and its intensity (Pallant, 2005). Furthermore, multicollinearity was tested, thus correlations above .9 which are important ($p<.05$), since multicolinearity between predictor variables may affect the result of multiple regressions (Franke, 2010; Pallant, 2005).

The relation to variables was tested by the normal least square method (OLS) and the basic linear return for the telepresence route with many linear regressions. Moreover, the multi-linearity was handled with "tolerance" and "VIF" ticks using the matrix and regression results.Pallant (2005) further defines less than 10 tolerance levels, and greater than 10 VIFs as a multi-colinearity measure. By running multiple linear regressions and operating in the pattern from left to right, we were able to explain the connections between variables, determine the value of each variable in the pattern, and provide insight into the shape of the purchasing intention. It then deals with the big part of hypothesis. Since the regression of OLS is vulnerable to limited samples, Stevens (1996) advises that some 15 people can get a correct equation per prediction. Via the four maximum variables as predictors for each regression, the sample size of the research population can be considered suffice. The repetitive regression is also susceptible to outliers (Pallant, 2005). In addition to the original data screening process, the uniform residual plot was evaluated to demonstrate that all values fell within defined scale limits. In addition, the waste dispersal plot was used for any regression equation to track residuals' normality, linearity and homoscedasticity. The other variations are between the obtained attribute and the forecast performance (Pallant, 2005). The results of this study illustrate the uniform β coefficient for linear regressions.The β values are translated to the same size for each variable and equivalent to the variable input – individual (Pallant, 2005). In addition, the uniform coefficient indicates that the calculation affects how many standard deviations if the independent variable adjusts a standard deviation unit (Pallant, 2005). The square Adjusted R tends to overestimate the actual population value by a small sample R square (Tabachnick&Fidell, 2001). R square also indicates how well the gap in the dependent version is explained by the model (Pallant, 2005). Further analysis of the statistical significance of this mediating influence with the measure Sobel (Preacher, n.d.). Furthermore, Hayes (n.d.) used the SPSS macro called Proceeding to verify the indirect effect for a method of 5000 tests, as it is more precise than the tiny Sobel examination (Fritz & MacKinnon, 2007).

Chapter 4: Findings and analysis

Table: Descriptive statistics and independent t test

	Experimental Group		Control Group		t-test			Effect Size
	Mean	Std. Dev.	Mean	Std. Dev.	Sig. (2-tailed)	t	df	eta squared
Intentionto Purchase	4.72	1.02	4.01	.92	.000*	4.67	175	.11
Product Knowledge	3.33	.72	3.45	.72	.302	-1.033	175	
Attitude	4.94	1.13	4.65	1.34	.135	1.51	175	
Valueof Utilitarian	5.83	1.16	4.98	1.11	.000*	4.61	175	.11
Ease of Use	5.41	1.13	5.24	1.02	.242	.84	137	
Value of Hedonic	5.63	.73	4.36	1.08	.000*	9.23	160.94	.33
Telepresence	3.58	1.23	3.76	1.47	.481	-.72	175	
Anxietyrelated to Technology	2.23	.77	2.52	.95	.063	-1.76	175	
Ego Involvement	3.74	1.17	3.62	1.32	.264	.71	175	

*significant at the .01 level (2-tailed)

The experimental-controlling group's low technology anxieties were predicted because participants in generation Y were already active. Several researchers found that the technology anxiety for young people was lower (Kim & Forsythe, 2008; Laguna & Babcock, 1997; Meuter et al., 2003). Ego activity and therefore the self-concept of the researchers in general was not closely correlated to fashion shopping in the experimental and control classes. The technical anxiety and ego engagement approaches for both classes were also not substantially different (Table above). With respect to product perception, all participants displayed comparable levels for the experimental community without substantially higher values (Table above). This may be shocking in the first instance when other researchers have had a positive influence on product awareness on immersive technologies. However, there are quitea few elements representing various product characteristics in the product awareness scale. For measuring the "style," the "size," and the confidence they had in a purchasing decision, the experimental group obtained a higher number. The AR experience has however not contributed to a higher awareness of the entire product, since the detail provided by a product image is presumed to be incomplete.

Furthermore, the higher practical importance of the experimental community reveals that the immersive technology provides knowledge that is important to and improves consumer buying in the manner that conventional online shopping does not, for instance, with regard to 'scale' of the commodity.

Both classes were optimistic towards the commodity shown. The experimental group did have a higher ranking than the control group but objectively the discrepancy was not important (Table above). Schwartz (2011) considered a significant AR influence on perceptions that our research does not help. This could be for a variety of reasons. The like telepresence levels suggest, on the one hand, that participants have not been totally absorbed in the AR world, and thus have no background of virtual goods, close to the experience of a direct product, expected to form attitude and purchasing intentions (Li et al., 2002). In the other side, it may be an example of the related forming capacities of both the AR and e-commerce pages. In comparison, in terms of color and style, the sleeper is reasonably neutral and maybe even common to consumer participants. In addition, the platform and the AR program were seen by participants as user-friendly. While the experimental community has a very modern technology, no big difference was noticed between groups in the ease of usage (Table above). Generation Y, which has been a target group of our research, may be considered that it is able to take advantage of AR innovations and less daunting than a website. One explanation is why more advanced technology is utilized by this generation earlier than others (Rowinski, 2012). Snapchat often uses the AR (Newberry 2016) or already uses the Pokémon GO, a term that is one of the major population classes of the present century (Parkin, 2016; Seitz, 2016).

In comparison to Schwartz (2011), who used AR technologies as her testing tool through video, our research methodology has had a greater impact on consumer purchasing intentions within the experimental community following the AR app than the control group that has seen conventional e-commerce website screenshot. The findings thus indicate that a committing AR program may not be a fun tool, but will affect the purchasing purpose of consumers and perhaps transform them into purchasing customers. On the basis of the assumptions, we may also clarify probable reasons contributing to a foregoing rise in the intention to buy. The higher utilitarian and hedonic importance of improved experience specifically impacts consumers' buying intentions. The AR perception is often influenced by product awareness and its strongly hedonic existence. Consistent with prior studies, product awareness obtained from 3D increase in a product has an impact on the subsequent buying intent. In contrast to conventional online product interactions, though, the product knowledge given is special but also of little reach. It is noteworthy that AR experience has not changed the approach to the commodity favorably or negatively. It did not even lead to the purchasing intentions of the higher consumer. It is difficult to embrace the premise that AR's telepresence is a primary factor for improved buying intentions. The excitation of telepresence in an easy-to-use program will, nevertheless, boost AR experience and lead to higher purchasing intentions, mediated through hedonic and utilitarian value and product awareness.

Chapter 5: Discussion and conclusion

This research reveals the effect between AR implementations and the purchasing purpose of the consumer. As has already been said, product awareness, hedonic and utilitarian meaning expressed by the improved experience are the most critical factors contributing to purchasing purpose. Given the process restriction, we feel that this can be applicable to other commercial AR applications such as digital 'magic mirrors' in the makeup or apparel sector, from the IKEA example. Furthermore, our analysis indicate that immersive technology has shifted as researchers have concluded that the technology has decreased its usefulness since the Van Krevelen studies and (2011). While our analytical methodology was intended for the analysis of causal effects in a strictly quantitative manner, participants from the experimental community commented additionally during the current experimentation period. When the application was first test, almost all participants were struck by how the true pieces of furniture were simulated and identical arguments made, as in the AR research by Javornik (2017) like "Wow! The application was tested!" "Or "It's cool," he said. While technology has now been recognized for a while, we may conclude that the representatives of Generation Y have a lack of hands-on experience. However, few participants said they liked the fun side of the growing encounter at the end of the trial but they won't use the experience as part of their future purchase process. The statement supports concerns related to the practicality and low-intention usage of "gimmicky" implements (Owyang, 2010; Scholz& Smith, 2016) (Rese et al., 2014). Our experiment therefore reveals that the application can provide telecommunication by utilizing a shopping-focused AR software. Although it's not a major part of our research paradigm, through the testing process we have explored the impact on both sexes. Both sexes may be believed to have a similar effect on hedonic and practical sense and purchasing intentions. These architecture requirements are supported by the overall developments in qualitative analytics that combine technological factors such as performance and usability. But, contrasted with other new platforms or innovations, study struggled to figure out how mentally RA might have an effect on customers. Particularly when qualitative research has posed problems like RA with disorientating results that make some customers feel humiliated. This thesis thus opposes the idea of utilising VFRs and in the suggestions portion of this chapter this topic will be explored further. The study shows that while the key trend of fashion retailing is aesthetics, customers use more of a service-dominant rationale since the importance of a good shopping experience is apparent. Thus if customers believe like they would profit from their shopping experience, they may be more inclined to embrace innovative innovations such as AR.

After the analysis method, the benefits and drawbacks of the different networks where AR can be used became quite well known. The fundamental concern that will influence the AR brand is how the invention has been utilised. Therefore, AR may be incorporated through several platforms and as previously established, this allows the application aim for the fashion retailing industry the most efficient way to boost the experience. The study results indicate that fashion retailers profit from AR implementation in addition to helping customers by developing an

immersive experience. The results indicate first of all that AR is more successful when used as a marketing strategy than a sales strategy, since it concentrates on control of consumer service. Research indicates that if fashion retailers adopt AR in principle, they will gain from enhanced brand awareness, optimistic WOM, consumer participation through the social network and expanded customer base, thus improving income. This indicates that if apparel retailers were to adopt RF, they would be compensated with a strong return on investment.

Limitations

The empirical effects ought to be acknowledged and weaknesses taken into consideration. The method preferred to quantify and sample lab comfort for widespread usage in real life environments and other populations after generation Y can be questioned. Furthermore, provided that the adoption of technology and the possession of intelligent equipment differ across nations, there can also be no cultural impact. It may also be debated whether the analysis is conducted with appropriate subjects, as the measurement of sample size of Malhotra and Birks (2007) with the same sample size as other samples has been followed. For reliable statistical results in the experimental population in particular 59 participants might be small. It is therefore important to remember that only one device - the white armchair - was exposed to the participants. In its analysis Schwartz (2011) recommended to use more goods to reduce personal preference and taste, although the product was almost identical in support and disdain by both classes. Since the consequences of offering a single chair were only studied, the restriction of a product group can therefore be generalized. The findings which vary from ours for other furniture categories such as beds, tables or decoration. In other markets, the effects on the customer dimensions may be different, since the utilitarian importance of virtual picture experience is believed to include consumers in the main for high participation and for products not always bought (Fiore et al., 2005b). As the consequences have been addressed, the usability values for the AR experience were strong. At this point, it seems necessary to note that the application was used to provide all participants in the experimental community first. This quick presentation by researchers may have influenced the understanding of the simplicity of the application by participants.

References

- Ajzen, I. (2005). Attitudes, personality, and behavior. Maidenhead, Berkshire, England: Open University Press.
- Benz, C. and Newman, I. (2008). Mixed methods research. Carbondale: Southern Illinois University Press.
- Blakeman, R. 2014, Nontraditional media in marketing and advertising, SAGE, Los Angeles, Calif; London
- Blakeman, R. 2014, Nontraditional media in marketing and advertising, SAGE, Los Angeles, Calif; London, p.118 Britten, F. (2011). Fashion embraces augmented reality technology. [Online] Nytimes.com. Available at:

http://www.nytimes.com/2011/09/21/fashion/fashion-embraces-augmentedreality-technology.html

- Bryman, A. 2012, Social research methods, Oxford University Press, Oxford.
- Bulearca, M. and Tamarjan, D. (2010). Augmented reality: A sustainable marketing tool. Global business and management research: An international journal, vol. 2 no.2/ 3, pp.237-252.
- Carù, A. & Cova, B. 2003, "Revisiting Consumption Experience: A More Humble but Complete View of the Concept", Marketing Theory, vol. 3, no. 2, pp. 267-286.
- Craig, A. (2013). Understanding augmented reality. Amsterdam: Morgan Kaufmann.
- Creswell, J. and Plano Clark, V. (2011). Designing and Conducting Mixed Methods Research. 2nd ed. London: Sage publications.
- Creswell, J.W. 2014, Research design: qualitative, quantitative, and mixed method approaches. 4th ed. SAGE, Los Angeles, Calif.
- Creswell, J.W. 2014, Research design: qualitative, quantitative, and mixed method approaches. 4th ed. SAGE, Los Angeles, Calif, p.220.
- Crowther, D. & Lancaster, G. 2008, Research Methods, Routledge Ltd, GB.
- Davis, F.D. 1989, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology", MIS Quarterly, vol. 13, no. 3, pp. 319-340.
- Dawson, C. 2009, Introduction to research methods: a practical guide for anyone undertaking a research project, How To Books, GB.
- Diamond, J., Diamond, E. and Litt, S. (2015). Fashion Retailing: A MultiChannel Approach. 3rd ed. London: Bloomsbury.
- Egan, J. (2007). Marketing communications. London: Thomson, p.40. Egan, J. (2007). Marketing communications. London: Thomson.
- Euromonitor (2015) Top 10 Global Consumer Trends For 2015, from Euromonitor Passport database, Available at http://www.portal.euromonitor.com.ezproxy.cardiffmet.ac.uk/portal/analysis/tab
- Höhl, W. (2009). Interactive environments with open-source software. Wien: Springer. Holbrook, M.B. & Hirschman, E.C. 1982, "The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun", Journal of Consumer Research, vol. 9, no. 2, pp. 132-140.
- Huang, T. & Hsu Liu, F. 2014, "Formation of augmented-reality interactive technology's persuasive effects from the perspective of experiential value", Internet Research, vol. 24, no. 1, pp. 82-109
- Nazimsha, S., and M. Rajeswari. "COMPARING DIGITAL MARKETING WITH TRADITIONAL MARKETING AND CONSUMER PREFERENCE, OVER WHICH MEDIUM BY TAKING CONCEPT OF ADS."International Journal of Sales & Marketing Management (IJSMM)7.1, Dec-Jan 2017; 1-12

- Huang, T. & Hsu Liu, F. 2014, "Formation of augmented-reality interactive technology's persuasive effects from the perspective of experiential value", Internet Research, vol. 24, no. 1, p.93
- Huang, T. & Liao, S. 2014, "A model of acceptance of augmented-reality interactive technology: the moderating role of cognitive innovativeness", Electronic Commerce Research, No pagination
- MAHAJAN11, R. I. N. I., and DHEERENDRA SINGH. "STEP BY STEP SECURING CLOUD ENVIRONMENT." International Journal of General Engineering and Technology (IJGET) 6 (2017): 47-54.
- Kang, J.M., Johnson, K.K.P. & Wu, J. 2014, "Consumer style inventory and intent to social shop online for apparel using social networking sites", Journal of fashion marketing and management, vol. 18, no. 3, pp. 301-320.
- Jain, Pooja. "Visual persuasion-a creative aspect in communication." International Journal of Humanities and Social Sciences 7.3 (2018): 5-12.
- Keynote, (2014). Clothing Retail :Keynote Market Update Report, 11th Edition March 2014, Available at :https://www.keynotecouk.ezproxy.cardiffmet.ac.uk/marketupdate/retail/clothingretailing?full_report=true
- Dayanithi, S. "Study on Digital Banking Services after Demonetisation with Reference to Kancheepuram District." International Journal of Human Resource Management and Research (IJHRMR) 8 (2018): 93-100.
- Kim, J. & Forsythe, S. 2009, "Adoption of sensory enabling technology for online apparel shopping", European journal of marketing, vol. 43, no. 9/10, pp. 1101-1120
- King, N. and Horrocks, C. (2010). Interviews in qualitative research. Los Angeles: SAGE, p.153. Kipper, G. and Rampolla, J. (2012). Augmented reality. Waltham, MA: Syngress
- Li, Y., Zhang, Z., & Zhao, Y. (2016). Analysis on influencing factors of consumers' purchasing behavior online for furniture. Proceedings of the 18th Annual International Conference on Electronic Commerce e-Commerce in Smart connected World - ICEC '16. doi:10.1145/2971603.2971606
- Liao, T. (2014). Augmented or admented reality? The influence of marketing on augmented reality technologies. Information, Communication & Society, 18(3), 310-326. doi:10.1080/1369118x.2014.989252 Lombard, M. (2000). Presence and television. The role of screen size. Human Communication Research, 26(1), 75-98. doi:10.1093/hcr/26.1.75
- Lu, Y., & Smith, S. (2007). Augmented Reality E-Commerce Assistant System: Trying While Shopping. Lecture Notes in Computer Science Human-Computer Interaction. Interaction Platforms and Techniques, 643-652. doi:10.1007/978-3-540-73107-8_72
- Malhotra, N. K., & Birks, D. F. (2007). Marketing research: an applied approach. Harlow: Prentice Hall. Mallinson, H. (2017). 'New year, new resolutions': Provocative

anti-smoking billboard advert 'coughs' whenever it senses cigarette smoke. Retrieved from http://www.dailymail.co.uk/news/article-4102944/New-year-new-resolutionsProvocative-anti-smoking-billboard-adv

- Marquis, R. (2012). 3 brands that failed with QR codes. Retrieved from http://www.imediaconnection.com/articles/ported-articles/red-dotarticles/2012/jun/3-brands-that-failed-with-qr-codes/
- Marshall, G. (2012). Augmented Reality Marketing: Utilizing firesheep Here Innovative Research For one's Selling Requirements. Retrieved http://marketing.ezinemark.com/augmented-reality-marketing-utilizing-firesheep-hereinnovative-research-for-ones-selling-requirements-7d33ec35d892.html
- Maurin, H., Sonnenwald, D. H., Cairns, B., Manning, J. E., Freid, E. B., & Fuchs, H. (2006). Exploring gender differences in perceptions of 3D telepresence collaboration technology. Proceedings of the 4th Nordic conference on Human-computer interaction changing roles - NordiCHI '06. doi:10.1145/1182475.1182517
- Mayer, R. C., Davis, J. H., &Schoorman, F. D. (1995). An Integrative Model of Organizational Trust. The Academy of Management Review, 20(3), 709. doi:10.2307/258792
- Metafacts. (2016, May 04). For Early Adopters, Age Matters More Than Youth. Retrieved from https://technologyuser.com/2011/10/06/for-early-adopters-age-mattersmore-than-youth/
- McCarthy, J., & Wright, P. (2007). Technology as experience. Cambridge, Mass: MIT Press.
- Lecinski, J. (2011). ZMOT. [Mountain View, Calif.]: Google. Lusch, R. and Vargo, S. (2014). Service-dominant logic. Cambridge: Cambridge University Press.
- Lysonski, S. &Durvasula, S. 2013, "Consumer decision making styles in retailing: evolution of mindsets and psychological impacts", The journal of consumer marketing, vol. 30, no. 1, pp. 75-87.
- McKean, J. (2014). Customer's new voice. New Jersey: John Wiley & Sons, p.182.
- Merriam, S.B. 2014, Qualitative Research: A Guide to Design and Implementation : A Guide to Design and Implementation (3rd Edition), Wiley.
- Olsson, T., Lagerstam, E., Kärkkäinen, T. &Väänänen-Vainio-Mattila, K. 2013, "Expected user experience of mobile augmented reality services: a user study in the context of shopping centres", Personal and Ubiquitous Computing, vol. 17, no. 2, pp. 287-304
- Pachoulakis, I. &Kapetanakis, K. 2012, "Augmented Reality Platforms for Virtual Fitting Rooms", International Journal of Multimedia & Its Applications, vol. 4, pp. 35-46.
- Preston, R. (2014). 'Virtual mannequins' promise better fit for online shoppers. BBC News. [Online] Available at: http://www.bbc.co.uk/news/technology25812130
- Quinn, B. (2012). Fashion futures. London: Merrell.

- Rogers, E. (1995). Diffusion of innovations. New York: Free Press. Ryan, J. (2012). Store gallery: Burberry Regent Street - a vision of luxury retail. [Online] Retail-week.com. Available at: http://www.retailweek.com/stores/store-gallery-burberry-regent-street-a-vision-of-luxuryretail/5040823.article
- Saunders, M., Lewis, P. & Thornhill, A. 2012, Research methods for business students, Pearson, New York; Harlow, England.
- Saunders, M., Lewis, P. & Thornhill, A. 2012, Research methods for business students, Pearson, New York; Harlow, England, p.130.
- Schmitt, B. 1999, "Experiential Marketing", Journal of Marketing Management, vol. 15, no. 1, p. 60
- Shen, W. (2013). Augmented Reality for E-Commerce. Applied Mechanics and Materials, 433-435, pp.1902-1905.
- Shobeiri, S., Laroche, M. &Mazaheri, E. 2013, "Shaping e-retailer's website personality: the importance of experiential marketing", Journal of retailing and consumer services, vol. 20, no. 1, pp. 102-110.
- VanderStoep, S.W. & Johnston, D.D. 2009, Research methods for everyday life: blending qualitative and quantitative approaches, Jossey-Bass, San Francisco, CA, p.312
- Varadarajan, R., Srinivasan, R., Vadakkepatt, G.G., Yadav, M.S., Pavlou, P.A., Krishnamurthy, S. & Krause, T. (2010), "Interactive technologies and retailing strategy: a review, conceptual framework and future research directions", Journal of interactive marketing, vol. 24, no. 2, pp. 96-110
- Vishwanath, A. and Barnett, G. (2011). The diffusion of innovations. New York: Peter Lang.