A study of customer perception and its impact on buying behaviour with special reference to Augmented Reality in the Retail industry

Nikita Vaidya
Student, Balaji Institute of Technology & Management, Sri Balaji University, Pune, MH, 411033
E-mail: vaidyanikita16@gmail.com

Rajkiran Pund
Assistant Professor, Balaji Institute of Technology & Management, Sri Balaji University, Pune, MH, 411033
E-mail: rajkiran.pund@bitmpune.edu.in

Abstract

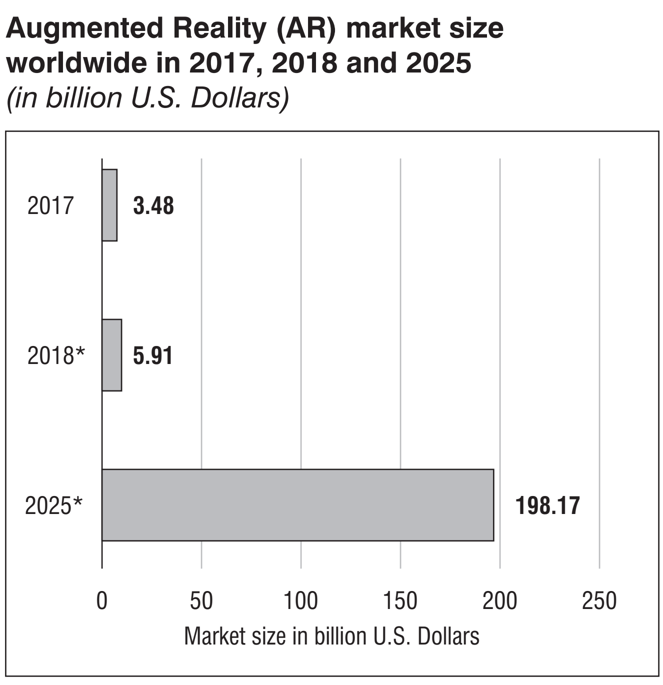
In today's era of technology, social media and digitalization, brands are trying their best to increase the ways customers experience their services and are making several unique, creative and new ways and means in their product launch and marketing strategies. AR (Augmented Reality) technology is one of these new approaches resorted to by these companies which can turn any object or surface into a billboard for the brand by interlaying the brand image and associated content on any surface, giving a unique and interesting experience to the customers, leading to brand education and helps them in improving their shopping experiences. This paper has conducted a study into the region of Pune, wherein not much exposure to AR technology has happened and seeks to provide insights regarding the future availability of this technology in the retail industry. The researchers will be discussing about the perception of AR technology into the minds of the customers and the way they might react, if they were exposed to this technology along with the benefits to the retailers, if they make use of this technology in their respective stores and presents a unique look at this topic as not many research studies have been done, on the relationship between the way technology is utilized and the journey of the customers and can present findings, of use to companies for taking strategic level or policy level decisions, regarding usage of the AR technology.

Keywords: Augmented reality, customers, retail industry, perception, technology

Introduction

Customers purchase from businesses for the satisfaction of their myriad needs. The experiences had by the customers is the product of the ways in which the customers and the businesses interact with each other. Businesses which provide excellent customer experiences are sure to succeed well in the markets, which drives the businesses to deliver unique customer experiences through means which are new, unique or unusual. This concern is indeed a critical one as more than 70% senior executives are of the opinion that the way customers experience is a crucial factor, which can determine whether the customers wish to stay loyal to the brand or not, resulting in the Marketing teams of companies brainstorming new ideas and campaigns for reaching through the customers through the quality of the experiences which has an effect on the brand as customers perceive the brand as good, if their experiences with the company are good, thus companies leave no stone unturned in their quest for the provision of excellent experiences to the customers. This brings us to the technology of Augmented Reality (AR). It is a technology which provides information about the brand, product details and other essential information through means of specialized applications and dedicated devices (Google glass). Through the application, the information about the product is 'laid' (superimposition) onto any real life surface such as the side of a refrigerator, a fruit, the plastic packaging of the products, cardboard box sides, etc. creating a unique experience for the customers as through VR, the box of biscuits they are holding in their hands can speak to them, increasing their levels of familiarity and comfort with the product.

Figure 1: Augmented reality market size



Pioneering research by an American engineer, Mr. Ivan Sutherland led to the development of 'Augmented Reality'. Mr. Sutherland envisioned this technology, giving it form as a head mounted display called as 'the sword of Damocles'. However, unlike the mythical sword, the device gave the users unique experiences about the world around them instead of splitting their head, inspiring further research into this technology, which led to the next epoch of development when a Boeing engineer, Mr. Tim Caudell coined the term 'Augmented Reality' in the year 1990, for this technology which led to further interest into it. The National Aeronautics and Space Administration of the USA created an AR based synthetic vision information display technology in the year 1999 for use in its newly developed spaceplane, the X-38 Spacecraft. The Nokia Corporation developed a video game based on AR technology called 'AR Tennis' in its feature phones, enabling two players to enjoy a game of tennis. The BMW Corporation of Germany was the first brand which adopted the usage of AR technology for its newspaper ads, enabling its potential customers to enjoy a unique experience with its vehicles through their smartphones.

Analysis of the data (Statista) reveals that the global size of the market of Augmented Reality is expected to increase on a dramatic basis, crossing 198 Billion USD by the end of 2025, a figure that was just 3.5 Billion USD in 2017, which is a meteoric rise and is of significant value for businessmen, marketers and researchers alike. With specific reference to the retail market, the monetary value of this technology breached 795.1 Million USD in the year 2023 at a CAGR value of 47.1 percent period, as measured during the forecast period. This rise is significant as the figure was 115.8 Million USD at the end of 2018, representing the tremendous potential and scope of this technology. A fundamental aspect of human nature is the way the brain is programmed to go for things which make lives a bit more easier, which is in favour of the AR technology as it can present a unique way to look at the products, as it brings them to life (within the smart devices) in a way which can entertain, enlighten and educate, converting potential customers into customers as the technology enables the shoppers to view a product in a virtual environment, projected onto the real environment on any surface of their choice, enabling the creation of smart mirrors, smart glasses, etc. which can help the customers to try the products in an economically friendly way without compromising on its variety as customization options is possible through AR technology.

1.1 Three applications have been identified for Augmented Reality technology in the retail industry:'

1. Try before U buy': Stores and retail outlets which have installed AR enabled smart mirrors and reflective surfaces can enable the potential customers to 'try' the products (clothes, sunglasses, jewellery, smart wear, etc.) they are interested in, to know how they will look, using the products. This option increases the chances of conversion into sales as customers who are satisfied with their 'AR Looks' will purchase the products. Further, the AR option enables the potential customers to try the product in a way which will not compromise its saleability, making it more convenient for the companies.

2. Customization and Personalization: This option permits the shopper to customize the product they are interested in. For example, through AR, the colour of the sunglasses (a product they are trying using AR) can be changed to match the colour the shopper is wearing (say, a lime green top). This presents a unique way to check how the product will be in a cost effective way and has been reported by more than 55 percent of the marketers to boost the shopping experience.

3. Navigation assistance within the stores: Shoppers and customers can be guided with the AR technology for in-store navigation. For example, a large departmental store might feature a 'contest' wherein the customers had to get information about certain products through their AR apps in their smartphones, enabling them to discover new products in an entertaining way. The retailers can benefit by increasing the chances of their products being known to the shoppers as it can convert them into customers and the consumers can enjoy the way they discover the products in a way similar to 'Pokémon Go', making it a win-win situation for both sides.

1.1.1 Following applications for Augmented Reality technology have been identified by the researchers in the Retail industry:

a) The MirrAR App: The MirrAR app is an smart device based AR App which is designed for jewellery design customization for high end jewellery stores and retailers such as Tanishq, PC Jewellers, Malabar Diamonds, Amrapali, etc. The stores had featured large display units (55 inch smartscreen TVs and display panels) in the central areas in their stores along with several counter based Smart-tablets based display units with the MirrAR App installed into it for a limited time into their stores. In addition to their stores, these high end brands had also installed the Smart panels in prominent locations in the Delhi and Bangalore airports, giving a unique perspective into their products to the shoppers, potential customers and travellers. The App also featured the option to place orders for the products along with permitting the users to take their pictures featuring them using the products and share them in social media which was a hit with the users. The brands which were using this AR product reported success with the usage of the product, with the PC Jewelers Brand reporting generation of leads more than 1 Crore Rs, through virtual inventory alone, at no cost for the brand owners. Since its initial launch in the year 2018, the app is being used by more than 50 prominent jewellery brands in India today.

b) Nexus Grab: The Nexus Group, a prominent real estate firm which operates malls in the prominent cities in India, had installed AR technology based panels and access devices in their malls in Mumbai and Ahmadabad. In their Ahmadabad location (Ahmadabad One), they were offering their visitors a chance to indulge in a VR based game similar to 'Pokémon Go'. The visitors had to turn on their video cameras at the AR enabled detectors in the mall, which would display product images which had to be grabbed. Each image so grabbed, gave the user a chance to purchase the actual products at a discount at the participating stores by downloading discount coupons, via the captured image data, making it a unique experience for them. At their Seawoods Mall (Grand Central Mall, Navi Mumbai), the company had installed a giant AR installation into a 'wall' made from several smart panels which featured 3d like views of marine animals such as Orcas, polar bears, penguins, etc. to the viewers, giving them a unique view into the world of marine life.

c) Shopper's Stop Magic Mirror: Shopper's Stop the prominent retail chain had installed a 'Magic Mirror', an AR enabled display panel into their stores in Mumbai on a trial basis. The device enabled the users to try almost all products featured into its stores (1500 + products) in a unique way, which enabled the user to know how the product will look like at no cost to them, increasing the chances of conversion into actual sales for the company as well as providing a unique experience to the users, enabling sales to increase in a significant way.

1.1.2 AR Based Grocery shopping: Prominent grocery stores and supermarkets such as the Freshland Supermarket Chain of the USA have installed AR based applications into their store locations. A key feature of the AR app is that it assists the user into selecting the right products for their needs, enabling them to take more informed decisions by providing the requested information about the products in an interactive way. The brand reported that sales had improved post utilization of the AR app as the customers were able to decide what products they wanted based on the dietary information, discounts and other special features, etc. in a convenient way.

1.1.3 AR for Retail OPS/SCM: Trax, a Singaporean technology company has developed a line of AR apps for enabling greater operational efficiency in large retail brands' operations and supply chain management efforts. Through this application, the big retail brands will be able to optimize their operations in an efficient way, through means of video cameras, machine readable codes and other means of acquisition of data. The app enables the discovery of products which have been stocked in the wrong places, products which are missing and enables the discovery of similar nature products enabling the retail stores and their store managers to work in a more convenient and faster way, benefiting the customers who will be able to get their products in a swifter and sure way than before.

1.1.4 Customized shoe designs: AR technology has been employed by the Nike Company for enabling its customers to virtually customize their favorite pairs of shoes and sneakers. Specially dedicated AR scanning boxes were installed in the Nike stores, wherein the shopper was to place the shoe. The AR app, then generated an image of how the shoes would look, customized in the design pattern selected by the customers, giving them a unique chance to know the ways in which they could customize their purchases.

1.2 Probable issues with Augmented Reality technology:

a) Cost: AR technology is expensive and may not be cost effective for small to medium retailers. For example, an AR enabled smart panel could cost several lakh Rupees and the cost of maintenance is expected to be in a similar way, keeping this technology only with the big retailers and brands who can afford the cost of this technology.

b) Technological compatibility: AR technology is compatible with only the current, in-vogue generation of smart devices, which were manufactured keeping AR compatibility in mind. Any smart device which was manufactured before can face difficulties working with AR technology due to device compatibility issues.

c) Privacy issues: AR technology requires a user to permit full access to his or her smart device to work in a comfortable way. Due to the nature of the technology, the company which is running the apps may be able to observe the user's interactions with the app which is a breach of their privacy. Also, the apps collect significant data about the customer's buying behavior which may cause problems and studies have revealed that such apps can be hacked, leading to possible theft of personal data and information.

d) Health issues: Long usage of AR technology puts a strain on the user's eyes, which could cause problems with vision or eyesight.

e) Ethical and morality issues: Several researchers have identified possible ethical and morality issues with AR technology, famously seen in the case of 'Pokémon Go', which was reported by several users to show the Pokémon 'Koffing' in the Holocaust museum in Washington DC, USA, which was extremely controversial due to Koffing being a 'poison gas' type Pokémon.

1.3 Future applications in AR technology in the Retail industry:

The move towards digitalization is expected to increase with rapidity in the next decade with almost all brands, companies and retailers moving towards the e-commerce platforms as a significant part of their futurization strategies. Businessmen, stakeholders and marketers have realized that they have to feature something new or different to attract the crowds into their stores, in order to secure the future for their businesses in the world today. AR technology has been identified as a 'game changer' in this domain as it not only leads to improved shopping experiences for the customers but also greater efficiency in the in-store stock inventory, operations and logistical uses for the brands, as the data generated through the AR enabled apps and devices can be used for store optimization, alternate product recommendations and other related applications for making future assumptions and predictions about the customer purchase patterns. A significant amount of resources, in excess of 45 percent is expected to be spent on AR technology and the number will increase in the next decade as companies are leaving no stone unturned for creative utilization of this technology for improving their businesses. Researchers say that AR technology is the future and along with it, Virtual Reality and Mixed Reality technologies are expected to come into the markets in the days ahead, increasing the needs for businesses to invest in this technology so that they will avoid being trampled under the march of history.

1. Literature Review

'Augmented Reality' means a combination of the real and the virtual into our reality as it 'adds to', to our real world through virtualization technology enabled placement of images and videos onto compatible real life surfaces, through superimposition of the visual data in a way visible to the users, enabling more unique experiences of the real life objects around us, enabling value addition and possible conversion of prospects into sales. AR technology has been the focus of study of several researches since its advent. The studies conducted into this topic seek to explain what Augmented Reality is about and how it can help businesses in enhancing their customers' experiences with their products. Pandya (2015), Flavian et al., (2019) state that AR technology enables the integration of 3D objects and environment into an 2D surfaces, changing the user's perception towards the objects around them by modifying their experiences through superimposition of the virtual objects into a real life environment. AR technology acts in supplementation to the reality enabling the customers to develop a greater sense of familiarity with the products of interest to them.

Rohan et al., (2019), Hilken (2018) and Hilken et al., (2018) have stated that brands and businesses are using AR technology as a way for fulfilling the expectations from their customers regarding online and offline integrated experiences about their products and services. The brands, in their desire to convey to their customers about their technological savviness, wish to enable the customers in having memorable experiences in their outlets and stores are turning towards AR technology as a medium for their customers, desirous to know whether the product they are considering is indeed the one they want through the provision of personalized experiences and customization via AR enabled smart panels, tablets and other display devices, to beneficial ends as visualized by increases in the revenue figures of the brands upto 10 percent due to investment in AR technologies. Digitalbridge (2017) in a survey has stated that more than 50 percent of the customers want their favourite brands and companies to feature AR enabled devices in the stores as it could lead to unique experiences for them, which needs to happen in a coherent way. The research studies have noted that brands are facing difficulties in integration of the offline and online experiences had by the customers and that the firms need to prioritize their offline or online customers, which could create delays regarding adoption of AR technology. Further studies have indicated that AR technology is not privacy friendly as it not only collects data about its users but also any identifiable persons in its scope of view as well, increasing the risks in case such devices were to be hacked.

Saxena (2022) states that AR technology is playing a role in blending brick and mortar stores and e-commerce into one coherent unit as it entertains, educates and creates curiosity amidst the customers, increasing the chances for businesses to convert customers from their userbases. The level of quality of the Augmented Reality is a crucial factor which can lead to increase in the customers, if the quality of the AR is very high. Poushneh (2018) states that the purpose of Augmented Reality is to assist in increasing the sales figures and customer retention so as to increase the profit levels of the businesses in an efficient way. AR forms a core part of the 'Omni Channel' journey adopted by businesses for enhancing the experiences of their customers leading to increased wealth for them in the long run. Prior studies into the topic of AR did not cover the exact aspects which were experienced by the involuntary customers along with their expectations regarding the experiences they will be having at the businesses. This research will attempt an effort to fill into the lacunae, as it will cast some light onto the expectations of the customers and the way their buying patterns will change, post exposure to Augmented Reality. There is a very good scope in India for the retail industry for the adoption of this AR technology into their business models as it can lead to an increase in the form of profits and wealth in the long run through increased user traffic and conversion to customers as an effect of using the AR technology, as the customers are becoming more techno savvy and are using several smart devices and apps for cost effectivization through the ways they purchase to get more value out of their experiences. This paper seeks to discuss the experiences of the consumers regarding their usage of AR technologies in real life and can help the companies in acquisition of valuable insights related to the buying behaviour of customers and can lead to policy level decisions regarding the usage of AR technology in their daily operations.

2. Research Gaps and Research Objectives

Augmented Reality technology is a technology which is showing promising outcomes in the world of organized retail. However, there are several gaps which remain unfilled, regarding the current level understanding of the impact of this technology onto the retail industry. Even though it has been acknowledged that the AR technology is potentially enough to change the way customer shop, there is little evidence of empirical nature which could explain how the technology of AR can improve the customers' retail shopping experiences in a seamless way.

In addition, the level of readiness of the consumers to move to AR technology driven shopping methods from the traditional shopping methods (brick and mortar stores, e-commerce, etc.) needs to be studied as it represents a knowledge gap of significant nature. Although there are research studies which have widely discussed the ways in which the AR technology can be utilized for product/service branding and customer attraction purposes, there is a gap, which could explain in a comprehensive way, the effectiveness of this technology onto the respective domains, as not much research has happened which could provide ways for the acquisition of the broader opportunities and the challenges which could be encountered by the retail industry post the integration of AR technology as it is a gap, which still remains unfilled. In addition, there is scope for significant research into the data privacy and information security/safety aspect of the AR technology into the retail spaces. Lastly, the prior studies into this subject domain have not looked into the critical aspect of the alignment of the AR technology with the expectations of the customers and the offerings by the retailers.

In light of the above paragraph, the researchers would like to state that the following are the objectives of this study:

I. To perform an investigation into the way the consumer buying behaviour has shifted, in the wake of the integration of the Augmented Reality technology into the processes associated with retail purchases and shopping.

II. To perform an analysis into the effects of the implementation of the Augmented Reality technology into the factors of sales figures and the overall performance of the businesses in the retail sector.

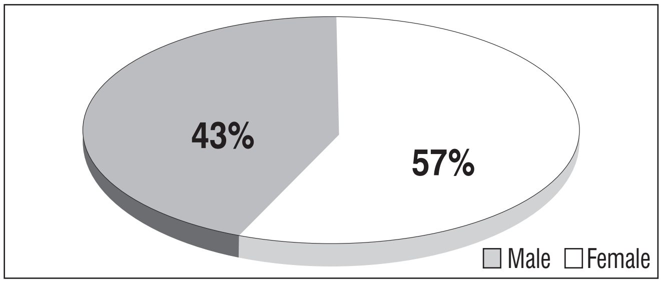
III. To perform an examination into the willingness of the customers in the embracement of the technology driven methods of shopping and purchasing through an assessment of their attitudes and preferences regarding the Augmented Reality technology into the retail industry.

3. Research methodology

The primary focus of this study is Augmented Reality in retail stores. Due to the non-familiarity with this technology in the city of Pune, regarding the usage of Augmented Reality amidst the surveyed respondents there, the researchers had to frame a bunch of simple questions, which could gauge the perception of the respondents regarding the AR technology, whether they are in favour of this technology or not. It is to be noted that usage of AR technology in India is not the norm, particularly in case of retail stores. Therefore, this research seeks to gather data specifically about the future availability of this technology in the retail stores in the country.

Primary and secondary data collected by the researchers was used for the derivation of the hypothesis in the research. An online survey form (self-administrated questionnaire) was conducted for testing the hypothesis amidst a group of convenience samples of the population identified in the city of Pune. The survey questionnaire was developed after analysis of the measurement items of the prior studies into this area by the researchers.

Figure 2: Pie Chart representing the gender ratios of the respondents (Source: Author's compilation)



Data analysis was done using the MS Excel and the IBM SPSS Software, which played an integral role in the process of testing of the hypothesis. 211 respondents were identified by the researchers and were presented with the questionnaires by the researchers, relating to the future availability of Augmented Reality in retail stores. As depicted in Figure 2, the gender breakup of the respondents reveals that 57% were female and the remaining were male. Further analysis of the data revealed that maximum number of the respondents (96.2 percent) were within the 21 – 30 years age group.

1. Hypothesis statements

Following hypothesis statements were made in the course of the study:

Hypothesis One:

a) H0: The usage of Augmented Reality technology does not lead to an impact in the buying behaviour of consumers

b) HA: The usage of Augmented Reality technology does lead to an impact in the s Two

a) H0: buying behaviour of consumers

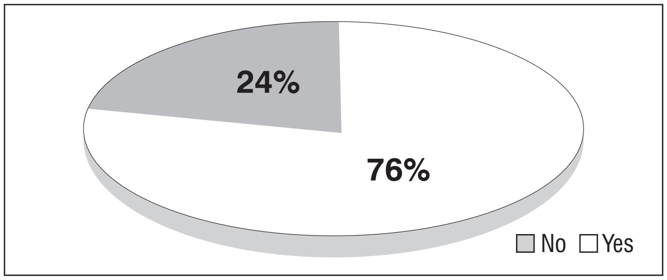
HypothesiThe introduction of Augmented Reality technology does not have an impact on the sales figures in the retail industry

b) HA: The introduction of Augmented Reality technology does have an impact on the sales figures in the retail industry

2. Statistical analysis of the data

The data acquired by the researchers was subjected to the process of statistical analysis.

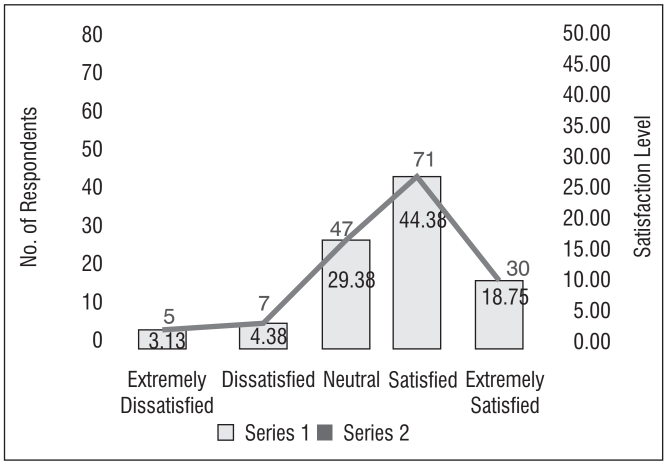
Figure 3: Pie chart representing the respondents' level of awareness regarding Augmented Reality (Source: Author's compilation)



Analysis of the data revealed that majority of the respondents were aware about the technology of Augmented Reality, as seen in Figure 3.

The authors had found that the respondents had had some experience regarding AR technology, in form of the 3D trial provided by the eyewear retailer, Lenskart. This being the case, the authors wanted to know, how satisfied the respondents were regarding the 3D trial which was measured in form of a 5 point Likert scale responses in the questionnaire (1 – Extreme dis-satisfaction to 5 –

Figure 4: Bar graph chart representing the levels of satisfaction as expressed by the customers regarding the AR based 3D Trials provided by Lenskart (Source: Author's compilation)



Extreme satisfaction), as depicted in Figure 04 which reveals that majority of the respondents were happy, with their experiences with AR technology through the Lenskart 3D trials.

Reliability Statistics		
Cronbach's Alfa	Cronbach's Alfa based on Standardised Items	No. of Items
.752	.761	5

A reliability test was conducted onto the data for verifying the extent to which the data was authentic and reliable. 5 Scale items were considered in total and the items were measured in an 5 scale Likert scale. The Cronbach Alpha value for the study was found to be 0.761, which is above the recommended value by 0.7, which implies that the data is indeed, reliable. Table 02 has displayed the item statistics used in the study, through which one can know the mean, the standard deviation and the number of respondents for the questions.

Table 2: Item Statistics

	Mean	Std. Deviation	N
Have you ever used Lenskart 3D trial? If yes, then rate the satisfaction level.	.86	.798	211
Do you think that trying clothes in changing rooms or trying other things at stores is time-consuming?	.93	.915	211
I am provided with a virtual trial mirror in the apparel store, I would like to prefer it. Rate this statement.	1.33	1.015	211
Do you think that this navigation will help me to avoid unnecessary buying?	1.06	.832	211
I would like to pay more If I am provided with this technology at the store. Rate this statement.	.94	.882	211

Testing of the Hypothesis statements:

Hypothesis 1:

a) H0: The usage of Augmented Reality technology does not lead to an impact in the buying behaviour of consumers

b) HA: The usage of Augmented Reality technology does lead to an impact in the buying behaviour of consumers

For testing the above statements, two variables were taken – 1) 'My offline store shopping has been reduced due to the time consuming nature associated with offline shopping' and 2) 'My visit to the offline stores might increase if the stores would use AR technology for selling their wares. Both questions were followed by 5-point scale responses (Likert scale). One grouping variable was identified – 'What is the frequency of your visits to the offline stores?'

Table 3: Case Processing Summary

		Count	Percent
Frequency	Once a Week	43	20.4%
	Twice a Week	24	11.4%
	Once a Month	76	36.0%
	Once in 6 Months	68	32.2%
Overall		211	100%
Excluded		0	
Total		211	

Table 4: Ratio Statistics for Before AR/After AR

Group	Mean	Median	Std. Deviation	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
						Median Centred (20%)
Once a Week	.645	.600	.377	1.048	.392	63.3%
Twice a Week	.855	.750	.478	1.097	.438	65.3%
Once a Month	.722	.633	.287	1.047	.376	47.5%
Once in 6 Months	.693	.667	.363	1.052	.315	54.5%
Overall	.745	.667	.410	1.069	.403	62.7%

Data depicted in Table 4 reveals that the median centred values are within the range of 47 – 65 percent and the overall ratio of the Mean is 0.745. Being that all the values in the Median Centred are in a range of a similar nature, we will state that the Alternate Hypothesis is accepted and the Null Hypothesis is rejected.

Hypothesis Two

a) H0: The introduction of Augmented Reality technology does not have an impact on the sales figures in the retail industry

b) HA: The introduction of Augmented Reality technology does have an impact on the sales figures in the retail industry

For the purpose of the interpretation of the above Hypothesis, three variables were taken – 1) 'Do you think that trying clothes in changing room or trying other things at stores is time-consuming?', 2)' I am provided with a virtual trial mirror in the apparel store, but I would like to prefer it.' And 3) 'I would like to pay more If I am provided with this technology at the store.

The statistical testing method of Multiple Regression was utilized for the determination of the analysis.

Table 5: ANOVA[b]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	39.436	2	19.718	33.107	.000[a]
Residual	123.881	208	.596		
Total	163.318	210			

a. Predictors: (Constant), I am provided with a virtual trial mirror in the apparel store, and I would like to prefer it. Rate this statement., Do you think that trying clothes in changing rooms or trying other things at stores is time-consuming?

b. Dependent Variable: I would like to pay more If I am provided with this technology at the store. Rate this statement.

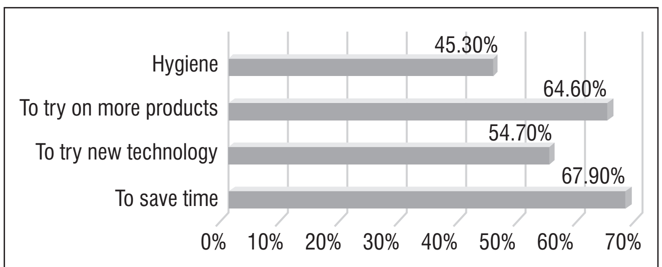
The level of significance is taken as 0.05 i.e. 5%. The significance value in Table 6 is 0.00 % which should be ideally less than 0.05 %.

Table 6: Coefficients[a]

Model	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	.381	.095		4.020	.000
Do you think that trying clothes in changing rooms or trying other things at stores is time-consuming?	.407	.061	.423	6.730	.000
I am provided with a virtual trial mirror in the apparel store, I would like to prefer it. Rate this statement.	.138	.055	.159	2.536	.012
a. Dependent Variable: I would like to pay more If I am provided with this technology at the store. Rate this statement.					

Analysis of the data given in Table 6 reveals that the 'P' value of the independent variable is 0.00 which is less than 0.05. which can be used to conclude that the independent variable can impact the dependent variable, which lets us to declare that the Null Hypothesis is rejected and the Alternate Hypothesis is accepted.

Fig 5: Factors responsible to switch to the virtual trial mirror (Source: Author's compilation)



The reason behind opting for the virtual mirror is analysed and presented in Figure 5. There were four factors based on which respondents wanted to try or switch to the virtual trial mirror. Those four factors are mentioned in Figure 5. A maximum number of people (67.9%) chose the option 'to save time'. 64.60% of people want to try more products in lesser time. 54.70% of respondents want to try out new technology and 45.30% are concerned about hygiene.

The researcher William Comcowich, Founder of Glean.info have said that 44% of customers are expecting the AR facility at the store which will enhance their shopping journey. Around 26% of buyers think that the brand which provides AR is technologically savvy, higher than artificial intelligence (19%), facial recognition (18%), chatbots (6%) and cryptocurrency (4%).

As per the data analyses both the hypotheses are tested and proved. Hence, we can conclude that augmented reality impacts the customers buying behaviour positively and customers are giving the green signal to switch from the traditional way of buying to technology-driven shopping. The installation of AR at stores will be a sales booster for brands.

1. Findings

In the primary data collection, a total of 211 respondents are surveyed of which 43% were males and the remaining 57% were females. There were 76% of the respondents were aware of the concept of AR whereas 24% were not aware. But mostly all of them are willing to use this technology if they are provided with the same. According to the results, people are looking forward to accepting this technology. The researcher observed that the customers are ready to visit the offline store more often if they are provided with AR. As they previously used to waste time in apparel stores in changing rooms while waiting in a queue or in trying multiple clothes. Respondents are wanting the retail industry to introduce AR technology as they can come over these problems.

Respondents are also excited to try out this new technology and experience the different outcomes. 95% of customers are expecting the retailers to launch the navigation and informative AR app as they can make their life easy by finding out the products in lesser time. It is also found that 79% of respondents can avoid unnecessary buying which they used to do while roaming in the supermarket while looking for something. 80% of respondents are ready to do more if they are provided with AR at stores. This will benefit the retailers and will be profitable for sure and there are higher chances of getting a hike in their sales. The introduction of AR will also help these stores or brands to stand out.

2. Suggestions

Retailers should start looking for installing this AR at their stores as it will increase the customer traffic in the store, which will eventually increase their sales. Customers also should try these new technologies which are provided by these stores as they will make their job easy and quick. Introduction of AR will help the store/ brand to stand out from the rest of the crowd which will become their POD.

3. Limitations and Scope for future research

Due to the fact that this research was specific to the City of Pune, the respondents from whom the primary data was acquired were limited to a specific region. Due to this, the results will vary, in case the study were to be done in other cities or regions in India. In addition, a significant volume of the respondents was from a single age group – 21 to 30 years. The quality of the research would have been more appropriate if the samples were more heterogeneous, regarding the age group as it could lead to a greater variety in the data. Future research studies could focus regarding the specific expectations of the customers with reference to specific product categories and sub-categories into the retail industry. Studies can also be done, focussing specifically on the other side of the fence, that is the retailers and their experiences with installation and further utilization of AR technology to understand what kind of problems can be faced and possible solutions to the lacunae and could lead to interesting research papers in the days ahead.

4. Conclusion

Augmented Reality is a technology of the future, today. To the customers, this technology saves them their time and resources as they can try different products in a way which is non-damaging and through this technology, data and information about various products is displayed to them in convenient ways through the convenience of a smartphone. Further, expensive products can also be displayed to the customers which is extremely convenient and the utilization of this technology has also led to improvements in the sales figures. For the retailers AR technology is the future as they can offer new and unique experiences to their customers, regarding their products and services in ways which both entertain, inform and educate the users, increasing the chances of conversion of customers which can lead to generation of profit and wealth in the long run. The penetration level of AR technology is expected to increase in the days ahead as more and more retailers are making use of this technology in new and innovative ways for boosting their sales and revenues. Cost and Technological familiarity are the obstacles in the utilization of this technology, but with the way technologies are proliferating in the world today, that will not be a factor of concern in the future, which can change the entire pattern of the way products and services are bought and sold in the days ahead and will form a part of several research studies in the future.

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