A Study on Consumer Perception towards Augment Reality in Retail Industry with reference to IKEA

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ABSTRACT

Augmented reality (AR) is having the strength to redesign the online shopping performance and enhance greater reliable consumer-brand association. Yet, the broader experiential and brand-related impact of AR remains unclear, as much existing research adopts an app-centric perspective focused on consumer motivations and consumer perception for and reactions to using AR applications. The current article takes a more holistic approach to examine what consumer perception is being simplified through implementation of augmented reality in retail industry. This research looked at IKEA Place, an app that allows customers to shop for furniture online using augmented reality technology instead of a marker to define the surface. The constructs of the Technology Acceptance Model and other models were used to evaluate. The study long-term viability is experimental, and it includes determining how consumers perceive augmented reality applications in the future (IKEA place). The main objective is to study the use of augmented reality in e-commerce industry with reference to IKEA store and analyze the various elements relating to consumer perceptions of an augmented reality application in an IKEA store. Hypothesis is to measure the 0073ignificant level of consumer perception on the elements relating application of augmented reality. The services provided by furniture retailers are one market that could profit from such advancements and consumers are satisfied with technology shopping ability in IKEA place, and augmented reality application in IKEA place. Consumers purchase in IKEA place are mostly quarterly and half yearly and they are very satisfied with the size of chair in website of IKEA place and consumers are strongly agree with shopping ability in IKEA place. Consumers are expecting to introduce more type of models in augmented application there are only limited models we can see in application.

Keywords: Augmented Reality, Consumer Perception and Retail Industry

1. INTRODUCTION

In today's hectic environment solutions and avoid such uncomfortable situations. The services provided by furniture retailers are one market that could profit from such advancements. In this article, the renowned furniture retailer IKEA's Place App is examined in terms of to provide all the customers with a unique internet shopping experience business and IKEA as a company are discussed in the following sections. Second, we'll look at augmented reality (AR) and how it can be used in marketing. After that, there's a part where you can read a review of the IKEA Place app as well as some comments on it. Finally, within the SD logic, final thoughts are offered AR-captured.

***The IKEA Place app*:** The Corporation rose from humble beginnings in 1943 to become a global powerhouse. Despite its status as the most well-known Scandinavian furniture firm, IKEA design services are an important part of the company's marketing efforts. In this vein, IKEA launched IKEA Place, an augmented reality app, in September 2017 with the goal of resolving practical issues associated with furniture buying. The software will employ. It would not only relieve the stress of furniture buying, but it would also relieve the responsibility of returning any items that did not fit. IKEA builds a service-centered value with this free app by signaling that it understands the challenges of furniture purchasing and offers assistance. Customers can use the IKEA application to not choose which one to buy, but also to avoid unsuitable outcomes. The software accomplishes this by allowing furniture buyers to virtually furnish their spaces. IKEA's catalogue has almost 2,000 different goods and accessories. The app adapts the selected goods to the size based on the customer’s room measurements as well as the representation of light and shadows. Furthermore, IKEA Place aims to transform the process of selecting furniture into a pleasurable digital interaction.

Types of AR in Marketing: Advertisement with Augmented Reality In previous years, eye-catching commercials that utilized AR in public spaces drew the attention of the media and consumers. That used a smoke detector that played an anti-smoking movie in response to persons smoking who went by. Pepsi also duped commuters into thinking QR codes were the first to make it possible to get more information than what was printed on the actual advertisement that was not well received by the general public. According to advertisements, "but "entertainment value" appears to be the major influence in 2D ads." QR images are a more restricted kind of augmented reality that was frequently used in a variety of marketing efforts. As seen by bad marketing plan executions, companies failed to

understand technology from the standpoint of their customers despite adopting this medium. Consumers were invariably left puzzled, irritated, or angry.

AR shopping focuses on a virtual experience as direct experience and engagement is not possible in shopping-oriented AR application. Furthermore, state that "conventional electronic ecommerce is constrained because it cannot deliver enough direct information about products to online consumers resulting in. AR solutions like virtual have the potential to enhance conversion and decrease returns for online merchants. Furthermore, the technology opens up opportunities for offline retailers. Because it allows customers to "taste" a product before purchasing it in a store

2. REVIEW OF LITERATURE

An online questionnaire was given with participants in the form of a panel-based quota sample in the UK to collect the data needed for the study. The findings also suggest that augmented reality-enabled brand engagement boosts app satisfaction and future brand usage intent. The findings are critical for retailers interested in implementing augmented reality (Graame McLeen , Alan Wilsan, 2014). The user experience as indicated in product pragmatic quality As a reflection of product hedonic quality, AR has an impact on user experience. An AR-enhanced user experience has a favourable and significant influence on user happiness and purchase intent (Atieh pouoshneh, Arturo Z, vasquez-parraga, 2016). This study's findings expand our earlier findings to the contemplation and actual choice of decision makers. When decision makers utilise social AR to communicate their point of view via a sta tic photo (Tim hilken , Debbie keeling , ko do reyter, Dominik mahr ,Mathew chylinski, 2019).

For the effective acceptance and deployment of AR and VR in online commerce, more efficient and more consumer-friendly purchasing interfaces are required. According to study. To develop efficient virtual shopping environments, a shared understanding and cooperation amongst various disciplines is necessary (Francasca Bonejti, Gary warmaby and Lee Quiinn, 2020). The data gathered in this field experiment provides evidence from real-world scenarios. To evaluate the acceptance and effects of the AR application, 100 randomly selected visitors to a popular bookstore in the city centre of a large German city were invited to take part in a field study (Philipp spreer , Katrin kalliweit, 2015).

It is claimed that implementing IoT in the retail business will result in significant cost reductions, time savings, and enhanced accessibility for retailers and customers. Interconnectedness and

networking, enhanced intelligence, and augmented behaviour are all ways that IoT adds value. One of the top strategic technology innovations projected to change retail prospects through 2020 is the Internet of Things (M.S Balaji , Aditi sengupta , sanjit Kumar Roy , Alai Chong, 2017). It is claimed that implementing IoT in the retail business will result in significant cost reductions, time savings, and enhanced accessibility for retailers and customers. Interconnectedness and networking, enhanced intelligence, and augmented behaviour are all ways that IoT adds value. One of the top strategic technology innovations projected to change retail prospects through 2020 is the Internet of Things (miell , s.gill and Vezquez D, 2016). The article looks into two augmented reality (AR) applications and the reactions of consumers to their media qualities. It begins by examining the function of interactivity in AR technologies. Second, it proposes augmentation as a key media attribute of AR applications and evaluates perceived augmentation measurement items (Roy's and Balaji.M and Quasi.A, 2018)

3. RESEARCH METHODOLOGY

Statement of the Problem: The e-commerce market is stimulated by system changes. In the retail industry, augmented reality is making quite a stir right now. This research looked at IKEA Place, an app that allows customers to shop for furniture online using augmented reality technology instead of a marker to define the surface. The constructs of the Technology Acceptance Model and other models were used to evaluate. The study long-term viability is experimental, and it includes determining how consumers perceive augmented reality applications in the future (IKEA place).

Need of the Study: The goal of the study based on the discussion made on issue is to bridge the gap in the field of augmented reality research. How the consumer perception towards the application of augmented reality on IKEA place How the IKEA place is works on consumer expectations whether the AR application is fulfilled their expectations and needs.

Objectives:

1. To study the uses of augmented reality in the retail industry with reference to IKEA store.

2. To analyze the various elements relating to consumer perceptions of an augmented reality application in an IKEA store

Hypotheses:

H11:- There is a no significant level of consumer perception on the elements relating application of augmented reality (IKEA place)

H01:- There is a significant level of consumer perception on the elements relating application of augmented reality (IKEA place)

Research Design: The random convenience sampling method is used to obtain a sample size of 100 respondents Primary and secondary data are the data collection methods. Questionnaires are used to acquire primary data. SPSS is used to analyze the collected data using one sample T-Test variables. The secondary data was primarily gathered through Google Scholar. We were able to access a variety of scholarly articles, journals, and books through these tools, as well as the IKEA Place application.

Scope of the Study: The study is confined to friends, family, society users who are using IKEA place augmented reality application from a long time.

Limitations of the Study: The trial is only 45 days long. With only 100 respondents, the sample size is modest. There are some limitations to this study. First, the sample size was small, thus a bigger sample size may be required to draw definitive conclusions that allow us to completely grasp both what customers really experience and what they expect to be delivered when interacting with AR in shopping or entertainment. It's especially crucial to pinpoint the AR qualities that boost customer happiness. This constraint can also be applied to a product category. Other furniture categories, such as beds, tables, and decorations, may yield results that differ from ours. In addition, the impact on customer dimensions may change for AR

4. DATA ANALYSIS AND INTERPRETATION

Table – 1: Analysis of Demographic Variables:

AGE			GENDER			MARITAL STATUS			HIGHEST DEGREE			OCCUPATION		
Item	Count	%	Item	Count	%	Item	Count	%	Item	Count	%	Item	Count	%
15-25	34	34	Male	40	40	Married	51	51	Primary school	4	4	Student	24	24

25-35	49	49	Female	58	58	Unmarried	49	49	High school	12	12	Business	24	24
35-55	14	14	Other	2	2				Bachelor degree	33	33	Private Emp.	44	44
55 & above	3	3							Master's degree	48	48	Other	8	8
									Doctorate degree	3	3			

From above table 1 showing that the Age of customers are using IKEA place augmented reality application. The table says that the age between 15-25 are 34 people out of 100 respondents, the age between 55& above are 3 respondents out of 100. From the above shows that the male are 40 out of 100 respondents, and the female are 58 out of 100 respondents, the others are 2 out of 100 respondents. it shows the female percentage is more than the male percentage in usage of IKEA place application. Basically Females are decisions makers in terms of purchasing in Home applicants like furniture and other things that should to decorate of home. From above table shows that the married are 51 out of 100 respondents and the unmarried are 49 out of 100 respondents. From above in education qualification in highest degree table is shows that primary school is 4, high school is 12, bachelor degree is 33, masters degree are 48, doctorate degree are 3 out of 100 respondents. From the above table 5 shows that the occupation option 1 shows that number of students is 24 out of 100 respondents, option 2 shows that 24 business man respondents out of 100 respondents, option 3 shows that number of private employees are 44 out of 100 respondents, option 4 shows that others are 8 out of 100 respondents. It clearly says that option 3(private employees) are 44 out of 100 respondents.

Table-2: Analysis of Descriptive Statistics:

S. No.	Question	Mean	SD
1	Frequently do you purchase in IKEA place	2.90	.823
2	What attracts you most in IKEA Augmented reality application	2.54	.846
3	How much information do you feel you have from the website about the size of the chair?	3.17	1.045

4	How much information do you feel you have from the website about the chair overall?	3.32	1.014
5	IKEA website can improve my shopping productivity?	3.50	1.000
6	IKEA website can improve my shopping ability?	3.50	1.010
7	Shopping with IKEA place is comfortable	3.64	.990
8	It is create a product experience similar to one have when shopping in a store	3.57	1.066
9	I can easily technicalities of AR	3.57	1.071
10	I can't updated myself with latest technologies	3.60	.921
11	Website will be influencing you purchase decision	3.66	.966
12	The website increased my intention to buy the furniture	3.63	.939
13	I believe that I have enough information to make a purchase decision	3.72	.842
14	IKEA Augmented reality is clear and understandable	3.66	1.037
15	IKEA Augmented reality does not require a lot of mental effort	3.65	.936
16	IKEA Augmented reality is easy to use	3.71	.935
17	IKEA Augmented reality allows me to shop the way I went to shop	3.74	.954
18	The Augmented reality experience in the application would be helpful in aiding me to make purchase decision if I am considering buying the chair	3.64	.959
19	Shopping with IKEA Augmented reality would be excited	3.55	.968

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The above table, descriptive statistics is all about the of consumer perception and Awareness on the uses of AR at IKEA place to know the customers perception about on the uses of IKEA place likert 5 scale analysis is used. From the above table let consider mean values, there we can observe that the mean values are ≈4. So, most of the respondents are showing more interest towards the Application of Augmented reality (IKEA place) most of the people are in aware of using application and consumers are more attracted to the features in IKEA place. By using 5 scale most of the respondents says

Hypothesis Testing:

One-Sample Test		
	t	Sig.
Frequently do you purchase in IKEA place	-1.216	0.227
What attracts you most in IKEA Augmented reality application	-5.438	0
How much information do you feel you have from the website about the size of the chair?	1.627	0.107
How much information do you feel you have from the website about the chair overall?	3.156	0.002
IKEA website can improve my shopping productivity?	5	0

IKEA website can improve my shopping ability?	4.95	0
Shopping with IKEA place is comfortable	6.464	0
It is create a product experience similar to one have when shopping in a store	5.347	0
I can easily technicalities of AR	5.257	0
I can't updated myself with latest technologies	6.514	0
Website will be influencing you purchase decision	6.83	0
The website increased my intention to buy the furniture	6.709	0
I believe that I have enough information to make a purchase decision	8.553	0
IKEA Augmented reality is clear and understandable	6.365	0
IKEA Augmented reality does not require a lot of mental effort	6.944	0
IKEA Augmented reality is easy to use	7.592	0
IKEA Augmented reality allows me to shop the way I want to shop	7.691	0
The Augmented reality experience in the application would be helpful in aiding me to make purchase decision if I am considering buying the chair	6.674	0
Shopping with IKEA Augmented reality would be excited	5.682	0

From the above factors: IKEA website can improve my shopping productivity is a significant [p0] with p=0.000 .05], As a result, H0 reacted negatively. **H1** accepted, IKEA website can improve my shopping ability is a significant with [p0] with p=0.000 .05], As a result, H0 reacted negatively. **H1** accepted. IKEA website is clear and understandable is a significant [p0] with p=0.000 .05], As a result, H0 reacted negatively. **H1** accepted, Shopping with IKEA is excited is a significant with [p0] with p=0.000 .05], As a result, H0 reacted negatively. **H1** accepted.

Shopping with IKEA is comfortable is a significant [p0] with p=0.000 .05], As a result, H0 reacted negatively. **H1** accepted. The shopping in a store is a significant with [p0] with p=0.000 .05], As a result, H0 reacted negatively. **H1** accepted. It is a significant with [p0] with p=0.000 .05], As a result, H0 reacted negatively. **H1** accepted.

I am able to keep up with important technology advances is a significant with [p0] with p=0.000 .05], As a result, H0 reacted negatively, **H1** accepted. It is consider to buy real chair is a significant with [p0] with p=0.000 .05], As a result, H0 reacted negatively. **H1** accepted. The website increased my intension to buy the furniture is a significant with [p0] with p=0.000 .05]. As a result, H0 reacted

negatively. **H1** accepted. How much information do you feel you have from the website about the chair overall is a significant with [p0] with p=0.000 .05], As a result, H0 reacted negatively. **H1** accepted. How much information do you feel you have from the website about the size of the chair is a significant with p=0.107[p<0.05], As a result, H0 reacted negatively, **H1** accepted. I believe that I have enough information to make a purchase decision is a significant with p=0.00[p<0.05], As a result, H0 reacted negatively, **H1** accepted. IKEA augmented reality is clear and understandable is a significant with p=0.000[p<0.05], As a result, H0 reacted negatively, **H1** accepted

IKEA augmented reality's effortless is a significant with p=0.000[p<0.05], As a result, H0 reacted negatively, **H1** accepted. IKEA augmented reality is easy to use is a significant with p=0.000[p<0.05], As a result, H0 reacted negatively, **H1** accepted. IKEA augmented reality allows me to shop the way I want to shop is a significant with p=0.000[p<0.05], As a result, H0 reacted negatively, **H1** accepted. The augmented reality experience in the chair is a significant with p=0.000[p<0.05]. As a result, H0 reacted negatively, **H1** accepted.

Shopping with IKEA augmented reality would be excited is a significant with p=0.000[p<0.05]. As a result, H0 reacted negatively, **H1** accepted. How frequently do you purchase in IKEA is a significant with p=0.000[p<0.05], As a result, H0 reacted negatively **H1** accepted. What attract you most in IKEA augmented reality application is a significant with p=0.000[p<0.05], As a result, H0 reacted negatively, **H1** accepted.

From the all above factors it accepts that there is a significant Level of consumer perception on the application of augmented reality (IKEA place). There is a significant level of consumer Awareness on the Application of Augmented reality (IKEA place)

5. FINDINGS:

Our research consisted in total of 100 participants. The age of the respondents in the experimental group raged from 18 to 33 years, with a mean of 24.72 and standard deviation of 2.55.Consumers purchase in IKEA place are mostly quarterly and half yearly and they are very satisfied with the size of chair in website of IKEA place and consumers are strongly agree with shopping ability in IKEA place.According to the consumers responds in the questionnaire they are mostly attracted to the capability to take a photo of the placement and virtual furniture placement with a possibility to change item colors in IKEA place augmented reality application. Consumers are satisfied with the

technology in IKEA place more than 80per consumers agree towards technology This study says that Purchase intention was increased in Augmented reality (IKEA place)There is a significant Level of consumer perception and consumer awareness on the application of Augmented reality (IKEA place)

6. SUGGESTIONS:

Consumers are expecting to introduce more type of models in augmented application there are only limited models we can see in application. Consumers are unable to login page easily and items in the cart don't sync with website and unable to payment at a time and application is super slow to load items. More updates are required in applications and more customers friendly to use

7. CONCLUSION:

The current research was to investigate if and how the experience with the AR shopping application can affect customers purchase expectations and avoid such uncomfortable situations. The services provided by furniture retailers are one market that could profit from such advancements and consumers are satisfied with technology shopping ability in IKEA place, and augmented reality application in IKEA place. Consumers purchase in IKEA place are mostly quarterly and half yearly and they are very satisfied with the size of chair in website of IKEA place and consumers are strongly agree with shopping ability in IKEA place.

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