

**Major Research
Project on**

**IKEA: - A STUDY OF CONSUMER
BEHAVIOUR ON AUGMENTED REALITY**

Submitted By

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CERTIFICATE FROM THE INSTITUTION

This is to certify that Mr. Yash Kumar, roll no. 2K21/DMBA/144 has submitted the major research project report AUGMENTED REALITY ON IKEA: - A STUDY ON CONSUMER BEHAVIOUR partial fulfilment of Master of Business Administration (MBA) program from Delhi School of Management, Delhi Technological University, New Delhi during the academic year 2021-23.

Signature of the Guide
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Signature of Head of Department
Dr. Archana Singh

DECLARATION

I, Yash Kumar, declare that the presented major research project report titled “AUGMENTED REALITY ON IKEA: - A STUDY ON CONSUMER BEHAVIOUR” is uniquely prepared by me.

I also confirm that the report is only prepared for my academic requirement, not for any other purpose. It might not be used in the interest of any party.

.....

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I, Yash Kumar would like to convey my gratitude to the Head of Department (HOD), Dr. Archana Singh of Delhi School of Management, Delhi Technological University for emphasizing the major research project and giving me the platform to conduct such research work.

I would also like to thank Dr. Archana Singh, who, in spite of her busy schedule has always been available for any guidance needed guidance continuously indeed, his valuable contribution and guidance have been certainly indispensable for my project work.

I am deeply grateful to all respected individuals who agreed to be a part of this research project and were instrumental in providing all the required data that was necessary to make this research project a success. I am highly indebted to their valuable contribution to my research.

I extend my warm gratitude and regards to everyone who helped me during the study.

Abstract

“Customer is king” the statement carries profound true in it. Today the success of any form depend upon the satisfaction of customer. in these circumstances understanding the consumer is a very difficult task because of the changing technology, innovation and changes in lifestyle of people. Especially in the field of augmented reality in retail industry we take the company IKEA. in it we are applying different methods to see the behavior of the consumer in augmented reality of furniture Giant IKEA.

We are applying the descriptive technique chi square method and interpret the data with the help of graph To understand the customer behavior in augmented reality world. The method for conducting a survey is simple random technique was adopted for selecting the consumers.

Executive summary

The present work deals with the consumer behaviour and market perception. In this project several aspects are taken into consideration for the achievement of the goal. The first and foremost step taken was the use of sampling method, research design, data interpretations using (chi square regression and all) . Also the concept of marketing strategy from the writer author and the mentor of modern marketing era Mr. Philip Kotler. On the basis of data collection and analysis we would come to know consumer behaviour and market perceptions among graduates and post graduates students. This is all I have displayed in my project to fulfill the objective of my research.

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Introduction

AUGMENTED REALITY

A new technique called augmented reality (AR) involves superimposing computer pictures on the physical world. One of the better summaries of the technology was one that defined the topic, listed numerous issues, and summarised previous advancements. Anyone interested in exploring or using augmented reality might start by reading this paper. Mixed reality (MR) is a larger category that encompasses virtual reality (VR), augmented reality (AR), telepresence, and other related technologies. The term "virtual reality" describes 3D computer-generated worlds that enable users to explore and engage in made-up environments. There are different levels at which users can "immerse" themselves in the virtual world of the computer.

Augmented reality can enhance natural environments or conditions while delivering perceptually richer experiences. Using cutting-edge AR technology, such as computer vision, the incorporation of AR cameras into smartphone applications, and object identification, the user's immediate environment's information can be interactively altered. Information about the surroundings and its components is shown on top of the physical environment. This information may be digital. Augmented reality is the term used to describe any synthetic experience that enhances the actual environment. or actual, as when electromagnetic radio waves are seen to overlap exactly where they are in space in reality. Additionally, augmented reality has great promise for gathering and disseminating tacit knowledge.

Expanding the operator's sensory-motor capabilities and problem-solving talents to a remote environment is the primary objective of telepresence. Between virtual reality and telepresence, AR can be categorised as a technology. While the world in virtual reality is entirely artificial and the environment in telepresence is entirely real,

- (1) Integration of the physical and digital worlds;
- (2) Real-time interaction; and
- (3) 3D registration. Other technologies are also available, however wearable devices like Head-Mounted Displays (HMD) could be utilised to display the augmented scene.

- (4) Some augmented reality applications demand that the user physically move about a big location. As a result, portability becomes crucial. The 3D registration becomes considerably more difficult for these applications. Applications for wearable computing often use a monocular HMD to deliver unregistered text and graphics information. By the strict definition of augmented reality, these systems are more of a "see-around" configuration. Although Augmented reality is present among us for the last 10 years, it made beyond belief footprints in recent years. Since then, the field has grown rapidly.

IKEA



With Swedish and Dutch roots, IKEA is a MNC that made and sells the home appliances, assemble furniture, kitchen items etc. It is the largest shop in the world, IKEA established in 1943 by Ingvar kamprad, has held that position since 2008, Ikea is a Sweden company.

The business is well known for its modernist furniture and appliances design as well as interior Design also. Which are typically related with eco- friendly environment. The Ikea is renowned for its on going product and services development, operational details and cost management also that helps to decline the prices by an all ikea stores under franchise from inter Ikea system.

Approximately 2,2 billion persons visited the website of ikeabetween sept 2015 to August 2016 and have 1200 products. Where Ikea is the 1% worlds use of commercial products and one of the giant retail industry for wood. 130,000 highly qualified employees work for IKEA all around the world. IKEA goods are produced ethically and according to the standard supply chain. Although the manufacturing procedure is carried out elsewhere at low cost, the designing is done in Sweden. The buyers build the IKEA furniture themselves, saving money. IKEA offers furniture and decor for bathrooms, kids' rooms, living spaces, bedrooms, and kitchens.

“A large portion of IKEA furniture is made to be constructed by the client, as opposed to being sold pre-assembled. By avoiding air transportation, the company argues that this helps to cut expenses and the amount of packaging used; the volume of a bookshelf, for instance, is significantly reduced if it is supplied unassembled rather than assembled. This is also more useful for European consumers who travel by public transit because flat packs are easier to transport”.

IKEA claims to have been a trailblazer in the development of sustainable responses to the culture of mass consumption. The company uses an integrated approach to production and design, which Kamprad refers to as "democratic design" (see also environmental design). In response to the explosion of human population and material expectations in the 20th and 21st centuries, the company implements economies of scale, capturing material streams and creating manufacturing processes that hold costs and resource use down, such as the extensive use of medium-density fiberboards ("MDF"), also called "particle board".

IKEA USING AUGMENTED REALITY



“IKEA has released a new augmented reality (AR) app that uses Apple iOS 11's AR Kit technology to let consumers examine IKEA products in real time. The free iPhone and iPad software, dubbed IKEA Place, offers 3D objects that are accurately produced and true to size. "The app automatically scales products, based on room dimensions, with 98 percent accuracy," the company claims. The programme uses an iPhone or iPad camera to scan the size of a room in order to see a product within a space. To make their decisions, users can peruse more than 2,000 IKEA products in an online database. After choosing, users must point the device at the desired location in the space, then drag and drop the chosen item there”.

IKEA Place allows direct purchases on the IKEA website and enables users to store and share their best loved products on social platform. The first batch of goods introduced, according to the business, mostly contains of large furniture pieces like armchairs, couches, storage option, and coffee tables. According to Michael Valdsgaard, chief of digital transformation at Inter Ikea, the holding company for Ikea, customers can make "reliable buying" decisions when they see lifelike replicas of Ikea products in spaces. Ikea's sluggish adoption of digital technology has contributed to its difficulties with e-commerce sales. According to Daisy Pledge, founder of AR startup, allowing users to view how a purchase might look in their home without making a three-hour trip to Ikea could boost the business with online sales.

The majority of individuals put back purchasing a new sofa because they felt uneasy making a choice if they're not certain the shade will mix with [the rest of the space] or it fits the design, according to him. "We can now put such solutions in their hands and allow them to enjoy free, effortless pleasure with home furnishings.

IKEA Place, a metamorphosis at Inter IKEA System, "makes it easier to make purchasing decisions in your own home, to get inspired and try many different products, styles, and colours in real-life settings with a swipe of your finger.”

Objective of the Study

1. To identify the most preferred furniture among the students and reason behind their preferences.
2. To explore factors that influence students to use augmented reality, when it comes into the use is decision making and future of furniture industry.
3. To analyse the relationship between augmented reality use known and people's preferences like their uses experience and decision making .
4. To access the impact of augmented reality on consumer decision making process when using augmented reality.
5. To evaluate the potential and new market of consumers on the basis of augmented reality product buying behaviour.
6. To identify the relationship between the gender and the use of augmented reality as well as between gender and easy to use the IKEA product.

LITERATURE REVIEW

According to Andreessen & Lindestad (1998), clients construct an impression of a company in their minds through exposure to information and experience. Corporate identity plays a crucial part in attracting and keeping clients, especially in a market where businesses are growing more and more akin to one another. Since brand reputation is frequently defined as "a Perception of quality associated with the name," corporate image can sometimes even impact how well consumers perceive a product's quality. Since it affects customer loyalty and, by extension, how inclined people are to spread good word of mouth, corporate image can also be an information channel for both current and potential customers (ibid).

Consumer Behavior Types

According to experts, complicated buying, dissonance-reducing buying, habitual buying, and variety-seeking buying are the four main categories of consumer behaviour. By observing these actions, marketers can have the superior understanding of a type of element that may be influence the purchase decision or not.

People intending to buy a boat, for example, will have different considerations than those looking to buy a hair dryer, which is a less expensive equipment. Understanding the factors that can lead a consumer to respond yes rather than no may be useful for developing targeted marketing strategies.

Complex Buying Behavior

Complex buying behavior is a type of behavior that a person buys the expansive good and service where he do lots of research on it like air conditioner, car new home etc. Sometimes it also believe that consumer is a strong sense of committable behavior because of its connected cost.

Dissonance-Reducing Buying Behavior

Dissonance reducing buying behaviour is a buying behaviour where the consumer are strongly committed to get the product but they are not able to discern between several brands they are little bit stressed, for an example, they want to buy led TV but every models they are looking for the same screen resolution the term dissonance refers to the fear of a consumer may choose poorly or then regret it can also be made for other things like lawn or and engaging rings.

Habitual Buying Behavior

Habitual buying behaviour is a buying behaviour where a consumer is regularly purchase a product without forming and emotional connect to particular brand over there for an example a consumer is purchase milk petrol eggs that can be categorised as an habitual purchasing behaviour.

Variety Seeking Buying Behavior

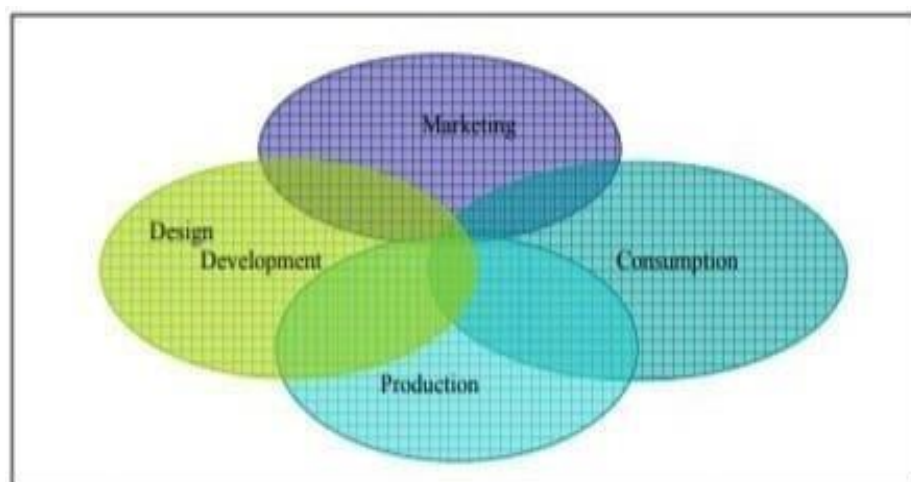
A variety seeking buying behaviour is the behaviour of a customer where customer is search of different kind of product. a customer is not dissatisfied from the product but he wants to us the different different products in the form of curiosity a good example is when a consumer purchase different type of hair products like lotion,gels and hair oils.

Customer encounters in retail settings:

IKEA is cited by Wikström (1995) as an illustration of how the customer can be involved in the design process. Ikea, which prioritizes reduplication, has discovered that its consumers no too much desire the exact same furniture in the homes of their friends. IKEA offers its customers the opportunity

to work with an experienced Sales professional to create their own kitchen designs. The author offers IKEA's flat Packages of furniture as an excellent illustration of how the consumer can take control of the completing, gaining an appropriate costs, in relation to collaboration throughout production. The providers play a supporting role while the consumers create their own value by participating more in the process.

1. Augmented reality has significantly impacted the retail industry, and ikea is one of the company that has embarrassed This technology to enhance the shopping experience for its consumer. The integration on augmented reality into the idea app allow use to utilised the furniture and home decor items in their own living space before making a purchase. Research study have explained the efforts of IKEA augmented reality implementation, focusing on several key aspects.
2. Firstly user experiences and satisfaction have been evaluated with the findings and industry that the AR announces the overall shopping experience, engagement increases as well as improve the decision making process. The ability to virtually place on manipulate the furniture in real time provide customer with a better understanding of products size commerce scale and capabilities with the home environment.
3. Secondly the impact on augmented reality in purchase items and consumer rate have been investigated. studies has shown that the augmented reality in the idea application is positively influenced consumer purchase intention leading to higher consumer rates. By bridging the gap between the online and offline shopping experience, a r allows customer to confidently make the purchase decision and reduces the livelihood of return.
4. Further researchers have explored the role of a r in reducing cognitive efforts and enhances the product information process. Air technology simplified the search process by enabling user to quickly filter through a vast array of product and utilised then in their desired setting. This improves the information comprehension and reduces the cognitive load associated with the traditional shopping methods.
5. And lastly, the impact of social influence and word of mouth communication of air adopted has been examined. Studied have found that the experiences with ikea's AR features lead to increases the consumer satisfaction and willingness to recommend the application to others. This highlights the importance of social interaction and user generated content in the driving AR adoption and creating a sense of community among idea consumers.



Customer interactive process by "Wikström"(1995)

RESEARCH METHODOLOGY

In this kind of research, we use all three kind of research techniques we apply Exploratory research because we have to describe the problem of demarcation that collects the as much as that collects as much as that collects as much as information about specific problem. Also it gave better understanding to researcher in specific research area.

Research Design

Descriptive research:- It can be applied when the problem is well structured, research have also cleared picture of the phenomenon before collecting that data .it can also be used when researcher find out which aspect of problem relevant and descriptive more thoroughly.

Explanatory:- Researcher analysis cause and relationship explain the certain event, purpose, investigate specific factor.

- We have to explain and describe the ikea's environment of customer by managing factor of retailing environment and enhances the customer experience.

Research approach:-

It is defined as choosing as well as analyzing the selected data that is classified either quantitative or qualitative.

- As a result, explanatory emphasizes qualitative research that show how people's behavior change there is a shift regarding offline to online trend etc.
research strategy
- Our research question based on why and how study based on contemporary events we do not charge is the behavior event but with the help of good questionnaires and by putting relevant question to increase the subject specification. But our main investigation to gain depth in the understanding of why and how they perceive shopping experience, Through new mode of augmented reality.
- It also encourages flexible, open conversation and information gathering to increase understanding of a given topic. The Thor review and analysis of this empirical data is a crucial phase in the procedure. The qualitative and quantitative approach successfully accomplished the thesis objective

Now a question arises why we use the descriptive analysis?

In our research we apply the descriptive approach here because in the initial phase we collect the data from the questionnaire in the form of secondary data but there is also the prevailing data in the market that we have, so on the basis of data we apply some Statistical tools like chi square test etc.

So we find that in both the hypothesis there is quantitative approach applied.

In a nutshell, can say that we apply both qualitative and quantitative approach in the research design

When was the last time you Went for shopping online furniture? [Quantitative Approach]

Have you ever do shopping online? [Qualitative Approach]

But, you find that most of our research and data that we used in qualitative rather than quantitative form.

Data collection

Data collection: -

Our data collection is majority of the student as well as those who are linked with the furniture sectors and those audiences who are willing to purchase furniture in near future, we do a question here or a little survey research about collection of data.

Data collection techniques that we use is the simple random technique which is the kind of sampling in which the researcher just randomly choose the subset of the participant from the specific population where each member has a chance to equally being selected.

Here we choose this technique because for the following reason

- A. Easy to use
- B. Each person as get equal chance to being selected.
- C. Free from biases
- D. Inexpensive in nature

1. In our data collection we ask very simple and open ended question like how easy it is used the application, kind of experience in AR in furniture etc.
2. Asking flexible question where people can easily have related and give the accurate answer rather than precise once.
3. Mode of asking the question should be easy rather than harder or difficult.
4. Make accurate use skills.
5. Asking review and respondent view points.
6. At last gathering data from reliable source and also you are giving your questionnaire to those who knows the technology and use it rather than just filling it random this may cause the inaccuracy in your data collection.

Sample selection: -

Sample is selected from different region, ages, genders and different choices.

- We have about 80 sample size respondent.
- Sample unit: -direct or indirect related to furniture.
- Extent:-Delhi or near area.

We have approximately 100 number of sample size in the responses that we collected

1. Where some of the distribution furniture and other members.
2. some of these are retailers that maintain the stock and inventory of the furniture also. Markets in Delhi like furniture market retailers are one of them.
3. In the sample unit:-
4. We have personalities like distributor, wholesaler, retailer etc.Those people are directly connected with the furniture industry.
5. We also have indirect personalities like customer coma vendors etc. which are

indirectly connected to the purchaser of the product as well as the services of the furniture industry.

6. Those areas where we spread the questionnaire near the highly Populous area that touches the entire Delhi specially focused on those areas of Delhi which are connected with the furniture market not more than one kilometer near the market. Like police line , kirti nagar etc.

Tool Used:-

- A. Excel
- B. SPSS

Target Market Audience

Target Audience and reason for choosing this:

The target audience for this paper could be researchers, practitioners, and professionals in the fields of marketing, consumer behaviour, and retail industry, specifically those interested in the application of augmented reality (AR) in the retail sector.

The reason for choosing this target audience could be:

Industry professionals: Professionals working in the retail industry, particularly those involved in implementing or considering the use of augmented reality, would find value in understanding consumer behaviour in the context of AR. The paper's focus on IKEA and its application of AR in furniture retail could provide insights and recommendations for similar businesses.

Academics and researchers: Researchers and scholars interested in studying the impact of technology, such as augmented reality, on consumer behaviour and its implications for the retail industry would be interested in this paper. It could contribute to the existing literature on the topic.

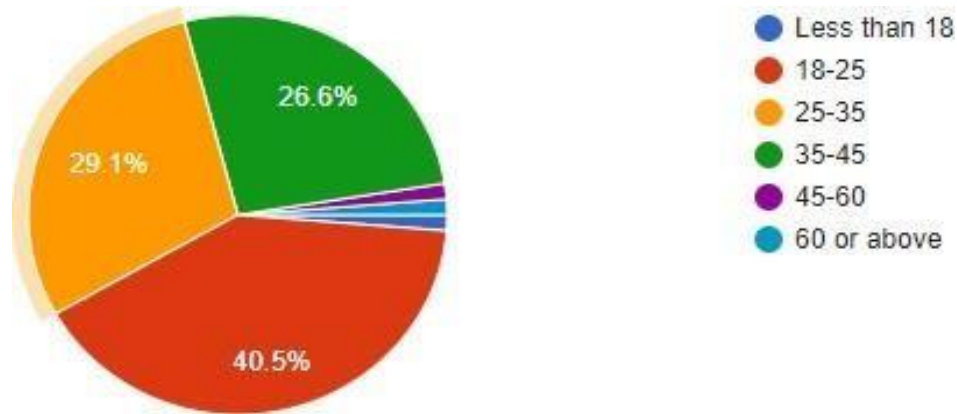
Marketing and consumer behaviour practitioners: Professionals involved in marketing, advertising, and consumer research can benefit from the insights and findings of this paper. Understanding consumer behaviour in the context of augmented reality can help them develop effective marketing strategies and campaigns.

The paper's emphasis on the importance of customer satisfaction, the challenges posed by changing technology and lifestyle, and the application of descriptive techniques and chi-square method for data analysis make it relevant and valuable to individuals interested in understanding consumer behaviour in the augmented reality world, particularly in the retail industry.

Research and Data Analysis

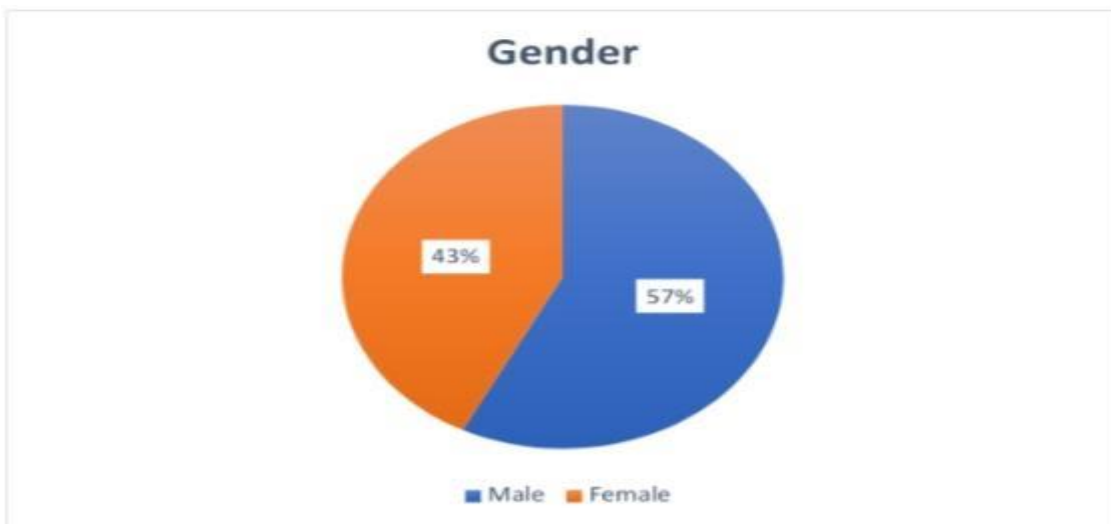
The data has been collected with the help of e-questionnaire. A total of 80 responses have been recorded over the period of 10 Days starting 10th April to 20th April 2023. The main objective of the study is to understand if, purchasing decision is effected by the Augmented Reality used by companies like IKEA. The AR technology is the future of furniture industry.

AGE



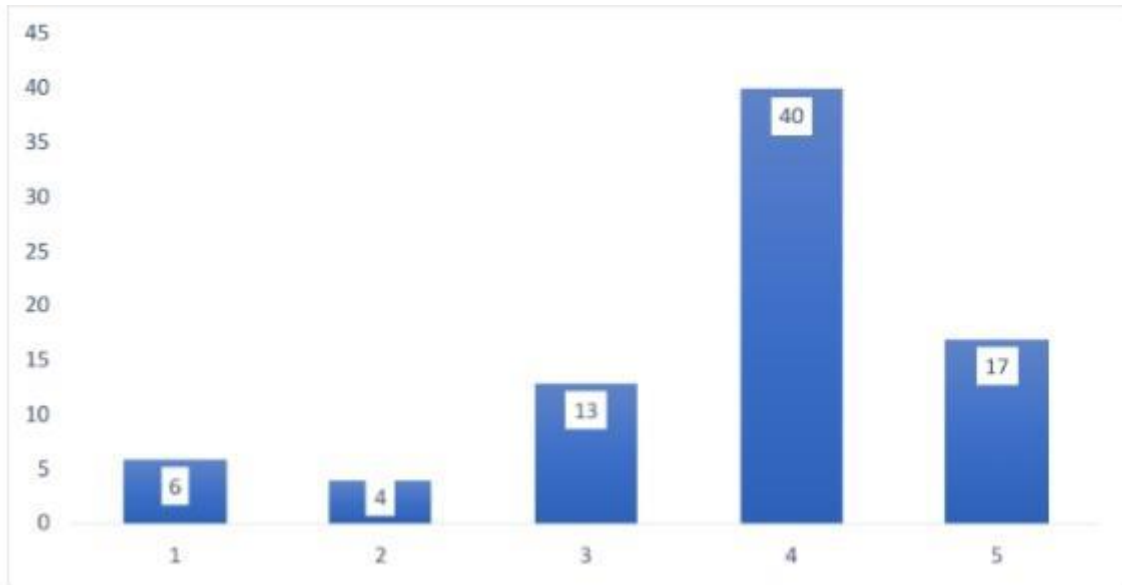
In this age data we have largest age group of 40.5% of 18-25 then we have second largest age group 29.1% age group of 25-35, then the third largest age group of 26.6% of 30-45 and rest are small in amount respectively.

GENDER



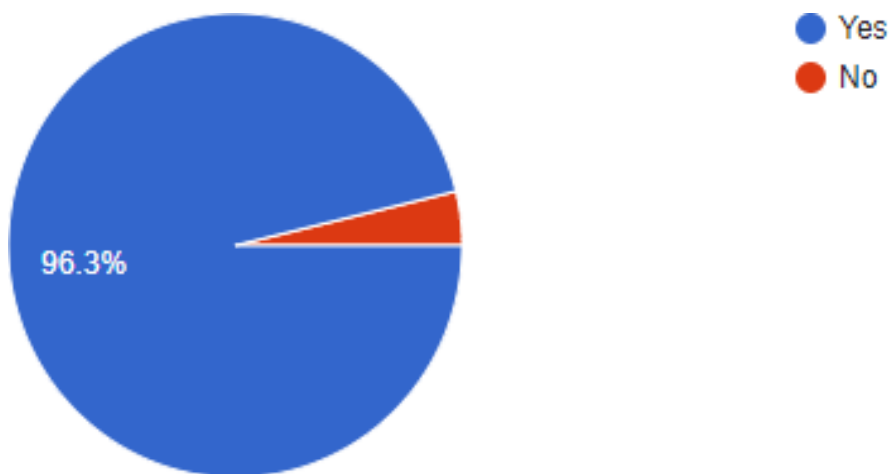
In this gender data we have 43% of females and 57% are males respectively where males are denoted by blue and females are denoted by Orange one.

How much do you know about Augmented Reality?



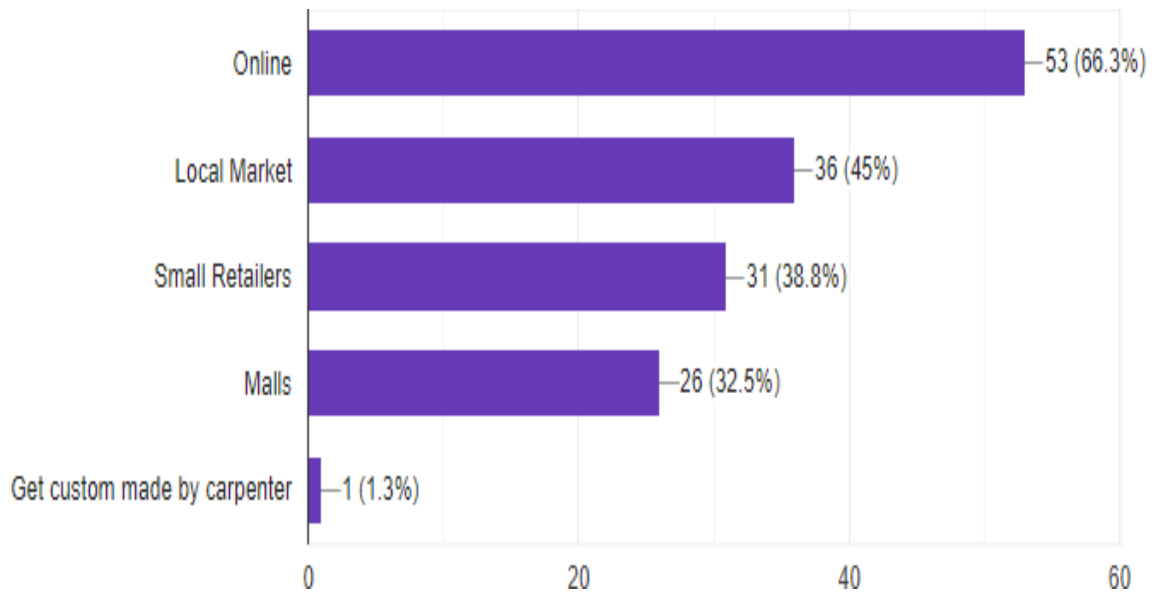
In our data we have 40% people know about augmented reality which is 32 in numbers and the smallest one is 6% respectively.

Have you ever done shopping online?



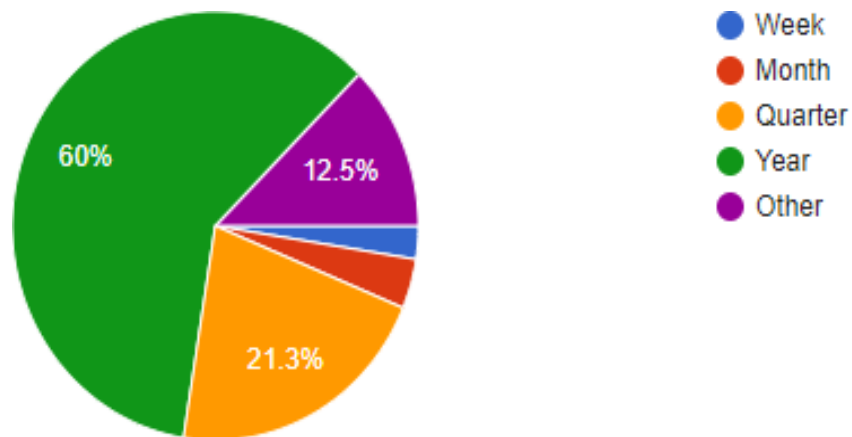
Out of the 100% we have 96.3% of people who do the online shopping and 3.7% people who do not experience the online shopping.

Which mode do you use to purchase furniture?



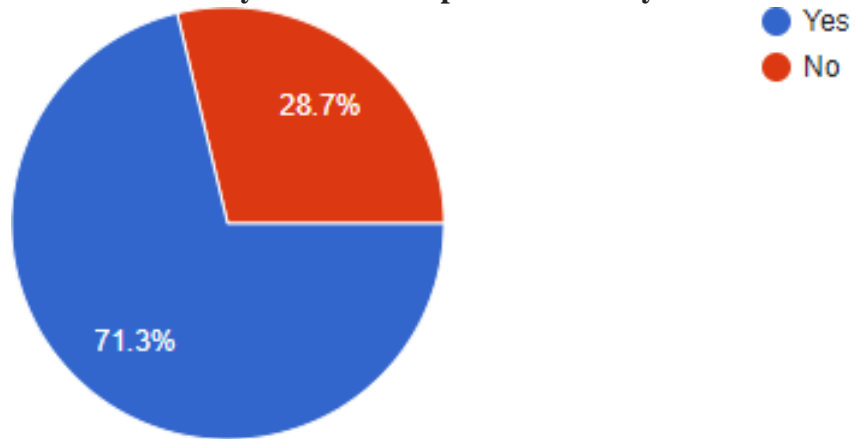
The highest mode of purchasing furniture is online which is 66.3% no of people 53 then we have the local market 45% third one is the small retailer 38,8% thwn we have the malls 32.5% at last we have get customised by carpenter 1.3% respectively.

When was the last time you purchased furniture online?



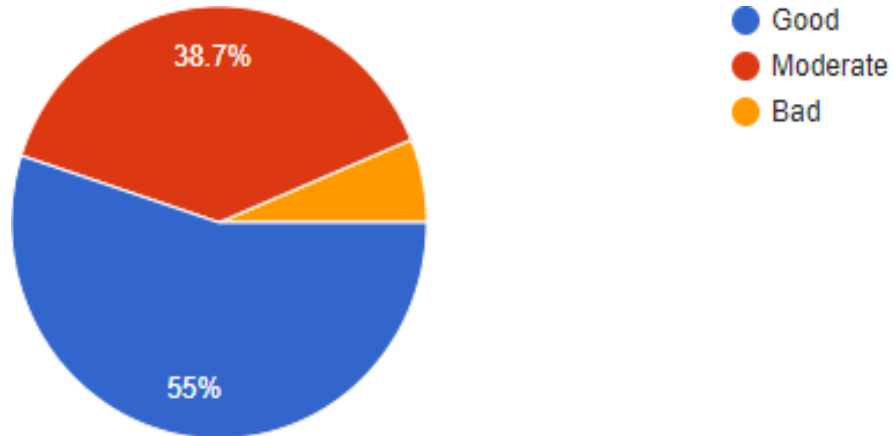
The majority of the last time people purchase furniture online is the highest 60% yearly 21.3% quaterly, 6% monthly and 5% weekly respectively.

Have you ever used IKEA or any other online platform to buy Furniture?



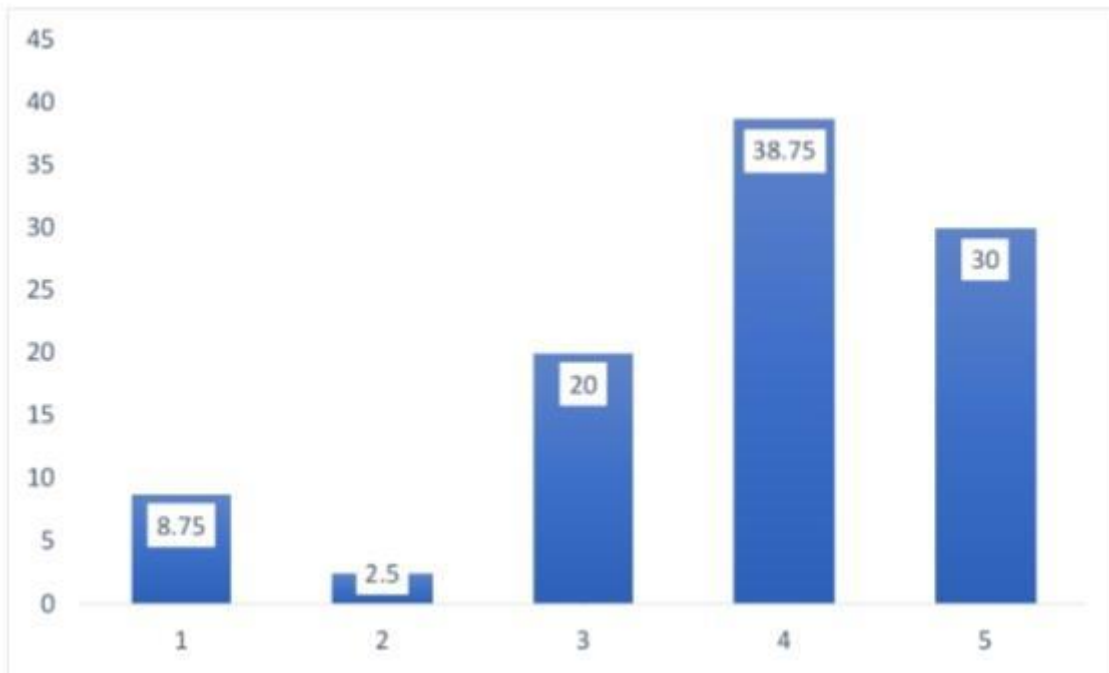
Out of the data, the people who used IKEA are 71.3% and the rest who did not use IKEA are 28.7% respectively.

If, yes, what kind of experience do you have?



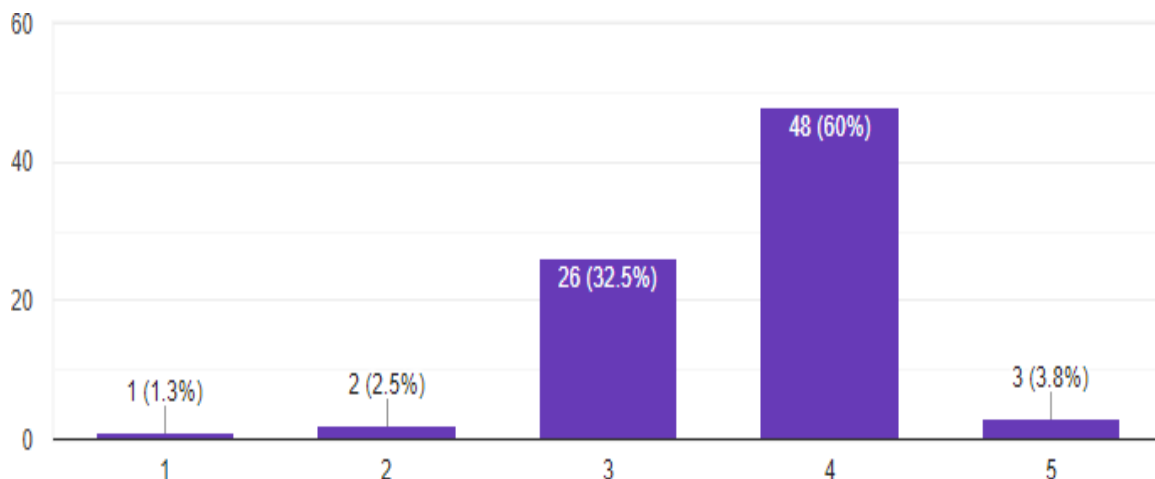
Majority of our data has good experience which is 55%, moderate one is 38.7% and the rest one is bad one which is 6.3% respectively.

How easy it is to use IKEA application?



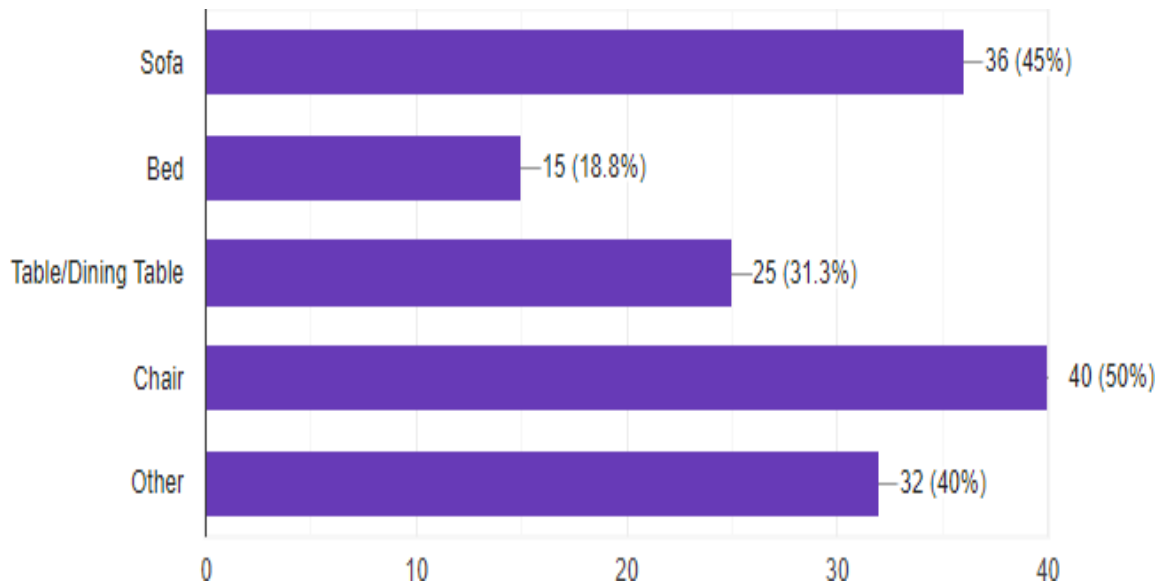
Ease of using ikea the largest is 38.75%, secondly 30% with 23 people, thirdly 20% with 20 people, then we have 8.75% with 7 people last we have 2.5% with 3 people respectively.

Do you think AR product overview will make your buying experience better?



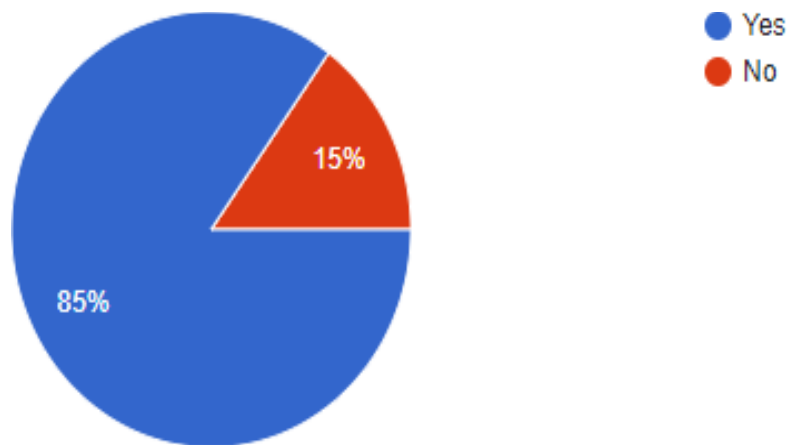
Buying behavior experience of highest is 60% with 48 people, 32.5% with 26 people and the smallest one is 1.3% with one people.

What kind of furniture items of IKEA do you prefer to buy using AR technology?



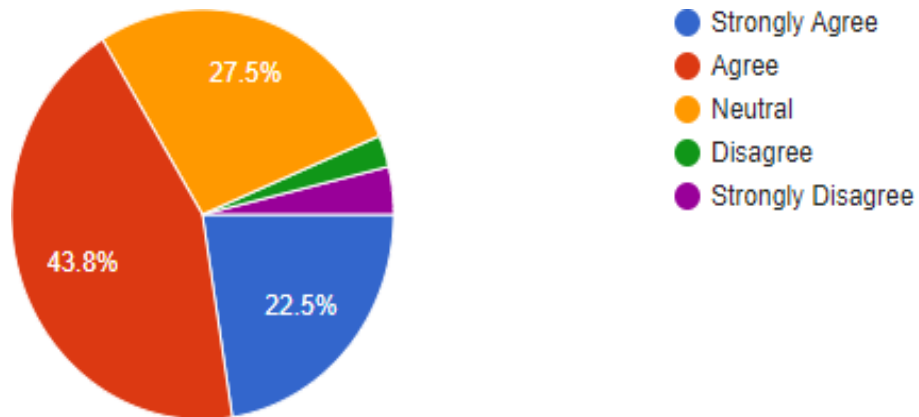
The highest preference of furniture is chair 50% then we have sofa which is 45%, other is 40% dining table is 31.3% and last we have bed which is 18.8% respectively.

Do you think AR Technology is the future of furniture industry?



In the given data 85% people think that AR is the future of the furniture industry and 15% people think that AR is not future of furniture industry.

Good Augmented Reality effect the decision making process?



In this data we find that 22.5% strongly agree that AR effect the decision, 43.8% agree, 27.5% neutral, 2.2% is disagree and rest is 4% which is strongly disagree respectively.

From your perspective what need to be changed or improve for the technology to add more value to customers?

Some of the suggestion came from the responses are: -

Advertising more for their growth

Quality of AR

AR applications are usually bulky in nature and need demand high processing power; they need to be optimized.

Interpretation of Data

The data indicates that out of 80 respondents, 40.5% people are from the age group of 18-25, 29.1% people are from the age group of 25-35 and 26.6% people are from the age group of 35-45 and the majority of them are females 62.5% and rest 37.5% are males.

And from them 96.3% have done shopping online through some or the other platform and 46.3% have a good knowledge about Augmented Reality other 37.5% have a moderate or decent knowledge and rest 16.3% have a low or little knowledge about Augmented Reality.

And most of them uses online mode for purchasing furniture which is around 66.3%, 45% people shop furniture from local markets, 38.8% people shop from small retailers and 33.8% people goes to mall for buying furniture.

From the data we also, came to know that majority of them purchases furniture in long time span of at least a year and 71.3% people have used IKEA for buying furniture the rest 28.7% used other platforms like pepperfry, urbanladder, evok etc.

55% of people had a good experience 38.7% had moderate experience and 6.3% had bad experience of using IKEA which gives an AR view on their application to customers which is easy to use for majority of customers.

50% of the people bought chair, 45% bought sofa sets 31.3% Table/ Dinning Table, 18.8% bought Bed and rest 40% people bought other items through the Augmented Reality view on the IKEA application.

We also asked respondents if good AR effect the decision making process on which 43.8% people agreed, 22.5% people strongly agreed, 27.5% stayed neutral and the rest 6.2% Disagreed or strongly disagreed, Hence the majority thinks it effects the decision making process positively.

From the respondent we also came to know that 85% of them think AR Technology is the future of furniture industry.

Which means people like the technology and it is helping customers in their buying process in the comfort of their home and also helping company to increase their customers and positively effecting buying behavior of the customers through Augmented Reality view on the websites or application.

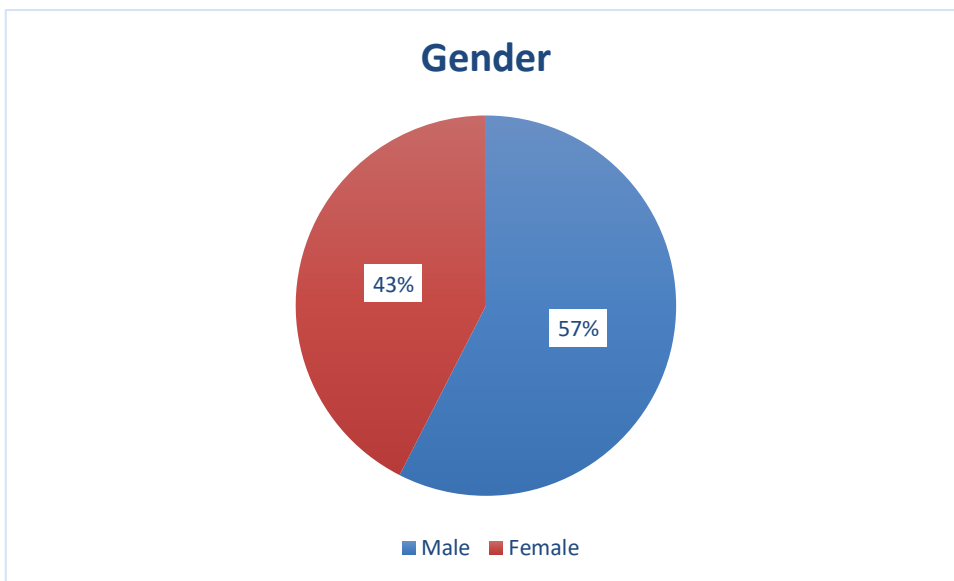
Hypothesis Testing

In the hypothesis testing we have two hypothesis testing

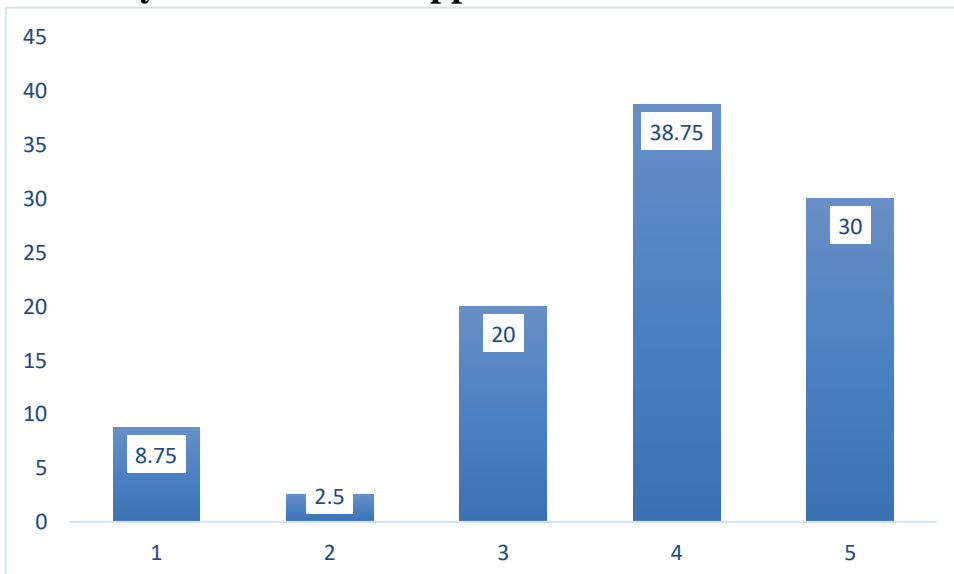
1.0 Between gender & how much you know about AR

2.0 Between gender & how easy to use IKEA application

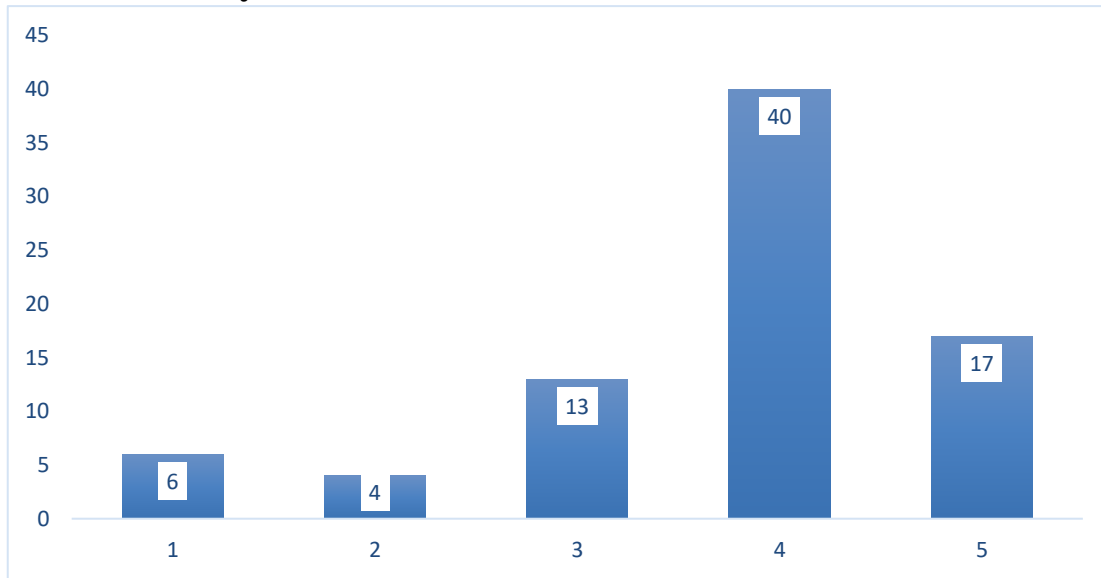
Gender :-



How easy it is to use ikea application:-



How much do you know about AR :-



1.0 Between gender & how much you know about AR

Ho(null hypothesis): There is no significant relationship between gender and information about AR

H1 (alternate hypothesis): There is significant relationship between gender and information about AR

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * How much do you know about Augmented Reality	80	100.0%	0	0.0%	80	100.0%

Gender * How much do you know about Augmented Reality Crosstabulation

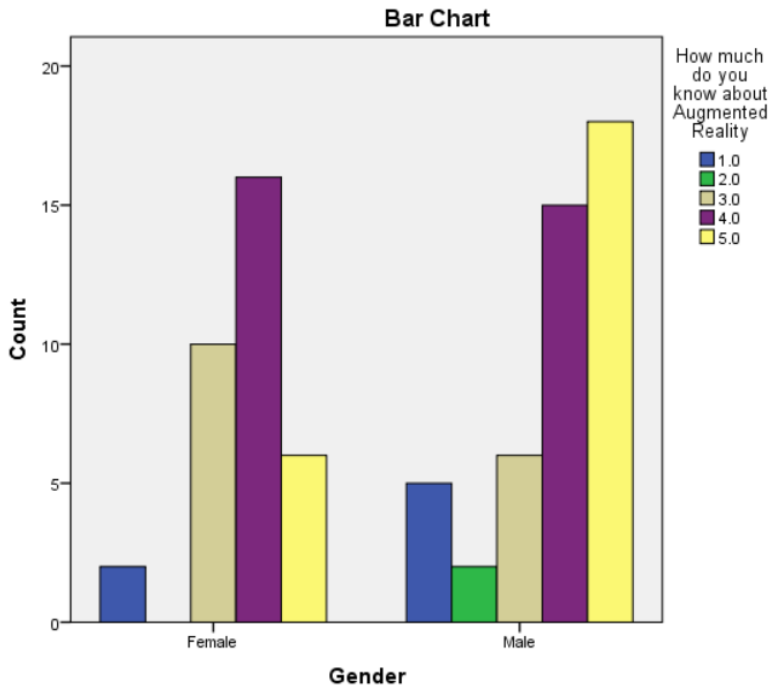
			How much do you know about Augmented Reality					Total
			1.0	2.0	3.0	4.0	5.0	
Gender	Female	Count	2	0	10	16	6	34
		Expected Count	3.0	.9	6.8	13.2	10.2	34.0
	Male	Count	5	2	6	15	18	46
		Expected Count	4.0	1.2	9.2	17.8	13.8	46.0
Total		Count	7	2	16	31	24	80
		Expected Count	7.0	2.0	16.0	31.0	24.0	80.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	8.714 ^a	4	.069
Likelihood Ratio	9.616	4	.047
N of Valid Cases	80		

Symmetric Measures

	Value	Approximate Significance
Nominal by Nominal Contingency Coefficient	.313	.069
N of Valid Cases	80	



Interpretation

Based on the chi-square test results provided, with a Pearson Chi-Square value of 8.714 and a Likelihood Ratio Chi-Square value of 9.616, both tests having 4 degrees of freedom, the associated p-values are 0.069 and 0.047, respectively.

Since the p-values for both tests are greater than the conventional significance level of 0.05 (assuming a significance level of 0.05), we do not have sufficient evidence to reject the null hypothesis (H_0) that there is no significant relationship between gender and information about AR (augmented reality)

2.0 Between gender & how much easy to use IKEA

H_0 (null hypothesis): There is no significant relationship between gender and use of IKEA application

H_1 (alternate hypothesis): There is significant relationship between gender and use of IKEA application

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * How easy it is to use IKEA application?	80	100.0%	0	0.0%	80	100.0%

Gender * How easy it is to use IKEA application? Crosstabulation

			How easy it is to use IKEA application?					Total
			1.0	2.0	3.0	4.0	5.0	
Gender	Female	Count	4	2	7	16	5	34
		Expected Count	2.6	1.7	5.5	17.0	7.2	34.0
	Male	Count	2	2	6	24	12	46
		Expected Count	3.4	2.3	7.5	23.0	9.8	46.0
Total		Count	6	4	13	40	17	80
		Expected Count	6.0	4.0	13.0	40.0	17.0	80.0

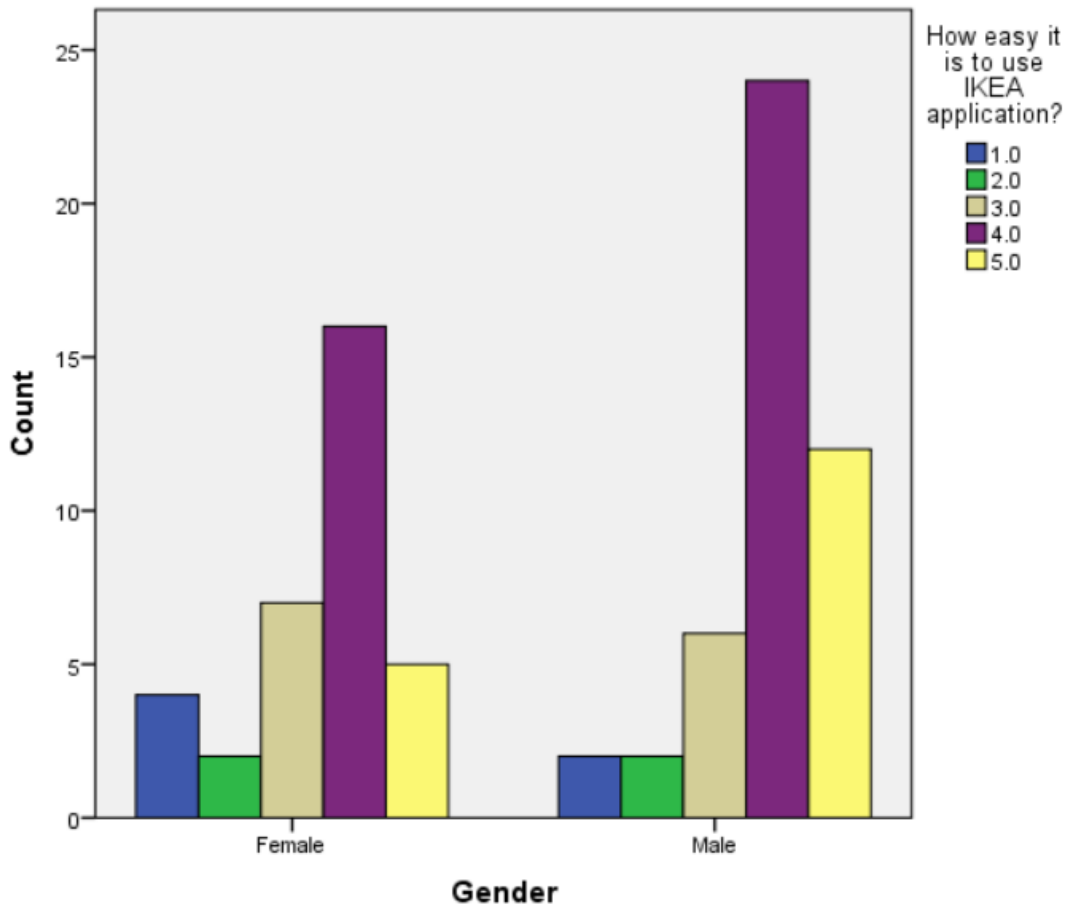
Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.505 ^a	4	.477
Likelihood Ratio	3.531	4	.473
N of Valid Cases	80		

Symmetric Measures

	Value	Approximate Significance
Nominal by Nominal Contingency Coefficient	.205	.477
N of Valid Cases	80	

Bar Chart



Interpretation:

Based on the chi-square test results, with a Pearson Chi-Square value of 3.505 and a Likelihood Ratio Chi-Square value of 3.531, and both tests having 4 degrees of freedom, the p-values associated with these tests are 0.477 and 0.473, respectively.

Since the p-values for both tests are greater than the conventional significance level of 0.05 (assuming a significance level of 0.05), we do not have sufficient evidence to reject the null hypothesis (H_0) that there is no significant relationship between gender and the use of the IKEA application. This means that based on the available data, we have not found statistical evidence to support the presence of a significant relationship between gender and the use of the IKEA application.

Findings and Recommendations on IKEA

Findings

- On the basis of ease we find that 40% of the people in our survey are the highest rank that find augmented reality easy.
- out of experience we observed that the consumers experience is 38.7% moderate, 55% feel good and rest of the 63% people experience bad.
- approximately 85% consumer feels that augmented reality technology is the future of furniture industry.
- People prefer to buy the furniture through augmented reality is the first chair with the 50% of their products and then we have the sofas with the 45% of their products.
- Good augmented reality affect the decision making process approximately 28% consumer strongly agreed with this and only 4% beliefs on strongly disagree.
- People prefer to take part in this survey because they find the augmented reality very realistic as well as easier to use.

Recommendations

1. When we see the data collection, we should neglect the small questionnaire data, which should enhance the quality of accurate data in our project. Example 2% of experience in IKEA , 1.2% of getting customised Carpenter data etc.
2. In this project we do the qualitative research where we find the behaviour of customers and analysis it with the help of regression (We apply the chi square test) .
3. IKEA should open the city store to see the scenario of current economy and COVID-19 situation also get ready to make the “move on” stores that enhances the physical experience of the customers.
4. Environmental efforts: -As an environmental concise brand they face a lot of problems in their green actions, they should improve their brand image as follow as.
5. They should indicate on furniture that they have to show transparency in the carbon footprint.
6. they reduce the catalogue printing and uses other social media handles and applications like (Facebook, Instagram, email) for the purpose of advertisement.
7. Bring back quality:- Being making of budget friendly products in retail furniture so their quality of product declined for long term purposes hence they need to introduce more quality in their products and attain the loyalty of customers for the long lasting purpose.

Limitations of AR of Retail in Furniture

- As we know that it is very expensive to develop the Augmented Reality technology based project because it takes time, manpower, accurate data and all things especially when it totally depends upon the consumer choice.
- It is also seen that these types of technologies have very less privacy and lack of security may effect the overall augmented data as well as with less privacy criminal could tapped your phone and learn anything they need to know about you
- People are missing out in important moments especially in augmented reality online and especially when you feel more feeling of shopping in physical appearance also this may cause the mental health issues.
- Require basic learning to effective use augmented reality complaints devices.
- Low performance and many a time devices did some mistake that the customer behavior also it is difficult to maintain the AR system sometimes information overloaded and it augmented without permission.

CONCLUSION

The importance of retail to utilize interactive technology such as augmented reality in their mobile application is considered due to change in customer behavior from in store to online.

Also, this can be shown when pandemic COVID-19 and people are becoming keen to purchase things specially furniture in retailer applications. Results shown that are significantly influences on customer perception pursued functional benefits and trust in augmented reality directly related to attitude towards augmented reality.

Does retailer to adopt air technology as interactive media to enhance customer experiences during online shopping and people do not feeling they are not shopping but defective end time save shopping.

- A. When IKEA adopted the augmented reality with 98% precision has led to drastically change which means increases in the website engagement, also there are many brands that embarrassing AR as described as described 50% increases in engagement and consumers.
- B. **Decline Returns**:-And 2020 study of the Deloitte describe that augmented reality has added many home goods companies lower return by 2030, when they can sense both the time as well as money. When it comes to Reverse logistics.
- C. **Building customer confidence**:-A small to mid size retailer, generating a strong relationship with customer is the major component that increases revenue and closing deal. Most of the successful relationship retailing have assigned to their success augmented reality components on their website, Forbes has describe the piece of mind augmented reality offer convinced up to 40% of customers to pay more for the product, that they can experience through augmented reality.

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Summary

ANNEXURE

Name

Your answer _____

Age

- Less than 18
- 18-25
- 25-40
- 40-60
- 60 or above
- Other: _____

Gender

- Male
- Female
- Transgender
- Other: _____

How much do you know about augmented reality?

- Very less 1 2 3 4 5 Very high
-

Have you ever do shopping goods online?

- Yes
- No
- Other: _____

What is the mode of furniture purchase do you like most?

- Online
- Local market
- Small retailer
- Malls
- Others
- Other: _____

When was the last time you went for shopping online furniture?

- Week
- Month
- Quater
- Year
- Other: _____

Have you ever use IKEA or any other platform online furniture?

- IKEA
- Other platform
- Other: _____

If yes, what kind of experience do you have?

- Good
- Moderate
- Bad

After using the arica application how would you consider it?

- Easy
- Average
- Hard
- Other: _____

How much you agree having an AR product overview.can help the speed up of purchasing process of people?

- | | | | | | | |
|-----|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------|
| | 1 | 2 | 3 | 4 | 5 | |
| Low | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | High |

Which kind of furniture products of IKEA do you prefer online AR?

- Bed
- Sofa
- Table/dyning table
- Chairs
- Other: _____

Do you think AR of furniture especially IKEA come is the future of furniture industry.

Yes

No

Other: _____

Good augmented reality effect the decision making process

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

For your perspective what need to be change and improve for the technology to add more value to customer

Your answer _____