A STUDY ON IMPACT OF AUGMENTED REALITY IN ADVERTISEMENT EFFECTIVENESS

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ABSTRACT

Digital technologies offer many opportunities in the field of Advertising and Marketing. In this paper, the researcher wants to examine to what extent the advertisement effectiveness can be made possible through Augmented Reality, the latest technological development followed by Virtual Reality, which means an amazing experience of the physical or real world enhanced by software-based audio and video inputs. AR is becoming more popular in advertising recently. In the field of digital advertising, AR plays a pivotal role. To study this, the researcher attempts to find out whether Advertisement Effectiveness can be achieved through AR or not. The advertisement effectiveness of AR was testing using tools like questionnaire through online survey. The findings strongly support that AR is a perfectly interactive system so that customers can deal with it easily. It was also found that this channel also had an impact on the customer’s visual and emotional level of engagement with the subject matter. After the testing and analysis, it was found that the most responsive group of the population on AR are people who belongs to the age group of thirty-five to forty-five.

Keywords: Augmented Reality, Advertisement effectiveness, Virtual Reality.

I. INTRODUCTION

AR is a technology which provide virtually an authentic life experience with the avail of inputs like digital sounds, visuals etc. The motion sensors, 3D images comes with it provides this experience. AR is such an astounding experience as it gives the customer the feeling that they arein the authentic environment.

AR is the latest advancement of technology. It spread its wings on the different areas such as education, medical, sports, gaming, defence, advertising etc. It laid its contribution in virtually in all fields and gained its popularity. Afore the exordium of AR, VR is on the limelight. AR integrates digital elements to the genuine world, but in VR a person can utilize electronic contrivances, specially designed googles in a 3D artificial environment and no interaction with physical world. VR is consummately immersive. AR is plenarily an interactive system. Now a days, MR concept is getting yare in the backend. MR is mixed authenticity which is amalgamation of the AR and VR. Many more advancements in the field of AR are yet to come.

The present study mainly focusses on to what extent advertisement efficacy can be possible with AR. In the present scenario, as per the marketing report, AR is widely accepted by the people. In a developing country like India, it is not more popular. Some advertising companies are investing in AR for promoting their products predicated on the research and development reports. More and more start-up companies are coming with the AR.

Applications of AR

From games to remote work, AR plays a vital role in every field. Few examples are given below:

1. Gaming

We know term AR from the Pokémon Games. It was introduced in 2016. In the Pokémon game, with the help of AR, we can see the cartoon character Pokémon at all places in your neighbourhood. Though it has waned its
popularity, still it was liked by many people. Some other games like Jurassic Park, Harry Potter was inspired by Pokémon AR game.

2. Medical
AR is now used in the medical field extensively. It is mainly used for performing highly delicate surgery, and for MRI applications.

3. Education
AR technology is in use in the field of education and will continue to use it in the days to come. AR helps making learning and teaching easier. Students can easily grasp the facts with the help of the 3D image.

4. Retail
In the area of retail it has been widely used from cosmetics to clothing, jewellery, foot wares, accessories etc. L’Oreal is one of the best example followed by Nike, Lenskart etc.

5. Television Broadcasts
AR is now a days used in weather broadcasts, sports events etc. AR also being used in events like election events, during reporting of natural calamities etc. where viewers are able to get a better picture of the happening.

AR Advertisement efficacy betokens, making the ad efficacious by magnetizing customers. It is anon-personal form of communication whose main objective is to increment sales and achieve maximum profit. Advertisement is a form of communication where the sender sends the right message at the right time to the right receiver. When the receiver understands the message, it is a correct/efficacious form of communication.

II. AR IN ADVERTISING AND MARKETING
Now a days, AR is widely utilized by many companies for marketing their products. First of all, the advertiser or marketer has to ken what are going to accommodate and who will be their target audience and what all will be their desiderata. By understanding this, they can communicate the message very well to the consumers. The AR is an interactive media. So, it will not engender anyarduousness in understanding the messages. The 3D feature, the virtuality etc makes the ad more informative, ingenious captivating etc.

As AR is a new media concept, it has the following characteristics.

1. Digitality
2. Interactivity
3. Immersion
4. Hyper-textuality
5. Dispersion

Digitality
From the word itself we can understand that digitality is marginally relate to digital elements. In the same way, AR is working on the substructure of the digital elements. Digital elements are overlayed on the genuine images gives an astounding interactive experience. There are marker- predicated, marker-less AR available. For GPS additionally, AR works on the substratum of digitalelements.

Interactivity
AR is an interactive system because it makes the customer directly in contact with the product. For example, IKEA has their own AR app, helps customers to choose furniture of their choice thruinteractive model. Through this app, customer can customize the furniture anywhere they wanted by taking the images of the furniture.
Immersion
AR gives an immersive experience to the customer when they are using the AR app or visually perceiving the AR ads. Immersive means deeply involved in something. Here, it signifies in a genuine, or artificial environment. In VR, artificial environment is engendered with the avail of head-mount glass or goggles and the user will get a feel of genuine environment which is fully immersive in nature. In AR, artificial environment is engendered with the avail of software apps or devices and interaction or immersion is achieved. It makes the customer engaged. It is a cumulation of one or more technologies together.

Virtuality
Virtuality denotes getting a feeling like a genuine environment. In games, virtuality utilized a lot. For example, video games give people a virtual stage where they can be interacting and remotely control their virtual lives to an extent. Augmented virtuality is a subdivision of mixed reality which is a coalescence of authentic-world objects with virtual world.

Hyper-textuality
Hyper textuality contains word or words that connect the user to required websites. It is called likes. This feature sanctions the users more freedom of choices and connect them with all kinds of data or websites.

Dispersion
Incipient media are dispersed in comparison to mass media where there is no clear distinction between producers and consumers. In new media, the user is the controller of their webpages and express their opinions liberatingly. Blogs are example for this.

Advertisement effectiveness & AR
Advertisement efficacy is achieved when the ad is informative, creative and capture the minds of the customer. An effective ad makes an intention in the mind of customer to purchase the product. Only an effective ad can make this. For the effectiveness of ad, attraction, certainty, informativeness, interest, interacting, attention etc is a must. Here in this study, we endeavour to ascertain through this digital features how we can achieve ad efficacy. Each feature of AR is contributing to this. In case, we take digitality, it signifies the SD images, other software, background, light etc. used to make the ad creative. When we optically discern the ad for the first time, it can create a spark in our mind so that we can recognize the ad at anytime, anywhere. The audio, visual effect, the feel, creates immersion. These effects make the customer immersed in the advertisement. The AR is also an interactive system and the devices which make it more interactive are smartphones iPads AR apps etc. The more immersion is there, the more will be the interest of the customers, and the ad create more attention. This interest, attention and persuasive nature of the ad leads to ad liking. The effective AR ads have a high recalling effect due to its virtuality and digitality features. Once we see AR ads it will never go from our mind due to its features. So, AR ads will be more effective than traditional advertising.

Current Scenario of AR world wide
AR is along with artificial intelligence captured the world in different fields and influence the markets the most in coming years. The involvement of some companies (Facebook, Apple, Microsoft, Google, Amazon) make these phenomena the most popular which is now. FAMGA are now also working on it for further developments. All these make these phenomena an outstanding one. With large number of small phones supporting AR and the escalated work on new AR devices to come—all these phenomena show that this technology is soon to reach mass business adaptation phase, which will mean substantial business benefits.
AR technology is about to change the market in coming years. Zion Market Research predicts that AR’s value will reach 133 billion dollars in 2023 with average growth rate of 85.2% during 2022-2023.

**Scope and Objective of Research**

The adaptation of AR is becoming more significant in the world of advertisement which helps in effective communication of the product features to the end customers. So, it is imperative to judge the impact of such technological interventions so that organisations can take a decision in implementing the same for their product lines. Integrating Artificial Intelligence into such campaigns will take the user experience to next level.

**Objectives of the Study**

1. To know whether AR creates brand awareness
2. To explore how and why AR influences advertising effectiveness

**III. STATEMENT OF HYPOTHESIS**

A research hypothesis is a statement of expectation or predication that will be tested by research. If you want to test a relationship between two or more things, you need to write your hypothesis before you start your experiment or data collection. Hypothesis propose a relationship between two or more variables. An independent variable and a dependent variable. In this study the independent variable is the AR and dependent variable is the advertising effectiveness.

**Hypothesis 1**

H₀: AR do not create brand awareness

H₁: AR creates brand awareness

**Hypothesis 2**

H₀: AR has no influence on the advertisement effectiveness

H₁: AR has influence on advertisement effectiveness

**Hypothesis 3**

H₀: AR ads do not build interest in customers.
H1: AR ads build interest in customers

IV. RESEARCH METHODOLOGY & DISCUSSION

Purpose of Research
Through this research, the researcher is intended to check the improvement of effectiveness of Advertisement by applying Augmented Reality into it.

Data Collection
A quantitative research design is used in this study to examine the relationship between variables using statistical techniques. A structured questionnaire was used for data collection which consisting of multiple-choice five-point Likert Scale questions and dichotomous questions to access the feedback from the respondents. The data collection was done thru online mode covering customers in the district of Ernakulam.

Sampling Method
A simple random sampling was the technique used for collecting samples from the population. For this research, the population of Ernakulam District of Kerala was considered for picking up the samples. A total of 414 valid samples was collected in the overall process.

Data Analysis
The data analysis was done using statistical methods such as ANNOVA, regression, frequency distribution using SPSS tool.

Age of Respondents

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-25</td>
<td>123</td>
<td>29.7</td>
<td>29.7</td>
<td>29.7</td>
</tr>
<tr>
<td>25-35</td>
<td>77</td>
<td>18.6</td>
<td>18.6</td>
<td>48.3</td>
</tr>
<tr>
<td>35-45</td>
<td>186</td>
<td>44.9</td>
<td>44.9</td>
<td>93.2</td>
</tr>
<tr>
<td>ABOVE 45</td>
<td>28</td>
<td>6.8</td>
<td>6.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>414</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

www.turkijphysiotherrehabil.org
The above table and graph represent a higher percentage of respondents were from the age group 34-45 at 44.9% followed by age group of 15-25 at 29.7%. The age group of 25-35 consisting of 18.6% and the balance of 6.8% were from the age group of 45 and above.

The hypothesis in this study was tested utilizing the statistical method ANOVA and the finding is that the null hypothesis is abnegated and alternative hypothesis is accepted. The alternative hypothesis fortifies the verbal expression that AR engenders brand cognizance, and influence advertisement efficacy. It withal builds interest among customers when utilizing AR.

To test the statistical relationship between the variables, regression analysis was utilized in this study. When there is more than one independent variable regression analysis is utilized. Here the dependant variable is advertisement efficacy and AR is the independent variable.

Since AR itself cannot be treated as an independent variable, the characteristics of AR such as digitality, virtuality, interactivity and immersion has been considered as the independent variables. Through this regression analysis, it was established that there is a statistical relationship between the dependent variable and the independent variable (advertisement efficacy & AR). That signifies, AR is positively cognate to digitality, virtuality and interactivity and overall it gives a better experience.

Advertisement Effectiveness and Interactivity

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>.337a</td>
<td>.114</td>
<td>.112</td>
<td>.717</td>
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ANOVA

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<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>27.184</td>
<td>1</td>
<td>27.184</td>
<td>52.889</td>
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<tr>
<td></td>
<td>Residual</td>
<td>211.756</td>
<td>412</td>
<td>.514</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>238.940</td>
<td>413</td>
<td></td>
<td></td>
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</tbody>
</table>

Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.499</td>
<td>.079</td>
<td>19.014</td>
<td>.000</td>
</tr>
<tr>
<td>Are the AR ads</td>
<td>.295</td>
<td>.337</td>
<td>7.273</td>
<td>.000</td>
</tr>
<tr>
<td>interactive?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the above analysis, we could able to understand that there is a significant relationship between advertisement effectiveness and interactivity. As the sig value is less than the P value, the model is significantly fit.
V. FINDING OF THE STUDY

Augmented Reality is relatively a new technology and the awareness of the same varies with the level of technological interest of different persons. Practical application of AR is in its nascent stage and not many companies are adopted this. There are lot of research happening on this which eventually will become the epicentre of the advertisements as this can provide a real-life experience to the customer from anywhere and take better decisions.

In our study, we tried to check the basic variables of the AR with our respondents and below is the graphical representation of the outcome.

As per this, majority of the respondents feel that AR Ads are effective and create awareness of the product. It is also interesting to some extent and interactive also. The purchase intention is comparatively low considering as most of the customers are yet to get used to this new model of buying experience. Such changes in behaviour will only happen over a good period of time.

VI. CONCLUSION

This study was commenced with an intention of understanding the efficacy of advertisement through augmented authenticity, the latest technological advancement in the field of advertising. Utilizing AR can be impactful in engendering a connect with the customers in and brand which in effect will engender higher sales output. The ad recollection and brand experience can be amended utilizing AR technology where customers able to get a genuine-life experience with the products. The familiarity of this technology needs lot of amelioration especially in rural areas which if utilized, can supersede lot of cost factors for both customers as well as the industries.

REFERENCE


