

Impact of Augmented Reality on Digital Marketing

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Abstract

This paper discusses how augmented reality based digital marketing has impacted awareness phase of marketing. It will open with how AR based marketing is becoming a new trend and replacing the conventional methods of digital advertisement, from posters to DVCs & animations to AR filters & immersive ads or content posts. Through the use of “meta spark studio” for making AR based content, comparison between conventional & AR based digital marketing is conducted in the form of organic and inorganic ads survey which clearly appraises us the difference and which is more impactful. The AR based digital marketing provides a more immersive experience to the user which in turns makes it more impactful.

Keywords: Augmented reality, digital marketing, meta, social media.

1 - Introduction

The main objective of marketing is to satisfy the needs of consumers. In order to achieve maximum sales, the use of internet, as a means of promotion, has become a usual practice in marketing since the access of visitors to websites facilitates knowledge of the brand and allows it's positioning in the market. This shows that as technology evolves, marketing adepts to this constant change. With the advancements in technology, marketing techniques are adapting to the trends and providing more and more immersive experience to the consumer which in return increases the overall sale of a brand. Appreciating that new technologies help to better deploy campaigns, we conclude that marketing needs to innovate its way of dissemination, with an emphasis on technological advancement, in this way, business is beginning to tend to use ubiquitous technologies (smartphones)

Currently, companies are faced with the constant competitiveness that exists in the market; they are looking for ways to implement tactics that contribute to their development, their position in the market and their profitability. Although traditional

marketing is effective, its presence means high costs and difficulty in interacting and offering personalized services to the client, because you cannot adapt a service that recognizes your requirements or opinions to change the ways of learning, nowadays people use more technology devices such as mobile phones and computers due to the constant technological changes in the world. The uncertainty of the consumer when buying increases the probability that the negotiation is not defined by lack of knowledge, lack of information or the inability to be able to choose a specific product, then increases the risk of tearing down consumer confidence, these problems inside the company create a gap in waiting for new tactics to reach the customer, interest and satisfaction with specific product

As technology is involved in various areas of marketing, it adapts and evolves according to the new requirements that arise when tools like virtual reality, augmented reality and so on are added to marketing strategies. At the level of technological designs, new advances and concepts have been developed based on virtual reality -VR-, which generates a virtual environment in real time using computer systems, allowing a degree of user immersion. In a parallel area of development, augmented reality -AR- includes digital objects in 2D and 3D in spaces and between real physical objects, so the user has an idea of what their environment might be like when making the desired adjustments. In order to perceive scenarios in augmented reality, it is necessary to use a visualization medium where the handheld device captures the real environment using an integrated digital camera and locates virtual objects on it, thus offering mixed visualization.

The advent of Augmented Reality based technology has also been introduced in marketing which, in year 2021, increased 70% of impulsive buying of consumers. In this context, the focus of the article is to promote a new marketing strategy based on augmented reality. The research will deliver a detailed account of the comparison between conventional digital marketing techniques and augmented reality based digital marketing and which method of digital marketing satisfies the needs of consumers better. Although strategies for marketing have been studied widely and are directly oriented to the old traditional methods, the inclusion of numerous methods based on technological advances, facilitates the promotion of new products in a more immersive and interactive way. By appreciating that new technologies help to better campaign deployment, we reach the

conclusion that marketing must innovate its way of diffusion, strongly considering technological advances.

1.1. Objective

To determine and understand the significance of augmented reality based digital marketing in being more impactful on the consumer in terms of increasing sales than conventional marketing.

1.2. Research Question

To what extent is augmented reality based digital marketing more impactful on consumers than conventional digital marketing?

1.3. Rational of Study

The research tends to deliver a detailed comparison between both the methods of digital marketing i-e; augmented reality based digital marketing and conventional digital marketing by analyzing the impact of both on the end user. Through this research, a better understanding of which method of digital marketing is more impactful on consumer will be decided. This will further enable a better understanding of how using augmented reality can add value to a brand and how it can affect the growth of sales since the dynamics and end results of conventional methods of digital marketing have already been comprehended and used as a standard but augmented reality has yet to bridge this gap. It will also explain whether a more immersive experience can have a negative or a positive impact on brand and what ways could be used to attain the desired results.

The research analyzes how augmented reality based digital marketing campaign provides the consumer with a unique experience. Due to its immersive and interactive nature, the augmented reality not only delivers a detailed account of the specifications of the product that a consumer wants to buy but also a hands on experience of what the product is about. The ultimate goal of any company is to build customer loyalty but it is equally important for the customers to become promoters of the brand and to recommend it to others, which the research emphasizes on.

The research also studies how augmented reality based digital marketing offers an experience that is real which creates a new bidirectional channel of communication that provides a much more realistic experience to the user which further creates more consolidated and deeper memory due to which a closer relationship is formed between the user and the brand, leading to achieving the ultimate goal of marketing and maximizing sales. It is yet to explore how augmented reality will mold the field of digital marketing in its entirety and with the gap still persisting in research on this topic, much is to be studied however, this research targets the fundamental problem of how augmented reality performs differently to conventional marketing methods and whether it is more impactful or not.

2 – Literature review

Augmented reality is emerging as a cutting-edge technology in digital marketing which develops auditory, visual, olfactory and tactile perception of consumer by augmenting digital content (Carmigniani et al., 2010). It has become one of the most significant technological advancements of modern era that have evolved the digital media by allowing the reality to interact with the digital world; however, much research is yet to be conducted to further understand the impacts of augmented reality. According to Philipp A. Rauschnabel; “Augmented Reality (AR) has received increased attention over the last years, both from managers and scholars alike. Various studies in the marketing discipline have tackled fragmented aspects of AR, such as its impact on sales or brands. Yet, a holistic approach to AR remains scarce.” (Rauschnabel et al., 2022). Early augmented reality systems had limited applications in businesses because they needed to be built on devices dedicated to the technology such as smart glasses e.g.; Google Glass (Pozharliev et al., 2021), somatosensory devices e.g.; Xbox Kinect (Huang & Liu, 2021) or devices that were fixed e.g.; web camera on PC (Baek et al., 2016). Augmented reality also tends to add a new dimension to marketing by introducing a much more immersive experience. “Augmented reality (AR) is considered a promising technology in retailing and e-commerce, because it enables consumers to virtually overlay products on their own face or surroundings, ‘as if’ they are part of their real world”. According to Verhagen (et al., 2014)

Augmented reality also tends to establish a deeper and closer relationship between users' physical space and virtual objects. Therefore, the experience of the user with augmented reality becomes more immersive, more interactive, more realistic and more vivid (Cipresso et al., 2018). This enables the consumer to understand the product even better than they are buying even better and make a judgment more easily "For example, AR apps show consumers through their smartphone's camera how make-up will look on their own faces or how furniture will look in their own living rooms or homes." (Hilken et al., 2017) Due to this, a "try before you buy" formula is applicable through augmented reality based digital marketing which will fill the gap between offline and online shopping experience (Baek et al., 2016). Although many marketing companies have begun to explore this new technological phenomenon yet it remains to be seen how augmented reality-based marketing can add value to the brand and the consumer. A report released by PwC claimed that augmented reality brought a net economic benefit of \$33 billion in 2019. Moreover, the benefits will reach \$338.1 billion by 2025 and \$1.0924 trillion by 2030 (PwC, 2019).

3 – Methodology

This is a descriptive research that tends to find the current status of identifiable variables. This will require self-reporting questionnaires and surveys that could help in exploring the impact of augmented reality on digital marketing. According to Alan Bryman, such type of research design is referred to as a comparative research design (Bryman, 2012). This design entails studying two contrasting cases using more or less identical methods. It embodies the logic of comparison, in that it implies that we can understand social phenomena better when they are compared in relation to two or more meaningfully contrasting cases or situations. The comparative design may be realized in the context of either quantitative or qualitative research. (Bryman, 2012).

The research tends to be quantitative in nature which is the systematic investigation of phenomena by gathering quantifiable data and performing statistical, mathematical, or computational techniques, the results of which can be depicted in the form of numerical. The purpose of quantitative research is to generate knowledge and create understanding about the social world. Quantitative research is used by to observe phenomena or occurrences affecting individuals.

○ **Data collection method**

This study is exploratory in nature, and the exploratory research classification is intended to explain the characteristics, aspects and facts of any research in comprehensive strategies. This research is focused on the idea of how augmented reality based digital marketing can increase sales of a brand by being more impactful on the consumer compared to conventional digital marketing. The collection of data includes the deployment of organic and inorganic posts on Meta applications I-e; Facebook & Instagram.

The posts will constitute of both, conventional marketing and augmented reality based digital marketing. For organic data, posts without boosts or capital placing, will be deployed on Metaverse platforms whereas, for inorganic data, digital media ads will be deployed. The data collected will be put through a survey in which the impact of both the methods i-e; augmented reality based digital marketing and conventional digital marketing.

○ **Population and sample**

A sample of N=350 participants will be selected from different universities using survey method. Since the study is being held in Islamabad, Pakistan therefore the sample will be collected within Rawalpindi and Islamabad.

An approval letter, provided by the Riphah international university will be submitted to the head authorities of the universities where the research will be held.

○ **Sampling technique**

Convenience or purposive sampling will be used as a sampling technique. The research will consist of two groups (N= 175 boys and N= 175 girls) lying in the age group of emerging adults i.e., 23-29 yrs. The responses from these two strata will help in finding the impact of augmented reality on digital marketing.

○ **Procedure**

The study will consist of a sample of 350 participants i.e., 175 boys and 175 girls all of them lying within the age range of 23-29 yrs. The sample will be recruited through different universities and through online survey questionnaire. The required university's main authorities will be approached and permission of data collection will be taken by providing them with the approval letter given. Before taking the survey, the participants will be briefly informed about the

research and an informed consent will be given. It will be made sure that they have the right and freedom to withdraw from the study whenever they want. Participants will be asked to read the instructions carefully and that they can ask questions related to the study from the researcher any time. After completion of the survey, the researcher will collect the data from the participant and keep it safe for data analysis.

In online survey, through Google forms data will be collected. All the required information will be asked including demographic characteristics consent form etc. The survey will consist of a likert scale and some graphs related to the digital marketing strategies. Secondary data will be used to get the responses in order to avoid any biasness in the research. Upon receiving the responses, a comparison will be made and correlation will be found using independent group t-test in data analysis.

- **Ethical Consideration**

The study will be conducted under the supervision of the thesis supervisor. A consent form will be provided as to obtain consent for participation in the study. It will be warranted that participants have the freedom to leave the study at any time. Confidentiality of the participants will be ensured by researchers.

4 – Data analysis procedure

Data Analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data. According to Shamoo and Resnik (2003) various analytic procedures “provide a way of drawing inductive inferences from data and distinguishing the signal (the phenomenon of interest) from the noise (statistical fluctuations) present in the data”

The data collected through posts constituting of organic and inorganic ads will be put through a survey and then will be analyzed using Statistical Package for the Social Sciences (SPSS 21) software. Demographics characteristics of the participants will be analyzed using descriptive statistics which will include frequencies, mean, standard deviation, Skewness and kurtosis. The reliabilities (if needed) will be checked using Cronbach’s alpha coefficients.

Limitations

Although this research has many meaningful contributions, we acknowledge that this research still has several limitations. These limitations provide opportunities for further

investigation. To begin with, the data used in this research is collected through means of survey and then analyzed. For future studies, the data collection may include statistical data obtained from Metaverse ad manager. This will add another dimension of how impactful augmented reality is on Digital marketing

5 – Results and discussions

Augmented reality (AR) has day by day exponentially increased its impact in Pakistan. Many researches show that AR has gradually taken over all the digital marketing strategies and digital marketing itself has started to offer AR experiences. People these days have led to a growing interest towards the augmented reality marketing. Companies have made identification to use digital capabilities for exponential growth.

AR is not actually virtual reality but a combination of reality and digital marketing. Due to the ability of combining virtual reality and digital marketing AR is being used in multiple fields and domains i.e., medicine, marketing, museums, fashion and may other fields. Unfortunately, Pakistan lacks in filling the gap of literature in this domain therefore the present study will prove to be a source of filling the gap in literature of Pakistan and will provide a platform for more future researches in this field.

According to multiple researches held, the environment in which we live in and in the world of internet has changed drastically. To learn and explore about the development in the trends of digital marketing and augmented reality, descriptive research will take place. It will not only show how the augmented reality is forming an impact on digital marketing but also explore the trends that are promising towards the population and will help meet the future needs.

It seems that more and more advertisements and digital marketing are offering web AR experiences. The independent t-test will help in correlating the comparison held between two groups (i.e., N=175 boys and N=175 girls). This will show whether the process that will be undertaken in the research actually has an effect on the population or not and how are the two groups different. Normality test will show that the data is normally distributed. Hence, the hypothesis that “augmented reality has an impact on

digital marketing” will be proved once the normality test shows that the data is distributed normally and a positive correlation between the comparisons of two groups is resulted through independent t-test (i.e., $p > 0.005$) in SPSS (VR-21).

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