

ADAPTABILITY OF EXTENDED REALITY (XR) FOR MARKETING - AUDIENCE'S PERSPECTIVE ON IMMERSIVE EXPERIENCE DELIVERED THROUGH EXTENDED REALITY (XR)

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ABSTRACT

Since last few years technical advancements have opened new doors for marketers. Extended Reality(XR), a board term representing Mixed Reality(MR), Virtual Reality(VR) and Augmented Reality(AR) (Milgram & Kishino, 1994); is an emerging integration of IT and Marketing that delivers meaningful results to marketing strategies by delivering immersive product experience to audiences. In continuation of past researches on Extended Reality, this study is exclusively focused on awareness, likability, acceptability and feasibility of Extended Reality for marketing communication tool, keeping audience's perspectives at center. Research findings are primarily based on data collected through structured questionnaire and supported through literature review. 150 numbers of respondents were asked with series of questions strategically designed to achieve research objectives. Research study is concluded with further scope of study in subject discipline.

Keywords: Extended Reality(XR), Mixed Reality(MR), Virtual Reality(VR), Augmented Reality(AR), Marketing Communication

INTRODUCTION

The role of marketing communication begins with product/service introduction to the right set of predefined audience. Recent technical advancements and internet growth have given birth to complex but easy to execute and monitor marketing campaigns like Social Media Marketing, Search Engine Optimization, Mobile Applications, Automated Catboats etc. Extended Reality (here after referred as XR), is no exception to such innovative marketing tools. Due to the shift of marketing communication from marketer to audience, XR is being seen as most promising communication means due to its integrated features of self-simulation, user-friendly navigation, C2B communication freedom and many more. XR has a huge potential across industries. To name few, tourism (Griffin, Giberson, Lee, Guttentag, & Kandaurova, 2017); retail (Bonetti, Warnaby, & Quinn, 2017); education (Merchant, Goetz, Cifuentes, Keeney-Kennicutt, & Davis, 2014); entertainment (Lin & Tao, 2017); healthcare (Freeman, et al., 2017); and many more. Most of the XR experiences are being delivered through mobile applications, as smartphone

have emerged tremendously (Olsson, Lagerstam, Kärkkäinen, & Väänänen, 2011). As XR has expanded boundaries of marketing communication by leveraging technical advancements (Höllerer, Feiner, Terauchi, Rashid, & Hallaway, 1999); it has become difficult to measure immersive experience delivered to audience (Olsson, Ihamäki, Lagerstam, Ventä-Olkkonen, & Väänänen-Vainio-Mattila, 2009). Hence, such study on perspective of audience about immersive experience delivered through XR is always insightful to a marketer. Over and above understanding audience's perspective, exploring effect on audience engagement ratio and conversion ratio is also an aim of this study.

LITERATURE REVIEW AND QUICK FACTS

In order to attain objectives of this research, subject related literature has been reviewed with search keyword: Extended Reality, Augmented Reality, Virtual Reality and Marketing. Studies from past nine years have been referred for this study. However present paper being concentrated on primary data, only selected quick facts are being highlighted herewith as per below.

1. 70% of consumers believe AR can bring them benefits (ISACA, 2016).
2. By 2020, there should be 1 billion AR users (Tractica, 2017).
3. 67% of agencies want to see more VR and AR in advertisement campaigns (Vibrant Media, 2017).
4. Companies with annual revenues between \$100 million and \$1 billion are experimenting

with AR in various forms to help grow their business (Deloitte, 2019).

5. 51% of consumers feel it is important to get a personalized experience across all digital channels within a brand (BRP Consulting, 2018).
6. 75% of consumers use digital tools prior to their in-store visit and mobile devices are leveraged in 46% of in-store shopping experiences (BRP Consulting, 2018).
7. 48% of consumers would be more likely to shop at a retailer that utilizes AR (BRP Consulting, 2018).
8. 77% of customers prefer to use AR capabilities to preview product variations such as color or style differences (Think Mobiles).
9. 40% of customers consent to pay a higher price for any products they were allowed to preview (Think Mobiles).
10. Consumers are more likely to spend time while interacting, playing or trying out AR model of a product. And that time rises more than 5 times (Think Mobiles).
11. Global AR for advertising market is forecasted to grow at a CAGR of 30.79% during the period 2017-2021 (TechNavio, 2017)

RESEARCH OBJECTIVES

Referring to the subject related literature, a gray area was found whereby acceptance by audiences of XR based marketing campaigns can be researched upon. Considering this research gap, this study accomplishes below research objectives.

1. To study awareness level of use of XR for marketing.
2. To study likability of XR usage over

photographic and videographic product experience.

3. To study acceptability level of XR for immersive product experience.

4. To study impact of value-added immersive experience delivered through XR and purchase intention.

METHODOLOGY AND APPROACH

Descriptive research design is followed for this study. A convenient sampling technique is used having total 150 numbers of respondents. Primary data was collected through online structured

questionnaire. Along with to the point questions to achieve research objectives, basic demographic information was asked to the respondents to ensure minimum length of questionnaire so as to retain a respondent to attain complete questionnaire. Demographic profile of respondents was collected through single select multiple choice questions while five-point Likert rating scale, ranging from strongly agree to strongly disagree was designed to attain objective related data. Below table no. 1 represents questions asked to attain research objectives.

Table 1: Research Instrument - Structured Questionnaire

No.	Question	Type of Questions	Objectives
Q1	Have you ever heard about Extended Reality (XR)?	Single select multiple choice	Screening
Q2	I am aware about Extended Reality (XR) application being used for marketing	Five-point Likert rating scale	Objective -1
Q3	Compared to photographic and videographic product experience, I am more likely to experience product through XR	Five-point Likert rating scale	Objective -2
Q4	Wherever possible, I prefer to have product demo through XR	Five-point Likert rating scale	Objective -3
Q5	XR delivers added value to my immersive product experience	Five-point Likert rating scale	Objective -4
Q6	XR encourages my shopping intention	Five-point Likert rating scale	Objective -4
Q7	Gender	Single select multiple choice	Demographic Profile
Q8	Age	Single select multiple choice	Demographic Profile
Q9	Education Qualification	Single select multiple choice	Demographic Profile
Q10	Occupation	Single select multiple choice	Demographic Profile
Q11	Annual Family Income (in Rs.)	Single select multiple choice	Demographic Profile

Since this study is formative, present number of respondents is considered as an adequate. Major gender of respondents was male i.e. 112 numbers while 38 were female respondents. The average age group of respondents was 31 to 40 years. Overall, the respondents were educated so they easily understood the concept of XR hence outcome of this study based on their responses are reliable and trustworthy. Below table no. 2 represents demographic profile of respondents.

Table 2: Demographic Profile of Respondents.

Gender		
	Frequency	Percent
Male	112	74.7
Female	38	25.3
Total	150	100.0
Age		
	Frequency	Percent
Below 20 years	5	3.3
21 to 30 years	31	20.7
31 to 40 years	78	52.0
41 to 50 years	34	22.7
Above 50 Years	2	1.3
Total	150	100.0
Education Qualification		
	Frequency	Percent
Schooling	5	3.3
Graduate	53	35.3
Post Graduate and Above	92	61.3
Total	150	100.0
Occupation		
	Frequency	Percent
Student	5	3.3
Service	76	50.7
Business/Professional	69	46.0
Total	150	100.0

Annual Family Income (in Rs.)		
	Frequency	Percent
Below 5 Lakh	32	21.3
5 to 10 Lakh	87	58.0
10 to 15 Lakh	15	10.0
Above 15 Lakh	16	10.7
Total	150	100.0

ANALYSIS AND DISCUSSION

The data collected through questionnaire was formulated, tabulated and investigated for further analysis. Data was analyzed using SPSS software. Based on the research objectives, hypotheses were developed as per below.

H1: There is high awareness about usage of XR for marketing

H2: XR is highly liked compared to photographic and videographic product experience

H3: XR is highly acceptable for immersive product experience

H4: Value-added immersive product experience through XR has a significant positive impact on purchase intention

H1: There is high Awareness about Usage of XR for Marketing

This particular hypothesis was developed to cater objective 1 - To study awareness level of use of XR for marketing. Question no. 2 shown in above table no.1 was asked to respondents to attain H1. Table no. 3 shows responses of 150 respondents about awareness of XR for marketing.

Table 3: Awareness of XR for Marketing

Variables	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
Awareness-XR for Marketing	93	54	2	1	0	150

As the response was measured in five-point rating scale, 93 respondents (62%) strongly agreed, 54 respondents (36%) agreed, while 2 (0.13%) and 1(0.07%) respondent marked undecided and disagree respectively. Hence majority of respondents were found having sound awareness about XR being used for marketing. As a result, H1 is proved.

H2: XR is highly liked compared to Photographic and Videographic Product Experience

Objective 2 - To study likability of XR usage over photographic and videographic product experience; was achieved through this hypothesis. H2 was attended through question no. 3 shown in above

table no. 1. Table no. 4 represents responses of 150 respondents about XR for product experience.

Table 4: XR for Product Experience

Variables	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
XR for Product Experience	23	109	6	5	7	150

When asked about likability of product experience through XR compared to photographic and video graphic product demo, 23 (15.33%) of the respondents strongly agreed and 109 (72.67%) agreed while 6 (4%) of respondents were found undecided. However, 5 (3.33%) and 7 (4.67%) respectively seemed to disagree and strongly disagree with the idea of product experience through XR. As 88% of the respondents agreed and strongly agreed that they like to experience product through XR, H2 is proved.

H3: XR is highly Acceptable for Immersive Product Experience

In order to achieve objective 3 - To study acceptability level of XR for immersive product experience; H3 was developed. Respondents were asked question no. 4 shown in above table no.1. Table no. 5 shows responses of 150 respondents on acceptance of XR.

Table 5: Acceptance of XR

Variables	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
Acceptance of XR	21	86	32	9	2	150

Respondents were found quite positive towards acceptability of XR for immersive product experience, delivering results as 21 (14%) strongly agreed, 86 (57.33%) agreed, 32 (21.33%) undecided, 9 (6%) disagree and 2 (1.33%) strongly disagree. Since majority of respondents 107 (71.33%) marked their responses as agreed and strongly agreed, the fact XR is highly acceptable for immersive experience is accepted. i.e., H3 is proved.

H4: Value-added immersive product experience through XR has a significant positive impact on purchase intention.

Considering research objective 4 - To study impact of value-added immersive experience delivered through XR and purchase intention, H4 was designed to study relationship between two variables, V1 - Value-addition through XR for immersive product experience and V2 - Purchase intention. Question no. 5 and 6 shown in above table no. 1 were asked to the respondents. As the questions

were designed on five-point Likert scale, data outcome was in ordinal scale. A nonparametric test of Spearman correlation test was deployed and found with result as per below table no.6.

Table no. 6: Nonparametric Correlation

			Value-addition through XR for immersive product experience	Purchase intention
Spearman's rho	Value-addition through XR for immersive product experience	Correlation Coefficient	1.000	.729**
		Sig. (2-tailed)	.	.000
		N	150	150
	Purchase intention	Correlation Coefficient	.729**	1.000
		Sig. (2-tailed)	.000	.
		N	150	150

** . Correlation is significant at the 0.01 level (2-tailed).

Where

$$r = 0.729 \quad N = 150 \quad df = N-2 = 150-2 = 148 \quad \alpha = 0.01 \quad p < 0.01$$

Result -There is a significant positive impact of value-addition through XR for immersive product experience on Purchase intention, $r(148) = 0.729$, $p < \alpha$; H₄ is proved.

CONCLUSION

Though in past ample studies were conducted on XR, a grey area was left untouched in line with audience's perspective on immersive experience delivered through XR. In era of technical advancements, understanding of what audience perceive about XR, may help marketers to design and deploy most promising marketing tools based on XR. This paper represents a small study to investigate the audience's perspective on immersive experience delivered through XR. Perspectives of respondents about immersive product experience through XR applications are the main contribution of this study. Outcome of

this study has turned out with positive future of XR for marketing. The novelty value of the study may be considered high as very few studies on subject line are published. At positive end of the study, new doors have been opened for further research that can be carried away to find out impact of integrated benefits of XR at various audience touchpoints.

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