

# **A Study on Conceptual Framework of Metaverse in India and It's Awareness Among Users**

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## **Abstract**

Metaverse is considered as the next big thing in the future which helps communication faster and engages in virtual activities in a virtual environment. Several Industry giants are entering into this Metaverse like Tourism, Healthcare, education etc. Top Metaverse and virtual worlds in the year 2022 are Sandbox, Axie Infinity, decentraland, Solchicks, bloktopia, Metahero, illuvium etc. The main focus of the study is to explore the conceptual framework of Metaverse in India and the challenges that India could face during its implementation process. This study also explores the awareness of internet users on Metaverse. Metaverse is an interesting technology but it requires high level computer programming, Augmented Reality headset, Virtual Reality headset and gaming device.

**Keywords:** Metaverse, Virtual Environment, Augmented Reality, Virtual reality

## **1. INTRODUCTION**

The term Metaverse originated from the words 'Meta' and 'Universe'. It is a virtual world in which the users can attend virtual events, establish virtual offices, live, work collaborately and can interact with others through a computer generated virtual environment. The term Metaverse is an outcome of evolution of online 3-D enabled digital space that provide users access to virtual reality, augmented reality and other digital technology which allow users to have online business experiences.

It is considered as the next big thing in the future which helps communication faster and engages in virtual activities in a virtual environment. Several Industry giants are entering into this Metaverse like Tourism, Healthcare, education etc. Top Metaverse and virtual worlds in the year 2022 are Sandbox, Axie Infinity, decentraland, Solchicks, bloktopia, Metahero, illuvium etc.

This study explores various challenges faced in India during the implementation process from the perspective of internet users. This study also focuses on the concept of Metaverse in the real digital world. Source of data collection is primary and secondary. Primary data is collected through a structured questionnaire. Secondary data is collected through referring research papers, research articles etc.

## **2. OBJECTIVES OF THE STUDY**

- To study the concept of Metaverse
- To study awareness of Metaverse among internet users
- To explore challenges that India can face during the implementation process from the perspective of users.

## **3. CONCEPT OF METAVERSE**

Metaverse is expected to give new shape to digital world. Now a days, it is essential for companies to strengthen their technology, block chain capability and security measures to adopt this technology. Metaverse works to connect people in virtual environment. It's an interesting technology but it requires high level computer programming, AR headset, VR headset and gaming device.

It's a technology that provides companies an opportunity to become user friendly and to understand their customers better like Virtual games to make users understand their product, virtual showrooms where customers can get better experience as it provides 3D advertising and marketing platform and so on.

For example, if someone wants to buy eye glasses, can get virtual experience of it and on the basis of this feature, can choose the option which best suits.

Virtual meetings can be conducted where every participant will get feeling of sitting in some conference or meeting room. Not only the feeling of sitting together, it also provides an environment to understand body language and emotions of one another.

Examples are Ready player one, Somnium space, Facebook's horizon, and so on.

#### **4. LITERATURE REVIEW**

Paper entitled "All one need to know about Metaverse" authored by Lee LikThlang et al (October 2021) focused on increasing use of technologies and also illustrates possibility of digital bang. They believe that increase of technological enabler's driving current system of internet towards Metaverse.

Paper entitled "A Study on Metaverse Awareness, Cyber Risks, and Steps for Increased Adoption" authored by Glorin Sebastian (January, 2022). Author believes that Metaverse is a success for mobile internet and becoming very much popular with the growth of Tech industry. In this research, ways proposed to increase awareness and easy acceptance of its use were discussed.

"Metaverse beyond the hype" authored by Dwivedi Yogesh et al (October 2022) believe that the Metaverse Process the capability to raise physical world in to virtual reality and allow users for interacting people with realistic and simulated way. Their study suggests impact sectors like education, societal, health etc. They also discuss that privacy, biasness and psychological factors like its addiction and impact on people.

Paper entitled "the Metaverse in Education" written by Zhang Xinli et al (October 2022). They believe that Covid Pandemic was the reason which forced people to divert towards technology world. This paper proposed Metaverse in the field of education. Even they presented about challenges that are expected in the sector.

Paper entitled "Exploring the Metaverse: Challenges and Opportunities for India" authored by Wajire Pankaj (August 2022). He called Metaverse as next Internet. Author believes that it is multi level technology application and includes hardware also with immersive technology and perceives that Metaverse is in nascent level. Further suggest how India can take benefit from the opportunity provided by Metaverse.

#### **5. RESEARCH METHODOLOGY**

Data for the research is collected through primary as well as secondary data. Primary data is collected through structured questionnaire. The population/universe for this study consists of general public and users of internet from all age groups and occupations. Sample size taken for this study is 100 respondents. Sampling technique for the study is convenience sampling. The tools used for data analysis include Excel, Google forms etc.

#### **6. DATA ANALYSIS AND INTERPRETATION**

##### **Age of the respondents**

76.5% of the respondents were from age group of 18-24. This indicates that majority respondents are youth.

##### **Occupation of the respondents**

61.7% of the respondents were students. 16% were Corporate employees. Others are either self employed or in teaching job.

##### **Awareness about Metaverse**

Majority of the respondents i.e. 84% were aware about Metaverse while 16% were not aware about it.

##### **Excitedness to use Metaverse**

53.1% of the respondents were excited to use Metaverse. Reason may be majority respondents were young (between 18-24 age group). 35.8% of respondents were having a 'Neutral perspective' towards Metaverse. 11.1% of respondents were not that excited to use Metaverse.

##### **Experience of Virtual or Augmented reality**

50.6% of the respondents have experienced virtual or augmented reality while 49.4% of the respondents have never experienced virtual or augmented reality.

Having gadgets that are required to experience Metaverse like VR headsets, AR glasses 70.4% doesn't have any gadget that is required to experience Metaverse, i.e., VR headsets, AR glasses while 29.6% of respondents have gadgets that are required to experience Metaverse.

#### **Perception of respondents with regard to India being ready for Metaverse**

49.4% of the respondents were not sure about India being ready for Metaverse. 35.8% of the respondents think that India is ready for Metaverse whereas 14.8% of the respondents think that India is not ready for Metaverse.

#### **Issues that India may face during or after the launch of Metaverse**

25.9% of the respondents think that Lack of resources i.e., VR headsets, AR glasses/screens is the biggest issue that India and organizations may face after the launch of Metaverse. 24.7% of the respondents believe Lack of awareness would be a factor affecting the implication of such technology. 19.8% respondents think addiction to VR games can be an issue that India can face.

14.8% of the respondents considers cyber-security as a threat for Metaverse implication in India. 11.1% of the respondents think that the general public will have to learn how Metaverse works which may require a lot of time and efforts.

#### **Awareness of increase of Metaverse 'Social isolation'?**

90.1% of the respondents think, Metaverse will increase 'Social isolation' (as people will be more active in virtual reality where they can have a life they want and eventually isolate themselves from the actual world). Lesser number of the respondents (9.9%) think that Metaverse will not increase 'Social isolation'.

#### **Concerned about the impact of VR technology on health (Eyesight issues, etc)**

88.9% of the respondents were concerned about the impact of VR technology on health (Eyesight issues, etc). 11.1% respondents admitted that they are not concerned about such impacts of VR technology on health.

#### **Usage of Augmented Reality**

35.8% of the respondents think that Metaverse can be used in Education sectors. 33.3% of the respondents believe that the 'Gaming sector' can be integrated well with the Metaverse. 18.5% of the respondents think that Metaverse can be used in the Healthcare sector.

#### **Do you think companies should advertise in Metaverse?**

76.5% of respondent thinks that companies should advertise in Metaverse while 23.5% of respondent thinks that companies should not advertise in Metaverse.

### **7. CHALLENGES THAT INDIA CAN FACE DURING THE IMPLEMENTATION PROCESS OF METAVERSE**

**High level of Cyber Risks:** As data required for this application includes biometric aspects like facial scan, eye contacts, etc which unethical hackers may try to get and misuse.

**Can Affect work Culture:** High level technical skills are required to get jobs as jobs that require moderate technical skills can be automated. These are chances that coming of this high-tech can affect work culture in IT sector.

**Resources to power intensive Technology:** Various resources like VR headsets, AR glasses/screens is the biggest issue that India and organizations may face after the launch of Metaverse. There is a need to support the power intensive technology for using multiuser platforms.

**Insufficient Protocols:** Sometimes low-quality data and lack of standardized security mechanisms is a problem in using Metaverse.

**Can affect mental health:** Addiction to Metaverse can lead to health issues like depression, anxiety, eye problems, lack of concentration, obesity etc.

## 8. CONCLUSION

Big Tech Companies are investing in metaverse because future refined version of internet is metaverse. Metaverse is coming to reality now a days and due to technological advancements, our real world is getting more viral. Many people would get experience on this new virtual reality. Metaverse would impact every sector and industry. Various challenges facing during the implementation of metaverse are cyber risks, work cultures in Information Technology sector, health issues, low quality data, requirement of digital technologies, security factors etc. Metaverse can change the perception of internet users and people are excited to use metaverse.

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