

## USERS' PRECEPTION TOWARDS METAVERSE WITH SPECIAL REFERENCE TO SELECTED SECTORS

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### Abstract

The metaverse, a network of 3D virtual worlds focused on social connection, has gained significant interest recently. This study examines users' perceptions of the metaverse and its impact on selected sectors, particularly education and entertainment, in Coimbatore, Chennai, and Bangalore. Utilizing systematic sampling, 150 respondents provided insights into factors influencing their awareness and satisfaction with the metaverse. Findings reveal that in the education sector, motivating students is a primary factor, while creativity stands out in the entertainment sector. The study highlights the potential for the metaverse to revolutionize various industries, although further technological improvements and broader accessibility are needed. The implications for future development and user engagement are discussed.

Keywords: Metaverse, Virtual Worlds, User Perception, Education Sector, Entertainment Sector

### Introduction

A metaverse is a network of 3D virtual worlds focused on social connection. In futurism and science fiction, it is often described as a hypothetical iteration of the Internet as a single, universal virtual world that is facilitated by the use of virtual and augmented reality headsets. The term "metaverse" has its origins in the 1992 science fiction novel Snow Crash as a portmanteau of "meta" and "universe." Various metaverse have been developed for popular use such as virtual world platforms like Second Life. Some metaverse iterations involve integration between virtual and physical spaces and virtual economies. Demand for increased immersion means metaverse development is often linked to advancing virtual reality technology. It has been used as a buzzword to exaggerate development progress of various related technologies and projects for public relations purposes. Information, user addiction, and user safety are concerns within metaverse, stemming from challenges facing the social media and video game industries as a whole.

The core technologies in the metaverse include:

- ✓ Augmented reality (AR) A presentation method wherein objects in the real world are supplemented with artificial digital objects, which can be either constructive (i.e. adding to real world objects) or

destructive (i.e. masking real world objects).

- ✓ Virtual reality (VR) An artificial rendering of an environment making use of audio and visual fields, possibly supplemented with other sensory devices.
- ✓ Mixed reality (MR) A blend of elements of physical and digital worlds into a single immersive experience.
- ✓ Extended reality (XR) An umbrella term encompassing AR, VR and MR, which refers to the spectrum of technologies that combine computer-generated virtual elements into the real environment.
- ✓ Artificial intelligence (AI) AI is the ability of a computer or machine to emulate human tasks through learning and automation, generally understood to be the simulation of the higher-order functions of intelligent beings in areas such as visual processing, speech processing and analytics.

As of study metaverse is a post-reality universe, a perpetual and persistent multiuser environment merging physical reality with digital virtuality.

### **Statement of the Problem**

Interest in the metaverse has peaked this year - the number of searches for the word increased more than tenfold from 2020 to 2021, according to Google Analytics. The users don't get to know how virtual domain has become an all-encompassing space where commerce, education, entertainment, community-building, wellness, work and more can be accessed. Though many people spend time online, digital third spaces they aren't aware of the potential of the metaverse that goes beyond the digital domain, allowing for interactions that blur the boundaries of physical and digital. Hence, this study is attempted to identify the users' perception towards metaverse and to study how it's changing people's lives, how new opportunities that are being created.

### **Objectives of the study**

1. To study the impact of metaverse in selected sectors.
2. To know users satisfaction level towards metaverse in selected sectors.

### **Review of Literature**

Daren Tsui (2021)<sup>1</sup> A persistent and user-defined virtual space "It is a computer-generated simulation of a 3D space where users can interact. The metaverse will have three key attributes: it needs to have presence (social presence), it needs to be persistent (when users come back there's some sort of continuity and not a reboot), and, last and most important, it needs to be shared (multiple people will need to be able to interact in the metaverse)."

Jon Morris (2021)<sup>2</sup> A digital layer of everyday life "We'll be living in the metaverse when 2D user-generated content, videos and chat evolve to become 3D player-generated experiences. Imagine Travis Scott, not a pre-recorded cartoon in Fortnite but actually, present and performing live, hovering above you in Times Square. A digital overlay that augments our lives and current understanding, a global game that connects us beyond what we now know, where the vibe and serendipity of an epic festival collide with the commerce and compression of

a vibrant city, and with the diversity of a Star Wars cantina at the edge of the galaxy. Technology can expand the feeling of collective presence beyond real life, where one can truly be with anyone, anywhere, at any time.

**Methodology:** Systematic sampling is the sampling technique is used for this study to identify 150 respondents as sample in Coimbatore, Chennai and Bangalore.

**Opinion on the factors influencing users in knowing about Metaverse in Education sector the respondents.**

**Table no 1.1: Preference and ranking of factors influencing users in knowing about metaverse in education sector**

S. No	Factors influencing user in knowing about metaverse in education sector	Rank Given by the Respondents			
		Rank 1	Rank 2	Rank 3	Rank 4
1	Motivating students	68	33	17	32
2	Learning Environment	21	68	50	11
3	Teaching Institution	24	33	67	26
4	Students – Teacher Relation	37	17	16	80

**Table 1.2: percent position and garret value**

S. No	$100 (R_{ij}-0.5) / N_j$	Calculated Value	Garret Value
1	$100 (1-0.5) / 4$	12.5	72
2	$100 (2-0.5) / 4$	37.5	56
3	$100 (3-0.5) / 4$	62.5	43
4	$100 (4-0.5) / 4$	87.5	27

**Table 1.3 : Calculation of garret value and ranking – educational sector**

S. No	Factors Influencing	Rank Given by the Respondents				Total	Percentage (%)	Rank
		Rank 1	Rank 2	Rank 3	Rank 4			
1	Motivating students	4896	1848	731	684	8339	55.59	1
2	Learning Environment	1512	3808	2150	297	7767	51.78	2
3	Teaching Institution	1728	1848	2881	702	7159	47.72	3

4	Students – Teacher Relation	2664	952	688	2150	6404	43.09	4
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INTERPRETATION:

From the above table, it is found that the respondents irrespective of classification pay high attention towards the factors like Motivating Students when compared to the other factors.

**Opinion on the factors influencing users in knowing about Metaverse in Entertainment sector the respondents.**

**Table 2.1: Preference and ranking of factors influencing users in knowing about metaverse in entertainment sector**

S. No	Factors influencing users in knowing about metaverse in entertainment sector	Rank Given by the Respondents			
		Rank 1	Rank 2	Rank 3	Rank 4
1	Creativity	83	29	27	11
2	Location	18	68	35	29
3	Content Projection	22	33	67	28
4	Teleportation	27	20	21	82

**Table 2.2: percent position and garret value**

S. No	$100 (R_{ij}-0.5) / N_j$	Calculated Value	Garret Value
1	$100 (1-0.5) / 4$	12.5	72
2	$100 (2-0.5) / 4$	37.5	56
3	$100 (3-0.5) / 4$	62.5	43
4	$100 (4-0.5) / 4$	87.5	27

**Table 2.3: calculation of garret value and ranking – entertainment sector**

S. No	Factors Influencing	Rank Given by the Respondents				Total	Percentage (%)	Rank
		Rank 1	Rank 2	Rank 3	Rank 4			
1	Creativity	5976	1624	1161	297	9058	60.38	1
2	Location	1296	3808	1505	783	7392	49.28	2
3	Content Projection	1584	1848	2881	756	7069	47.12	3
4	Teleportation	1944	1120	903	2214	6118	41.20	4

INTERPRETATION:

From the above table, it is found that the respondents irrespective of classification pay high attention towards the factors like Creativity when compared to the other factors.

**Opinion on the future perspective of Metaverse in Education sector the respondents.**

The Table describes the results of chi - square analysis in terms of Educational Qualification, chi - square value, p - value and their significance on the future perspective of Metaverse in Education sector the respondents.

**TABLE NO: 3 CHI - SQUARE VALUE – FUTURE PERSPECTIVE OF METAVERSE IN EDUCATION SECTOR**

<b>Future Perspective</b>	<b>P - value</b>	<b>DF</b>	<b>Significant value</b>	<b>NS/S</b>
Opportunities for Collaborative learning	7.360 <sup>a</sup>	9	.600	NS
Joyful learning/Critical Thinking	7.903 <sup>a</sup>	9	.544	NS
Creative innovation	7.385 <sup>a</sup>	9	.597	NS

**Note:** S - Significant (p value < 0.05); NS - No significant (p value > 0.05).

It is concluded that the Level of Education of the respondents have no significant inference on the opinion of the future perspective of Metaverse in Education sector of the respondents.

**Opinion on the future perspective of Metaverse in Entertainment sector the respondents.**

The Table describes the results of chi - square analysis in terms of opinion, chi - square value, p - value and their significance on the future perspective of Metaverse in Entertainment sector the respondents.

**TABLE NO:4 CHI - SQUARE VALUE – FUTURE PERSPECTIVE OF METAVERSE IN EDUCATION SECTOR**

<b>Future Perspective</b>	<b>P - value</b>	<b>DF</b>	<b>Significant value</b>	<b>NS/S</b>
VR Theme Park	12.980 <sup>a</sup>	9	.164	NS
VR Movie	4.317 <sup>a</sup>	9	.889	NS

VR Theatre	18.015 <sup>a</sup>	9	.035	NS
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**Note:** S - Significant (p value < 0.05); NS - No significant (p value > 0.05).

It is concluded that the Age group of the respondents have no significant inference on the opinion of the future perspective of Metaverse in Entertainment sector of the respondents.

### Suggestions

- Improved performance in avatar movement and environment rendering
- Reduction of environment 'sharding' so all participants can interact with each other live, in the same location
- More capacity to support complexity in design and interactions
- Reduction of local hardware requirements for complex interactions with 3D rendering
- Expanded accessibility across devices (including mobile)
- Development of interoperability or cross virtual world interactions, and ways to manage engagement and digital assets across virtual worlds

## Conclusion

The metaverse is the next generation of the internet. It is being built around activities you'll enjoy with your friends and co-workers. An exponential increase in creators are mixing-and-matching, embedding and linking, leveraging a new era of creator-oriented tools. It will take you to places you never imagined. Metaverse has broad development and application prospects. This paper summarizes the work of metaverse in various sectors.

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