

Repositório ISCTE-IUL

Deposited in *Repositório ISCTE-IUL*:

2023-08-28

Deposited version:

Accepted Version

Peer-review status of attached file:

Peer-reviewed

Citation for published item:

Cruz, M. & Oliveira, A. (2023). Hi doctor strange! Play it again, and discover the metaverse: Perceptions of the metaverse among gamers. In 2023 18th Iberian Conference on Information Systems and Technologies (CISTI). Aveiro, Portugal: IEEE.

Further information on publisher's website:

10.23919/CISTI58278.2023.10211283

Publisher's copyright statement:

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Hi Doctor Strange! Play it again, and discover the Metaverse

Perceptions of the Metaverse among gamers

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Abstract — New, past, or, in development, are common attributes given to the Metaverse concept. Possibly it is all of that, but the most important is how we perceive it. Our lives are being influenced and transformed by technology which has a huge impact on our social, physical, and virtual representations. Regarding what many authors say about this concept we may question: how do real people represent the Metaverse? The main objective of this study is to analyze how Portuguese adults think and feel about this concept. To achieve this goal, two focus groups were conducted, with a total of 8 participants - Portuguese adults, all of them digital gamers. The results showed us expected and unexpected findings that probably rely on the (still in development) definition of what is and what will be the Metaverse. The results will offer us a deep understanding of which concepts can be more relevant for our research, as items and dimensions to be considered in a Ph.D. research in development.

Keywords – Metaverse; virtual reality; gaming, technology.

I. INTRODUCTION

Throughout the last 10 years, the Metaverse has been gaining importance as a new concept or idea, enabled by the evolution of technology. But what exactly is the Metaverse?

Some authors refer to the Metaverse as a 3D virtual experience where we will be able to interact using virtual and augmented reality [1]. Others add that is a massively scaled and interoperable matter of real-time virtual worlds that will be experienced synchronously and persistently by unlimited users[2]. Metaverse can also be seen as an extension of the internet and we do not know what it will look like but it definitely will be interoperable and interconnected[3].

There's also the idea that there will be micro metaverses, self-contained (examples of Fortnite and Roblox) and single macro metaverses where all activities will occur, for example, the concept passed by the movie "Ready, Player One" from Steven Spielberg (2018)[3].

We can also look through an analysis of social networks as the Metaverse of the Mind where the user population of this network, MindField, revolves around diverse kinds of minds[4], empathizing the importance of social connection and representation in and between people.

One common argument among the authors is that is going to be a virtual experience in a virtual world. Although there's no

generally accepted definition for this concept[5], some authors define it as an automated, shared, persistent environment in and through which people are allowed to interact in real-time utilizing a virtual self[6], as a synchronous, persistent network of people, represented by avatars, facilitated by networked computers[7], and a persistent simulated and immersive environment, facilitated by network computers, providing multiple users with avatars and communication tools with which to act and interact in-world and in real-time[8]. These virtual worlds can also be defined as a work or play puporse[9].

However, for us to understand this concept, we also have to understand virtual reality, which is considered a subset of the virtual world[9]. Virtual reality may be described as a computer-generated environment[2]. The experience can vary on the type of immersive 3D, virtual, or augmented reality. Virtual reality has brought to us a new form of communication [1]. Achievable by different devices[10], creates new environments [11], and has become its development and immersive experience[12]. These immersive experiences have been researched in different domains such as virtual reality, games, and designs[13]. It can be defined as a qualitative property connected to the perception of the user[5], the concerned extent to which a group of participants and objects leave behind their local space and enter into some new remote space to meet with others[14].

Having this development of technology, through virtual worlds and virtual reality we cannot proceed without mentioning the biggest contributor to that is the gaming area. Gaming has made possible everything we could and never thought it was possible, or that we didn't know we wanted[1], and it's a clear founder of the Metaverse[1], and responsible for making a more socially shared experience[48].

The Metaverse and virtual reality concepts something connected to these concepts is the gaming world. The other two the evolution of technology potentialized the gaming industry as a lived experience and the limits between Metaverse, what is gaming and what is not[1]. The use of technology as a more engaging and immersive experience has been evolving over the years.

Looking at these concepts Metaverse, virtual reality, and gaming a lot is said or written about them through the years but what does the gamer population perceive about these concepts?

This study is part of a Ph.D. project, in progress, focused on the Metaverse concepts, virtual reality, and gaming. For this study, we choose the focus group for gathering our data. With this technique, we can simulate discussions among participants that on a normal day, life would not occur, considering this means the most efficient technique for gathering data[15].

Some other features are the possibility of gathering a large amount of data in a short period [15], we can gather thoughts and feelings about the topics[16], it allows group interaction[15], and the discussion can be used like a simulation of discourse or conversations of the daily life and also allows the diversity and difference either within or between the group[17].

The focus group technique has a “non-standard” technique, which means that the gathering of information and discussion do not follow a predetermined order or established text, to gather information[18].

For this reason, this technique will help us to understand the thoughts, ideas, and opinions of the participants about the present concepts, allowing us to understand the most relevant facts or concepts to include in subsequent studies.

II. OBJECTIVES

The main goal of this article is to understand how the Metaverse concept is perceived by adult Portuguese gamers – considering their knowledge, thoughts, and experience.

III. METHOD

The study consisted of two focus groups, with a total of eight Portuguese adult participants, 3 males, and 5 females, with an average age of 28 years old. They were all gamers. We focused our attention on the analysis of their answers to 6 questions regarding the Metaverse concept:

- What do you think about the Metaverse?
- Have you ever been immersed in the Metaverse? And, how did you feel?
- What kind of population is the Metaverse aiming for?
- Is the Metaverse present in your daily lives?
- Do you think the Metaverse is a virtual reality?
- Is the Metaverse a game?

Before each focus group began the participants were informed that their participation was voluntary, confidential, and anonymous, and they could decide to leave anytime during the interviews. We also obtained verbal agreement from the participants to allow the recording of the focus group session for posterior analysis of the data.

The qualitative data gathered was summarized, categorized, and analyzed by the frequencies of responses from the participants, considering categories and main themes.

After this categorization, we calculated the frequencies and percentage of the response given, and for a more visual interpretation of the results we transform some questions into a word cloud image, using free online software from <https://www.wordclouds.com/>.

IV. RESULTS

The main results will be shown through tables (cf. Tables I to VII).

Regarding the question “What do you think about the Metaverse?” we can see in Table I, that the five more mentioned concepts are: Past (N=8, 100%), Socialization (N=7, 69.2%), Evolution (N=7, 69.2%), Virtual (N=6, 53.8%) and Creation (N=5 46.2%).

Shows that the Metaverse is seen as something that already existed as a time travel to the past, present, or future (Past), a concept that promotes Socialization, it’s considered an Evolution of technology, its main space is Virtual reality, and is considered a concept with the ability to Create new worlds.

TABLE I. WHAT DO YOU THINK ABOUT THE METAVERSE?

Results		
<i>Categories/Concepts</i>	<i>Total</i>	<i>%</i>
Past	8	100
Socialization	7	69.2
Evolution	7	69.2
Virtual	6	53.8
Creation	5	46.2
Immersion	2	23.1
Build	2	23.1
Monitorize	1	15.4
Threat	1	7.7
Risk	1	7.7
Innovation	1	7.7
Future	1	7.7
New	1	7.7

For a better understanding, a word cloud was created so we can evidence the main concepts that the participants considered about the meaning of the Metaverse.

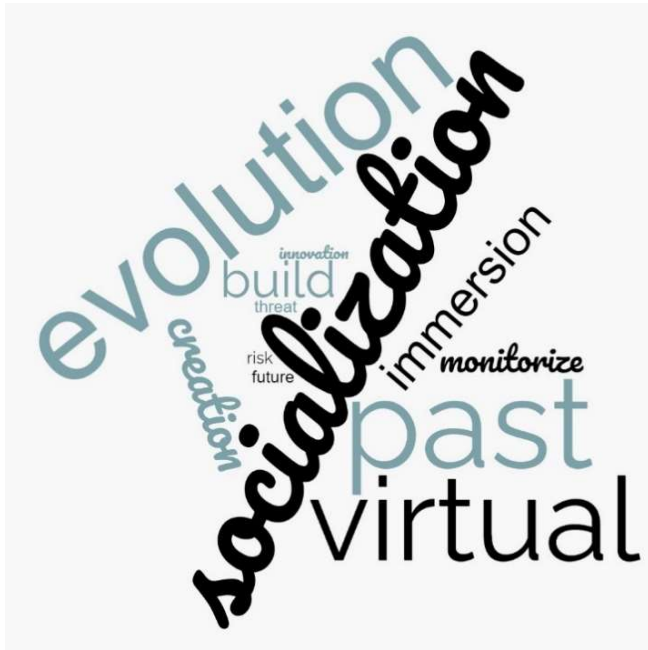


Figure 1. What do you think about the Metaverse?

As for the question “Have you ever been immersed in the Metaverse? And, how did you feel?”, we can see (Table II) that the majority of the participants (N=6, 76.9%) do not consider that they were, till the present day of the realization of the focus group, not been immersed on the Metaverse.

TABLE II. HAVE YOU BEEN IMMERSSED IN THE METAVERSE? AND, IF YES, WHAT DID IT MAKE YOU FEEL?

Results		
Categories/Concepts	Total	%
No	6	76.9
Yes	2	23.1

As for the participants that said “Yes” (Table III, N=2, 23.1%), all of them referred that it brought more fun to the activity that they were doing (gaming) and only 2 mentioned the sensation of being immersed in the virtual/alternative world.

TABLE III. AND, IF YES, WHAT DID IT MAKE YOU FEEL?

Results		
Categories/Concepts	Total	%
More fun	2	100
More immersion	1	66.6

Regarding the question “What kind of population is the Metaverse aiming for?” we can see (Table IV) that the participants were very divided when choosing a specific population, some also mention not being sure if it has an aiming population, even after mentioning a specific population and for this reason we decided to register the uncertainty with the N/A value.

TABLE IV. WHAT KIND OF POPULATION IS THE METAVERSE AIMING FOR?

Results		
Categories/Concepts	Total	%
Adults	8	69.2
Adolescent	8	69.2
N/A	5	38.5
Children	4	30.7

For a better understanding, a word cloud was created so we can represent the results graphically.



Figure 2. What kind of population is the Metaverse aiming for?

For the question “Is the Metaverse present in your daily lives?” (Table V) we can see that the majority of the participants considered that the Metaverse is not present (N=5, 61.5%).

TABLE V. IS THE METAVERSE PRESENT IN YOUR DAILY LIVES?

Results		
Categories/Concepts	Total	%
No	5	61.5
Yes	4	38.5

As for the question “Do you think the Metaverse is a virtual reality?” (Table VI), the answer was unanimous considering a metaverse as virtual reality and some add that without it that would be no possibility of the existence of the metaverse.

TABLE VI. DO YOU THINK THE METAVERSE IS A VIRTUAL REALITY?

Results		
Categories/Concepts	Total	%
Yes	8	100
No	0	0

Regarding the question “Is the Metaverse a game?” (Table VII), the majority of the participants considered the concept as a game (N=6, 69.2%), the participants that answered “no” (N=2,

30.7%) claim that is not only for the game it will be for more than that, an example has been able to provide services of any kind, shopping, and others).

TABLE VII. IS THE METAVERSE A GAME?

Results		
Categories/Concepts	Total	%
Yes	6	69.2
No	2	30.7

V. CONCLUSIONS AND FUTURE WORK

The results obtained are somehow, at the same time, expected and unexpected. Perhaps this can be explained due to a lack of consensus between the author's definition and by general population's understanding of what is it because there's no prediction of the future and our perceptions are influenced by what today's technology brings[3]. In a matter of fact, the Metaverse will be guided according to the wants [3] and needs of the people.

Some things are agreed upon regarding virtual reality and socialization. The Metaverse is a virtual world[2] so without the technology of virtual reality it could not be possible to create these virtual worlds. Socialization comes naturally because the concept passes to have an unlimited number of users[2], being considered as a multi-user environment able to merge physical and virtual reality[19].

About perceiving if it's already part of our lives and if it's something available to be experienced, the majority of the participants tell us "no", which can be explained by the technologies needed (that are still not available to everybody or have a high price) and because it's something on ongoing development. Some authors can argue that the Metaverse can be achieved by simple devices such as game consoles, computers, tablets, or mobile phones[10], so the perceived idea of the participants perhaps could or should have been different.

It's also mixed with expected and unexpected factors the perceived idea that the Metaverse is a game. Expected because the concept mixes gaming with a more digital engagement[20] and because games are the founders of the Metaverse[21], unexpected because it does not take into account other possibilities such as social networking, having its economy, changing education experiences[1] and a lot more other fields that exist in our society.

It's also surprising, in some way, that the Metaverse perceived concept has yet to mark a position about the target population, even within the authors there's no explicit description of this matter. We can only conclude that it will touch everybody, but the first interaction will be with adults and adolescents who are recognized as being more open and able to use it, more easily than seniors or children. There will be new opportunities to play again and discover the pathways of the Multiverse.

The present results offered us significant knowledge about the perceptions of the Metaverse concept, as well as a brief confrontation between the author's references and what gamers

perceive. These findings will also support our understanding of this concept, and we will continue to investigate which concepts are most pertinent to be discussed in the Ph.D. research in which we are working.

ACKNOWLEDGMENT

I would like to thank all the participants who voluntarily accepted the invitation to be a part of our study.

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