e-ISSN 2963-2870
Vol 3 2022

METAVERSPEDIA TO SPREAD TO AWARENESS OF THREATENED FLORA AND FAUNA

Dwi Ircha Permatasari[1*], Anisya Putri Chantika[2], Muh Rifli[3], Mutimanda Dwisatyadini[1], Sri Kurniati Handayani[5], Soraya Habibi[6]

[1, 2, 3, 4, 5, 6]Universitas Terbuka (INDONESIA)

[*]*042674477@ecampus.ut.ac.id*

Abstract

Metaverse is a three-dimensional virtual communication space that is currently being discussed by various groups, both from its very rapid development and its implementation which is starting to be widely applied in various sectors of life. The research method used in writing this paper is literature study by collecting library data from various written sources such as articles, scientific journals, and documents relevant to the topics discussed. The research design used is a narrative review. The reason behind the writer's interest in making this paper is based on the phenomenon of hunting and trade in flora and fauna which is increasingly happening. This makes the number of available flora and fauna increasingly threatened with extinction. The results showed that this did not make the general public uneasy, even many of them did not know information about endangered and extinct flora and fauna. Information about the extinction of flora and fauna is now diverse and easy to find, ranging from books in the form of encyclopedias to applications on mobile phones. Unfortunately, according to survey data conducted by UNESCO, it is stated that the reading interest of the Indonesian people is very concerning. In fact, the encyclopedia is a complete, clear and detailed source of information. However, the price of the encyclopedia is not cheap, so it is considered less economical and static. Therefore, the idea was created to create Metaverspedia, a three-dimensional virtual space that provides information on endangered and endangered flora and fauna with the aim of helping the community, both educators, students and the general public, in obtaining information and increasing knowledge about flora and fauna. interactive and endangered species. The advantage of Metaverspedia is that besides being interactive, easy to reach and also fun with a design that spoils the visuals of the users .

Keywords: Metaverse, encyclopedia, information media about endangered flora and fauna.

1 INTRODUCTION

The development of technology today is very fast. With the emergence of new technology, namely Metaverse, a virtual space in three-dimensional form that makes it easier for users to interact and communicate like the real world. Now we can also use metaverse in education. With the metaverse we can obtain information and learn without being limited by space and time.

Metaverse has three main elements that are very suitable to support the quality of learning in the era of digital technology development. With metaverse technology we can get virtual and artificial reality (VR), web 3.0 technology, and blockchain technology. According to data reported on the IUCN website in 2021, there are 170 flora and 189 fauna with critically endangered status (Critically Endangered).

Flora is all types of plants and plants that exist on earth and Fauna is all types of animals that live on earth. (Geography, 2016). There is a lot of information about the extinction of flora and fauna that is formed in print media in the form of encyclopedias to online reading applications on mobile

phones. Unfortunately, the reading interest of the Indonesian people is very concerning. Students in big cities have less interest in reading because of the influence of increasingly sophisticated technology, while students in villages or 3T areas do not have supporting reading facilities, even though they may have high interests. (3,128 Journal of Elementary School Teacher Education. 7th Edition 32 Year 2018)

To overcome this, a metaverse space was initiated that educates about endangered and extinct flora and fauna in order to provide a learning space with a pleasant atmosphere and freely accessible for educators, students, and the general public. The space is like an encyclopedia in the metaverse world called metaversepedia. (Journal of Barik, Vol. 4 No. 1, Year 2022, 37-51)

With this space, we hope that the interest of the Indonesian people in finding information about flora and fauna, especially those that are extinct and threatened with extinction, will increase, by knowing the number and types of extinctions of flora and fauna that exist, we hope that people will care more about preserving and caring for flora and fauna. that exist on earth so as not to become extinct.

2 METHODOLOGY

The general idea this research wants to achieve is a kind of space that can be used as an active learning place with ample information and engaging visuals. We come up with the idea of an encyclopaedia-like world, diving into the knowledge of endangered and extinct species, built to introduce the learner to the species' world. It is, the so called, Metaversepedia.

The learner first arrived at a gallery, there displayed pictures after pictures of endangered species and extinct species. The species are categorized by their extinction year and their populations left in the wild. The pictures can be interacted with, showing a 3D visualisation of the species that can be viewed freely, turned around, and switched the view between the body of the species or internal structure of the species. There will be a window prompt to help the learner learn more about the species, and also, jump into the species biome, learning and understanding their behaviour in the wild at their time. This jumping into the biome feature can be used in any manner, fast-forward or slow motion, for specific moment or general life, and controlled by the lecturer known as tour guide.

A literature study was used to look for materials and/or applications that shaped the metaverse. The literature study technique is a review of books, literature, notes, and reports related to the analyzed reports (Nazir, 2013, p 93). This research method is directed at finding the data materials

e-ISSN 2963-2870
Vol 3 2022

needed in the form of photos, images, and applications that support the writing process. In making this product, learning media from the “Spatial” application is used to produce the form of a 3D object that we want to add to the metaverse-space.

After acquiring the data and the materials needed for the metaverse-space, the data and materials collected is then inputted to the application and presented in the way we wanted. At this development stage, a lot of issues might start to show up. Experiments, tweaking, implementations, might be needed to help develop Metaverspedia. As the development progresses, so is the information needed and material needed. In the long run it is hoped that this technology can reach its fullest potential and form so it can benefit the masses.

3 FINDINGS AND DISCUSSION

3.1 Development

3.1.1 Findings

On the development of Metaverspedia, the team was able to create a gallery-like space using the “Spatial” application. We were also able to create a functioning explanation window. The “Spatial” application has enabled us to create a solid base world close to our ideals of Metaverspedia. Here's an example of a Metaverspedia display that our team created :

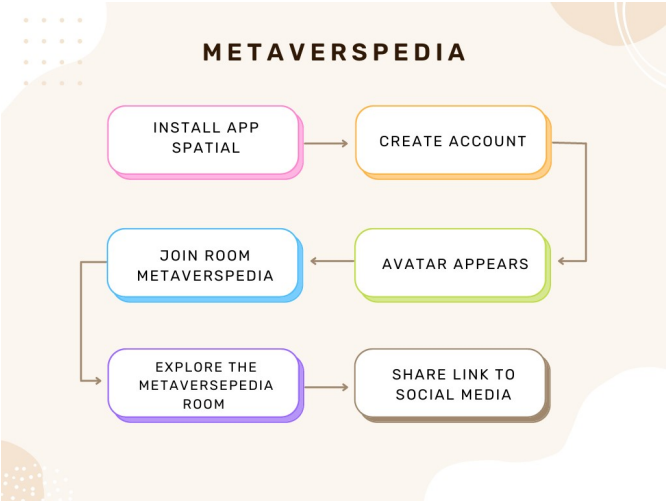

Figure 1. Login flow to the Spatial app

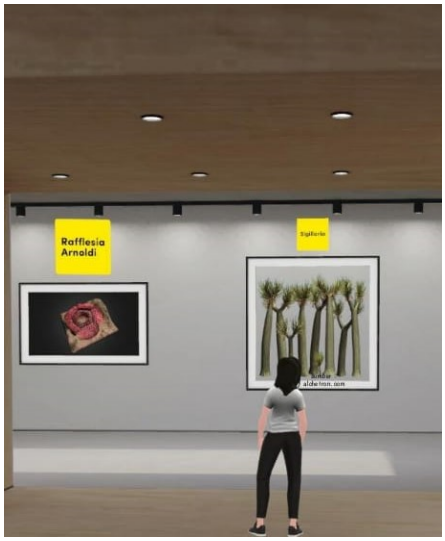

Figure 2. fauna display in metaverspedia

Source: Rifli made by Spatial application, 2022

e-ISSN 2963-2870
Vol 3 2022

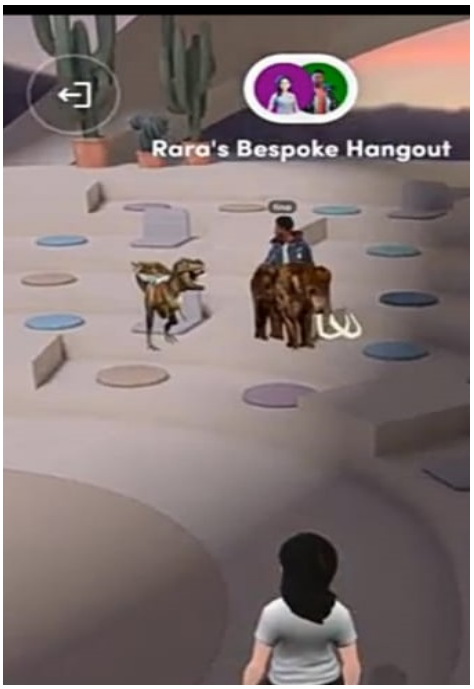

Figure 3. flora display in metaverspedia *Figure 4.Room meeting in metaverspedia*

Source: Rifli made by Spatial application, 2022

3.1.2 Problems

On the development of Metaverspedia, we encountered some development problems. One of them is the lack of time to create the space close to our ideals. This problem leads to our space being underbuilt, though it works normally as a gallery. We also did not gather enough data and material to support our build. We lack the data for extinct and endangered species, and also lack the 3D materials needed for our space. The “Spatial” application, though helpful, isn't enough to support us creating our Metaversepedia world.

4 CONCLUSION

Based on the result of the research we conclude that:

1. Metaversepedia can be a fun and engaging way to learn about the existence of endangered and extinct species.
2. There is a need to continue the research and to develop the applications further to be able to see the extent of the impact Metaverspedia can make in the education world in hope of easing the access of education for all.

ACKNOWLEDGEMENTS

We thank Diki, S.Si. M.Ed, PhD for his mentorship, guidance, and help throughout the making of this paper.

REFERENCES

Ardi Wijaya., E. S. (2022). Implementasi Resource Assignement Algorithm Pada Aplikasi Bahasa Latin Flora Dan Fauna Untuk Pelajar Berbasis Android. Jurnal Media Infotama, 12-13.

Ilham Maulana., D. K. (2008). Anthrophomorphism Character Designing On Indonesia's Flora. Proceeding of Art & Design, 209-211.

Iswanto., N. I. (2022). Utilization Of Metaverse In Education. Jurnal Teknologi Informasi dan Komunikasi, 44-50.

Joko Suwarno., A. L. (2022). Perancangan Aplikasi Pengenalan Flora dan Fauna Indonesia Bebasis Android Dengan Metode Library Research. Jurnal Ilmu Komputer, 1-5.

Muhammad Sholeh., J. T. (2021). Penggunaan dan Pengembangan Aplikasi Berbasis Augmented Reality untuk Dunia Pendidikan. Jurnal Masyarakat Mandiri, 2524-2530.

Yose Indarta., A. D. (2022). Metaverse : Tantangan dan Peluang dalam Pendidikan. Basicedu, 3352-3360.

e-ISSN 2963-2870
Vol 3 2022