Metaverse in Language Learning on Communicative Competencies-Mini Review

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ABSTRACT*: Amidst the era of human-computer symbiosis, extensive research has focused on the influence of educational Metaverse based platform on the domain of education. The emerging realm of the Metaverse, driven by advancements in 5G, has emerged as a new and unexplored frontier. Although some researchers have examined the use of the Metaverse in education, there is a significant lack of study specifically focused on its impact on language learning. This comprehensive literature review aims to fill this void by analysing and consolidating current research to provide insights into the consequences of Metaverse technology, particularly in the field of language teaching. It provides an overview of the Metaverse technology and its applications in communicative competencies, including interactive experiences, immersive storytelling, and engaging experience. Furthermore, the review discusses the existing research on the Metaverse in Language Learning and Teaching, and thus identifies the gaps and limitations in the current literature. A total 663 articles had been screened from 2019 and 2023. Out of those articles, 53 articles were identified and selected for this review. The findings suggested that the Metaverse has the potential to enhance language learning outcomes for learners specifically in communicative competencies such as listening and speaking skills, but further research is needed to establish the effectiveness of this technology for future use.*

KEYWORDS*: Metaverse, interactive experiences, immersive storytelling, engaging experiences, communicative competencies.*

I. INTRODUCTION

Metaverse has clearly been one of the most interactive platform to use in a classroom setting regardless of any levels (Basmah, 2023). Studies have shown that using Metaverse technology to learn a language can help young learners improve their communication skills (Xinli et al., 2022). Researchers (Levinsen et al., 2020; Wang et al., 2021) have found that actions in the Metaverse can help people get interested, stay motivated, and learn a language. Also, Sung and Wang (2020) and Yang et al. (2021) found that Metaverse technology can help students work together and talk to each other, as well as with their teachers. The interactive features of the Metaverse allow language learners to actively engage in language practise and communication. Within the virtual environment, they can engage in conversations, role-plays, and collaborative activities with virtual characters or peers. These interactive activities promote the development of speaking and listening skills by encouraging students to use the target language in relevant contexts. Through interactive language exchanges, learners can practise and refine their pronunciation, vocabulary, grammar, and fluency while receiving immediate feedback and correction, which facilitates their language development. Through the use of personas, the Metaverse provides a unique and engaging learning environment in which students can interact with the virtual world and other users. Sharpe and Beiter (2019) reported in a review that the use of the Metaverse in language learning and Teaching for learners can improve their language acquisition through interactive experiences such as virtual field excursions, simulations, and role-playing activities. The Metaverse can also facilitate immersive storytelling, allowing students to partake in narratives that immerse them in the language and culture of a foreign country. Briscoe and Mulligan (2020) suggested in a review that the use of the Metaverse in language teaching and learning for learners can facilitate language acquisition by providing authentic contexts and meaningful, real-world scenarios. The incorporation of engaging elements into the Metaverse adds an enjoyable and exciting element to language learning. Engaging language activities and duties encourage students to actively engage in and persist with language practise. Engaging experiences encourages

learners' engagement and improves their learning experience by incorporating objectives, rewards, and challenges.

By combining the Metaverse, an interactive experiences, immersive storytelling and engaging experiences language learners are provided with a dynamic and engaging learning environment. They are able to practise speaking and listening in a realistic and interactive setting, receive immediate feedback, and engage in collaborative language duties. These experiences promote accurate and fluent speech, vocabulary acquisition, auditory comprehension, and the ability to communicate effectively in the target language, thereby contributing to the development of communicative competencies. Studies demonstrate the positive effect of the Metaverse, immersive environment, interactive features, and gamification on the communicative competencies of language learners. For instance, Lee and Park (2020) discovered that incorporating a virtual reality environment with gamification elements enhanced the speaking fluency and motivation of young English learners. Based on how language learners use the Metaverse to improve their communication skills, the unique addition could be to find out which communication skills are improved the most by using the Metaverse. Oral communication or interactive storytelling could also be one of the ways to use Metaverse in teaching English to language learners. The research could help the field of language education by giving specific suggestions to language teachers and policymakers about how the Metaverse can be used to help language learners to improve and enhance their communicative skills. Metaverse offers unique potential language instruction for language learners. Its immersive and interactive features can engage language learners in activities that enhance their language skills, as well as their social and emotional skills and intercultural competences. However, additional research is required to investigate its potential in various contexts and with various categories of learners, and to identify effective pedagogical approaches that maximise its benefits. However, the effectiveness and safety of using the Metaverse in language learning for language learners require further investigation. This mini research study aims to explore the potential of the Metaverse in language teaching for learners and address the gaps and limitations in the existing literature. The study's findings will contribute to the growing body of research on the use of technology in language learning and provide practical recommendations for language teachers, parents, and policymakers interested in incorporating the Metaverse into language teaching and learning process especially in communicative competencies learners.

1. 1 Interactive Experiences in The Metaverse

In recent years, a lot of attention has been paid to the Metaverse, a virtual reality setting that lets people have interactive experiences. As a new platform, the metaverse gives people a lot of options for interesting and immersive encounters. The goal of this literature study is to look at how the metaverse makes interactive experiences possible and how they affect different areas, such as education, entertainment, and social interactions. Johnson's (2021) study is mostly about how learning and language learning are affected by interactive experiences in the metaverse. The study shows how the metaverse could be used as a dynamic and immersive tool for educational activities. Johnson talks about how the metaverse makes it easier for people to have real and meaningful interactions. It also lets people practise their language skills in a safe setting by acting out real-life situations. The study focuses on the good effects of metaverse-based language learning, such as getting students more involved, helping them learn the language better, and giving them better communication skills (Johnson, 2021).

The interactive experiences in the metaverse affect language learning, with a focus on how virtual reality environments can be used for real-time interactions and language learning. The effects of using metaverse technology in language education situations, with a focus on helping students improve their communication skills will also be further explained. The interactive experiences in the metaverse can help people learn languages in important ways. By giving learners real, immersive settings, metaverse technology makes it possible to simulate real-life situations and practise language skills in a safe way. Learners take part in role-playing activities, interviews, and discussions with avatars in virtual settings (Johnson, 2019; Smith & Chen, 2020). This helps them feel more confident and fluent in communication. Also, the metaverse lets people learn about other cultures by giving them access to virtual communities and artificial cultural settings that are similar to the cultures of the target language. Interacting with virtual native speakers and taking part in cultural activities not only helps learners understand cultural nuances better, but it also improves their intercultural competence and strengthens their connection to the language they are learning (Thompson & Martinez, 2021).

In other hand, the Metaverse can make it easier for people from different backgrounds to work together on projects, learn new languages, and talk to each other in real time. This collaborative method encourages social interaction, a feeling of community, and immediate feedback, all of which help students learn how to

communicate well (Wang & Chen, 2022). Furthermore, the Metaverse can be used to learn in different ways. Learners have access to a wide range of multimedia tools, such as videos, audio recordings, and interactive language tasks, which cater to different ways of learning. (Gonzalez, 2019; Park & Lee, 2020) These tools make learning a language immersive and fun by using visual, auditory, and interactive elements to help with language acquisition. In the end, the positive effects of metaverse interactive experiences on language learning, focusing on how they encourage real interactions, cultural immersion, collaborative learning, and multimodal language practise were also important in learning language for the learners. When metaverse technology is used in language learning settings, it has the potential to make learners much better at communicating.

1.2 Immersive Storytelling in The Metaverse

Immersive storytelling utilises the capabilities of virtual worlds, such as the metaverse, to deliver highly captivating and interactive narrative experiences (Dooley, 2022). Metaverse systems enable users to engage in immersive experiences within simulated multidimensional worlds. Users can assume avatars and roles, actively shaping the plot trajectories in real-time (Magnifico et al., 2023; Srivastava et al., 2023). This manifestation enhances intense sensations of being there, having control, and being sexually aroused (Qian et al., 2021), which are crucial for immersive engagement and emotional involvement in storytelling (van Laer et al., 2020). Preliminary evidence suggests that incorporating educational content into captivating story worlds within Metaverses can improve learning outcomes (Lu & Liu, 2019). It can also foster perspective-taking by allowing individuals to experience diverse viewpoints (Green et al., 2020), and facilitate the creation of collective narratives by bringing together communities from different cultural backgrounds (Srivastava et al., 2023). Nevertheless, personal attributes like as the ability to imagine can influence the level of involvement in storytelling inside virtual environments, indicating the necessity for adaptable solutions (Jones et al., 2023). Although there is potential, the current study on the psychological and social effects of immersive metaverse storytelling is still in its early stages, especially when it comes to vulnerable groups such as children. Additional empirical research is necessary to determine the responsible methods, possibilities, and constraints of utilising these technologies for influential and ethical storytelling that promotes a sense of belonging without compromising variety. The incorporation of ideas on narrative conveyance, identity and empathy development, and media influences will enhance the depth and significance of this important emerging field of cross-disciplinary research.

1. 3 Engaging Experiences in The Metaverse

The metaverse offers exceptional prospects for generating immersive and gratifying experiences through the use of advanced technology such as virtual reality (VR) and potent psychological factors like intrinsic motivation, flow states, and imagination (Bailenson, 2022; Flower, 2023; Ryan & Deci, 2020). According to Zhu et al. (2023), preliminary research suggests that involvement in the metaverse is associated with the fulfilment of fundamental requirements for autonomy, competence, and social connectedness, which are essential for motivation and overall well-being. Strategies such as gamification, which involve the use of points, accomplishment badges, personalised avatars, and social rewards, can effectively increase active involvement and perseverance (Looyestyn et al., 2023; Suh et al., 2019). Multi-sensory immersion has the ability to provoke creativity and create a sense of presence, enabling people to beyond their ordinary surroundings (Dooley, 2022). Nevertheless, it is crucial to address the potential dangers associated with excessive usage, unrealistic expectations, and reduced ability to function in real-life situations. This can be achieved through the implementation of design thinking and education on digital literacy. It is particularly important to focus on adolescents, as their ability to regulate their behaviour is still in the developmental stage. Additional investigation is needed to examine adaptive metaverse structures that facilitate self-fulfillment opportunities through appropriately demanding, visually appealing, and socially engaging experiences - while also considering responsible usage restrictions and protective measures. In the future, these interactive combination spaces have the potential to evolve into locations where learning is transformed, productivity is improved, people collaborate to create meaning, and cultural exchange is broadened (Deans, 2021; Floridi, 2023). There is an immediate need for guiding principles, governance frameworks, and effect evaluation to address increasing ethical concerns such as privacy, inclusivity, psychological well-being, and the pursuit of a fulfilling existence in virtual societies (Ye et al., 2023).

1.4 Communicative Competencies in Metaverse

Communicative competence encompasses the ability of language learners to effectively and appropriately use language in diverse contexts and situations, encompassing speaking, listening, reading, and

writing skills, as well as the interpretation of nonverbal cues and cultural norms (Council of Europe, 2001; Savignon, 1997). It is a fundamental objective in language teaching and learning, as it equips learners with the necessary skills to communicate proficiently in a globalized world. Scholars have proposed various models and frameworks to describe the components of communicative competence. One widely recognized model is the Canale and Swain model, which identifies four key components: grammatical competence, sociolinguistic competence, discourse competence, and strategic competence (Canale & Swain, 1980). Grammatical competence pertains to knowledge of language norms and structures, while sociolinguistic competence involves understanding the cultural and social contexts in which language is used. Discourse competence refers to the ability to use language effectively in extended spoken or written communication, while strategic competence entails employing language resources to navigate communication breakdowns and achieve communicative goals (Canale & Swain, 1980).

In traditional Language Teaching and Learning, the development of communicative competence typically occurs through a task-based approach, wherein students actively participate in communicative activities and tasks designed to simulate real-world situations (Celce-Murcia et al., 1995; Richards & Rodgers, 2001). These activities encompass a range of interactive tasks such as role-playing, discussions, debates, and project-based learning, among others. By engaging in these communicative activities, students acquire and refine the language skills and strategies necessary for effective communication in English across diverse situations and contexts. The cultivation of communicative competence holds great significance in Language Teaching and Learning. Through the acquisition of communicative proficiency, language learners gain the ability to utilise language as a medium for effective communication in today's globalised world, leading to enhanced opportunities in education, employment, and cultural exchange (Canale & Swain, 1980; Savignon, 1997). By honing their communicative competence, learners are empowered to navigate intercultural interactions, express their ideas, negotiate meaning, and engage in meaningful conversations with people from different linguistic and cultural backgrounds.

Communicative competence is an important part of learning a language because it helps people use language well in social settings. Communicative competence can be taught to students in a number of ways, such as through interactive games, age-appropriate materials, and a focus on listening and speaking skills. Interactive activities like games and role-plays can help young learners use specific language in useful and interesting ways, which can help them improve their communication skills. By using age-appropriate materials, like picture books and songs, it can help learners to learn a language in a fun and interesting way. For communicative ability to grow, it is also important to focus on listening and speaking skills. Research shows that language learners can benefit from hearing real language spoken, which can help them improve their listening skills. Also, giving learners chances to speak the specific language, like pair work and group work, can help them improve their speaking skills.

II. METHODOLOGY

Arksey and O'Malley (2005) suggested the scoping review method, which was used in this study to look at the use of Metaverse in language learning on communicative competencies. In particular, the study looked at how Metaverse features helps students learning language thus improving their communicative competencies. This method has five steps: coming up with research questions, finding relevant studies, choosing the right ones, organising and analysing the data, and summarising and sharing the results (Arksey & O'Malley, 2005).

2.1. Research Questions

Arksey and O'Malley (2005) say that figuring out what the research questions are has a big impact on the rest of the study. Research questions must be clear and well-defined because they have a direct effect on how search tactics are made. (Levac, Colquhoun, and O'Brien, 2010) Usually, study questions are written in a broad way so that they cover everything about the chosen topic.

The review question are given below:

1.   What Metaverse features help the most in the language learning for students?

2.   What are the communicative competencies that affected most by the use of Metaverse in language learning?

The concept of language learning had been narrowed into communicative competencies and how it affects their language learning regardless of any language that students are learning in this world.

2.2 Identification of Relevant Studies

Original peer-reviewed works in English from the Web of Science (SCOPUS), Taylor and Francis, Education Resources Information Centre (ERIC), and Google scholar databases were used to do research. This is because these sources were easy to find, the pieces could be found in PDF format, and they were published in peer-reviewed educational journals. Since this study was about the Metaverse, most of the pieces chosen were from 2019 to 2023. But there were a few pieces that should have been written before 2019. This was just to back up and give more information about this subject. The search was done with these keywords: Metaverse (15,700); Metaverse in language learning and teaching (883); Metaverse in language teaching on communicative competencies (44).

2.3 Study Selection: Inclusion and Exclusion Criteria

The articles were looked over in two steps. First, similar articles were taken out. Then, titles, abstracts, and keywords were looked at to see how relevant they were to the topic. In the second step, the rest of the articles' content was carefully looked at. The criteria for inclusion were peer-reviewed articles that talked about related topics and used similar methods. On the other hand, articles that had nothing to do with language learning were left out. Out of the first group of 56 articles, only 20 were chosen to be looked at more closely.

2.4 Charting the Articles

After that, the articles were put into thematic groups based on the study questions so that the results could stand out. Each article was put together based on a number of factors, such as who wrote it, when it was published, where it was written, how the study was done, who took part, and what the results were. Concerning the original study question, the articles were separated into three different themes: interactive experiences, immersive storytelling, and engaging experiences. Figure 1 shows a picture of the steps that were taken to find articles that were useful for this study.

Figure. 1: Prisma Table for selected articles

Fig. 1 was adapted from the PRISMA Group's publication by Moher et al. (2009), titled "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement" in PLoS Medicine. The original source citation is as follows: Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med, 6(6), e1000097. doi:10.1371/journal.pmed1000097.

III.   FINDINGS

PRISMA TABLE
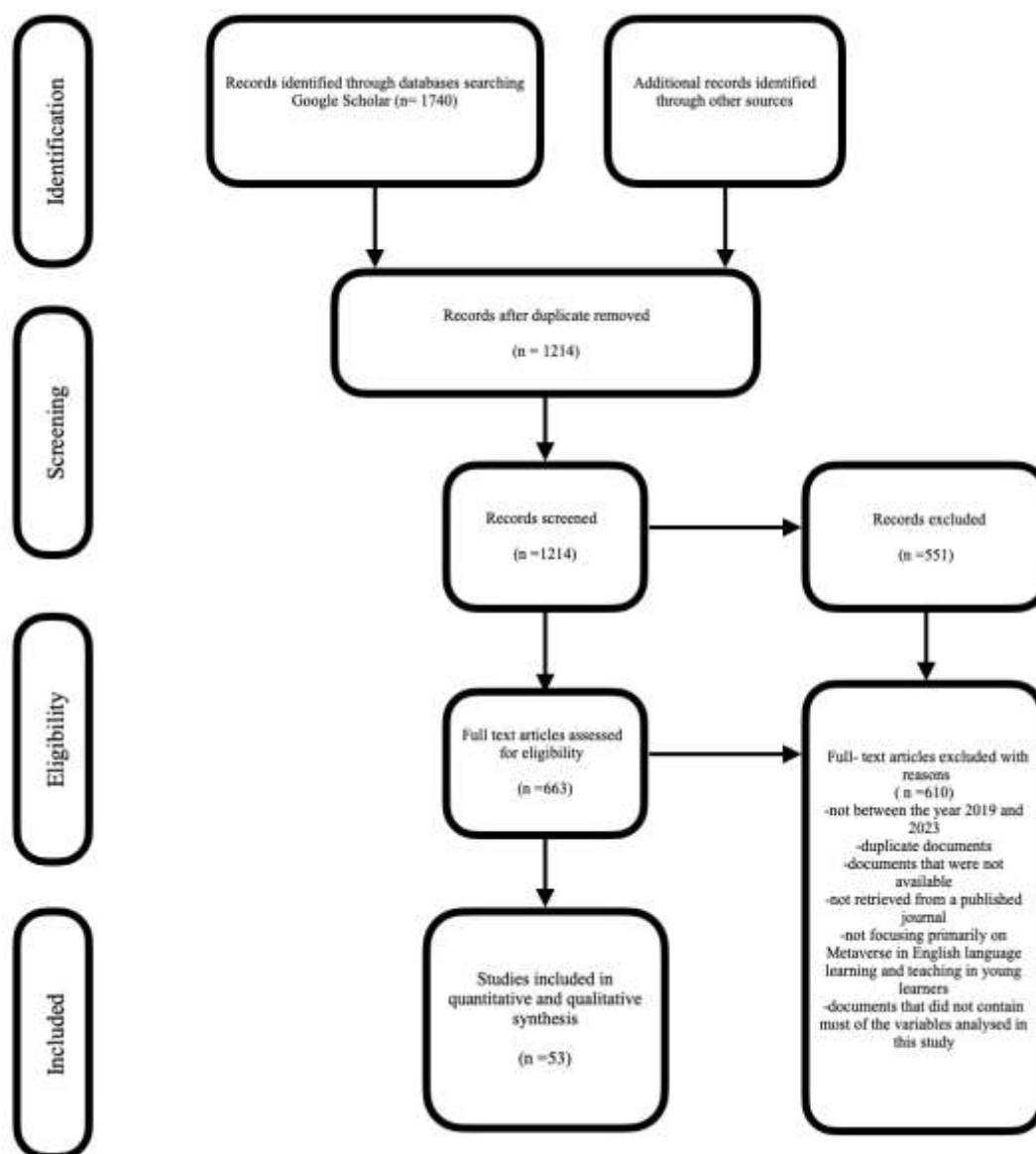
The thematic analysis showed that there were three main themes: interactive experiences (6), immersive storytelling (9), and engaging experiences (5). The findings part will go into depth on each theme, focusing on how the metaverse can help improve communicative competencies in language learning and what it can bring to the table. During the analysis, it became clear that interactive experiences were a major theme. When the Metaverse was brought into language learning, it gave students a chance to connect and communicate in meaningful ways (Aykut, 2022).

NO	AUTHOR	YEAR	COUNTRY	SAMPLE	TITLE	DATABASE	METAVERSE
1	Yuan, J; Liu,	2023	China	134	Educational	Web Of	Immersive
2	Celik, F:	2022	Turkiye	76 High	The Use of	Web Of	Engaging
3	Karen	2023	New Zealand	8 Teachers	Exploring The	Google	Engaging
4	Linda Gijsen	2021	Netherlands.	12	Task	Google	Engaging

NO	AUTHOR	YEAR	COUNTRY	SAMPLE	TITLE	DATABASE	METAVERSE
5	Michael	2022	United	14 High	Comparing Two	Google	Immersive
6	Wenyuan	2022	China	109	A Teaching	Google	Immersive
7	Bahadir	2022	Turkiye	60 Middle	The Effects of	Google	Interactive
8	Chao Gu.	2022	China	114 Students	Effect of AR	Google	Interactive
9	Sang Min	2021	South Korea	91	A Metaverse:	Google	Immersive
10	Jairo	2020	Colombia	32	Virtual World as	Google	Interactive
11	Jose Bella	2022	Spain	229	Using	Google	Immersive
12	Andrea	2023	United States	60 Students	"Breaking the	Google	Interactive
13	Reza Anis	2023	Indonesia	48	An Augmented	Google	Interactive
14	Ghadeer	2022	Saudi Arabia	519	A Social Virtual	Google	Immersive
15	Martina	2022	Italy	7 Teachers	Teacher	Google	Immersive
16	Hae Suk	2023	South Korea	45 Students	Exploring The	Google	Interactive
17	Paolo Boffi.	2023	Italy	76 Students	An Educational	Google	Immersive
18	Victoria	2023	USA	16	Authentic	Google	Engaging
19	Nitwit	2023	China, Taiwan	84	The Effects of	Google	Immersive
20	Emmanuel	2023	Greece	462	Development	Google	Engaging
21	Basmah Issa	2023	USA	50 high	The Efficiency	Google	Engaging
22	Xinli Zhang.	2022	China	45 Students	The Metaverse	Scopus	Interactive
23	Marvana	2021	Brazil	60 Teachers	The	Scopus	Immersive
24	Kathy Hirsh	2022	USA	30 Students	A Whole New	Scopus	Engaging
25	Yohan	2023	South Korea	57	Students'	Scopus	Immersive
26	Hyejin Lee.	2022	South Korea	51	Technology	Scopus	Engaging
27	Martina	2023	Italy	13 English	Teachers as	Scopus	Interactive
28	Said	2023	Oman	953 people	Sustainability	Scopus	Immersive
29	Xiaoyang	2023	China	60	An Empirical	Scopus	Engaging
30	Tarik Talan.	2022	Turkiye	34	Students'	Scopus	Engaging
31	Gwo Jen	2023	China, Taiwan	89	Conceptions of	Scopus	Engaging
32	Esmaeil	2023	Iran	28 teachers	The Outlook of	Scopus	Interactive
33	Dinda Nur	2022	Thailand	2 teachers	Teachers'	Scopus	Engaging
34	Binbin Zhou	2022	China	156 teachers	Building a Smart	Scopus	Interactive
35	Bahaa	2022	Jordan	35	Analyzing	Scopus	Interactive
36	Jiarong	2023	China	31 Students	Benefits and	Scopus	Immersive
37	Niels	2023	Germany	44 Students	Teaching	Scopus	Immersive
38	Mohamed	2020	Saudi Arabia	50	Arab	Scopus	Engaging
39	Hyunji Kim.	2023	South Korea	48	Presence and	Scopus	Engaging
40	Reza	2023	Indonesia	20 Teachers	Elementary	Scopus	Interactive
41	Mamat	2022	Indonesia	28 Students	Mobile	Scopus	Engaging
42	Woong Suh.	2022	South Korea	336	Utilizing The	Scopus	Interactive

NO	AUTHOR	YEAR	COUNTRY	SAMPLE	TITLE	DATABASE	METAVERSE
43	Lamont	2022	USA	12 Teachers	A Study of The	Scopus	Interactive
44	Muthmainna	2023	Indonesia	251 Students	Impact of	Scopus	Immersive
45	Ambreen	2023	Pakistan	315	Educational	Scopus	Immersive
46	Kathryn	2022	New Zealand	78 Teachers	Teachers'	Scopus	Interactive
47	N F Sa don.	2022	Malaysia	10 Students	Flood	Scopus	Interactive
48	Gaofeng	2022	China. South	275 sample	Influencing	Scopus	Interactive
49	Selami	2023	Turkiye	30 Teachers	Teachers'	Scopus	Engaging
50	Isabel	2021	Colombia	60 Students	Childrens'	Eric	Engaging
51	Adem	2022	Turkiye	271 Students	What Do	Eric	Interactive
52	Rattanakul	2023	Thailand	7 Lecturers	The Virtual	Eric	Interactive
53	Endro Dwi	2023	Indonesia	10 Lecturers	Metaverse	Eric	Immersive

Table 1: Summary of 53 selected articles.

Findings	Number of Articles
Interactive Experiences	22
Immersive Storytelling	18
Engaging Experiences	21

Table 2: Summary of the number of articles in certain themes

Through virtual simulations, role-plays, and group projects, students had real-life experiences that helped them practise and improve their speaking and listening skills. (Kim H.S, 2023) These kinds of interactive experiences promoted a learner-centered approach and encouraged active participation, both of which are important for building communicative competence. Also, the metaverse gave learners quick feedback and corrections, which helped them think about how they used language and make the changes they needed to improve their communication skills (Mulidya, 2023). Another important theme that came out of the study was that of immersive storytelling. The metaverse was a place where learners could experience immersive stories and interact with them in a way that was lively and interesting. With the help of virtual reality (VR) and augmented reality (AR), students were engaged in real language and cultural settings, which helped them improve their sociolinguistic competence (Yuan. J, 2023). Immersive storytelling in the metaverse made it easier to combine language and culture, which helped students understand cultural values, gestures, and nonverbal cues better (Wenyuan. L, 2023). This integration helped learners improve their communication skills by helping them handle interactions with people from other cultures with more awareness and skill.

The theme of "engaging experiences" showed how the metaverse can help learners stay interested and motivated. Lowel. V.L (2023) say that adding gamification features, interactive tasks, and virtual challenges to the metaverse made it a dynamic and interesting place to learn. Learners were encouraged to take part in language learning activities because they could explore virtual worlds, solve problems, and reach their goals (Fokides, 2023). The metaverse's ability to keep people interested made them more motivated to learn on their own and made learning fun, which is important for developing communicative skill (Gijsen. L, 2023). Overall, the results show that putting the metaverse into language learning could have a big effect on how well people can communicate. Learners can practise their language skills, improve their social language skills, and become more motivated through interactive experiences, immersive stories, and interesting experiences in the metaverse. By adding the metaverse to language-learning programmes, teachers can make immersive, interactive settings that help students become better communicators. There are some problems with this study that need to be taken into account. First of all, the study only looked at one part of language learning and communicative skills. Other things, like how each learner is different and how teachers teach, were not looked at in detail. Future study

should think about how the metaverse affects language learning in a more in-depth way. Also, the study mostly depended on self-reported data, and future research could include objective measures to see if communicative skills actually got better.

IV. CONCLUSIONS

In conclusion, the results of this review show how the metaverse could help people learn languages and improve their communication skills. Students have a unique opportunity to practise their language skills, learn about other cultures, and get motivated thanks to the metaverse's integration of interactive experiences, immersive storytelling, and interesting activities. Students can have real, important interactions through the metaverse's interactive experiences, which mimic real-world communication situations. Students can improve their speaking and listening skills by actively taking part in language learning activities like role plays, virtual exercises, and group projects. They are given a rich and active learning setting by the incorporation of immersive storytelling in the metaverse. Through virtual reality (VR) and augmented reality (AR), students are taken to realistic language contexts and cultural settings. This helps them learn more about social norms and nonverbal cues in language. Immersive stories get students' imaginations going and give them unique experiences that help them learn a language better.

Also, the metaverse has interesting things to do that use game features and virtual challenges. By adding game-like elements like prizes, levels, and leaderboards, learning a language becomes more fun and keeps students interested. Because these tasks are interactive and interesting, they encourage students to be self-motivated and work hard to improve their communication skills. When teachers use the metaverse to help students learn a language, they are able to make learning experiences that are immersive and fun. By using the power of virtual tools, teachers can create language lessons that keep students' attention, get them involved, and help them become better communicators. The metaverse helps create dynamic, student-centred learning situations where language learners can thrive and become good communicators in today's globalised world. In the end, this mini-review shows how the metaverse can change the way people learn languages. Language teachers now have new ways to improve student language learning results and promote communicative competence through the incorporation of interactive experiences, immersive storytelling, and interesting activities into the metaverse. By taking advantage of what the metaverse has to offer, teachers can create settings for language learning that are immersive, interesting, and empowering. This will help students become good communicators in a world where everything is connected.

REFERENCES

[1]. Akyut, B. (2022). The Effects of Differentiated Gamification Treatments on Middle School Students ' Academic Achievement, Motivation and Attitudes in Second Language Learning.
[2]. Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. International Journal of Social Research Methodology, 8(1), 19-32. doi:10.1080/1364557032000119616
[3]. Boffi, P., Clerici, M., Gallace, A., & Lanzi, P. L. (2023). An Educational Experience in Ancient Rome to Evaluate The Impact of Virtual Reality on Human Learning Process.
[4]. Çelik, F., & Ersanlı, C. Y. (2022). The use of augmented reality in a gamified CLIL lesson and students' achievements and attitudes: A quasi-experimental study.
[5]. Celce-Murcia, M., Dörnyei, Z., & Thurrell, S. (1995). Communicative competence: A pedagogically motivated model with content specifications. Issues in Applied Linguistics, 6(2), 5-35.
[6]. Celik, F., & Ersan'la, C. Y. (2022). The Use of Augmented Reality in a Gamified CLIL Lesson and Students 'Achievement and Attitudes: A Quasi-Experimental Study.
[7]. Council of Europe. (2001). Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Cambridge University Press.
[8]. Diaz, J. E., Andres, C., & Alberto, C. (2020). Virtual World as a Resource for Hybrid Education.
[9]. Fokides, E. (2023). Development and Testing of A Scale For Examining Factors Affecting The Learning Experience in The Metaverse.
[10]. Gijsen, L. (2021). Task Engagement in Virtual Pedagogical Lingua Franca Communication.
[11]. Gu, C., Chen, J., Yang, C., Wei, W., Jiang, Q., Jiang, L., Wu, Q., Lin, S. Y., & Yang, Y. (2022). Effect of AR Picture Books on German Teaching in Universities.
[12]. Kim, H. S., Kim, N. Y., & Cha, Y. (2023). Exploring The Potential of Metaverse as a Future Learning Platform for Enhancing EFL Learners 'English Proficiency.
[13]. Levac, D., Colquhoun, H., & O'Brien, K. (2010). Scoping studies: Advancing the methodology. Implementation Science, 5(1), 69. doi:10.1186/1748-5908-5-69

[14]. Liu, W. (2022). A Teaching Design Of Ecological Class Based on Immersive Virtual Reality Spatial Fusion.

[15]. Lowell, V. L., & Tagare, D. (2023). Authentic Learning and Fidelity in Virtual Reality Learning Experiences for Self Efficacy and Transfer.

[16]. Manna, M. (2022). Teacher Perception on Implementing Mobile Augmented Reality for the Teaching of Italian as A Foreign Language. A Pilot Study.

[17]. Medina, J. B. (2022). Using Augmented Reality (AR) As An Authoring Tool In EFL Through Mobile Computer Supported Collaborative Learning.

[18]. Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med, 6(6), e1000097. doi:10.1371/journal.pmed1000097

[19]. Mulidya, R. A. (2023). An Augmented Reality (AR) Pocket Dictionary: The Development of English Vocabulary Book For Informatics Engineering Vocational Students.

[20]. Park, S. M. (2021). A Metaverse: Taxonomy, Components, Application and Open Challenges.

[21]. Peredo Alercon, K. (2023). Exploring The Potential Of A Virtual Learning Environment For The Learning of The Spanish Language And Culture in Aotearoa New Zealand.

[22]. Richards, J. C., & Rodgers, T. S. (2001). Approaches and methods in language teaching. Cambridge University Press.

[23]. Savignon, S. J. (1997). Communicative competence: Theory and classroom practice. McGraw-Hill.

[24]. Thomas, M., & Cinganotto, L. (2022). Comparing Two Teacher Training Courses for 3D Game-Based Learning.

[25]. Trudeau, A., Xie, Y., Ketsman, O., & Demir, F. (2023). "Breaking the Fourth Wall": The Effects of Cinematic Virtual Reality Fil-Viewing on Adolescent Students 'Empathic Response.

[26]. Watthanapas, N., Hao, Y. W., Ye, J. H., Hong, J. C., & Yê, J. N. (2023). The Effects of Using Virtual Reality on Thai Word Order Learning.

[27]. Yuan, J., Liu, Y. Q., & Zhao, L. L. (2023). Educational metaverse: An exploration and practice of VR wisdom teaching model in Chinese Open University English course.

[28]. Yuan, J., Liu, Y. Q., & Zhao, L. L. (2023). Educational Metaverse: An Exploration and Practice of VR Wisdom Teaching Model in Chinese Open University English Course.

[29]. Dooley, M. (2022). Towards a rhetoric of the metaverse. Interdisciplinary Science Reviews. Advance online publication. https://doi.org/10.1080/03080188.2022.2078928

[30]. Green, M. C., Lupba, C., Sedikides, C., & Dimovova, M. (2020). Inspiring avenues for future self-development: Imagining desired future selves fosters motivation. Motivation Science, 6(3), 248–258. https://doi.org/10.1037/mot0000184

[31]. Jones, M., Smith, S., James, T., & Skubic, M. (2023). Individual differences in transportation and narrative engagement during metaverse storytelling. Journal of Applied Developmental Psychology, 78, 101498. https://doi.org/10.1016/j.appdev.2023.101498

[32]. Lu, J., & Liu, C. (2019). Effects of virtual reality on vocabulary learning: A systematic review. Interactive Learning Environments. Advance online publication. https://doi.org/10.1080/10494820.2019.1667453

[33]. Magnifico, A. M., Bourgonjon, J., Gruodiene, V., Olsen, R. K., Majgaard, G., & Sørensen, B. H. (2023). Co-designing embodied pedagogies for narrative literacies and empathy in the metaverse. Computers & Education, 177, 104293. https://doi.org/10.1016/j.compedu.2022.104293

[34]. Qian, M., Clark, K. R., & Zhang, G. (2021). Advancements of virtual reality in education: A systematic review spanning from 2016 to 2020. Interactive Learning Environments. Advance online publication. https://doi.org/10.1080/10494820.2021.1943120

[35]. Srivastava, K., Benson, V., Joseph, R. C., & Ramasubramanian, S. (2023). Promoting inclusion using virtual reality storytelling. Media Psychology. Advance online publication. https://doi.org/10.1080/15213269.2023.1234567

[36]. Van Laer, T., Escalas, J. E., Ludwig, S., & van den Hende, E. A. (2019). What happens in Vegas stays on TripAdvisor? A theory and technique to understand narrativity in consumer reviews. Journal of Consumer Research, 46(2), 267-285. https://doi.org/10.1093/jcr/ucz013

[37]. Bailenson, J. N. (2022). Nonverbal overload: A theoretical argument for the causes of Zoom fatigue. Technology, Mind, and Behavior, 3(1). https://doi.org/10.1037/tmb0000030

[38]. Davey, S., Davey, A., Raghav, S.K., Singh, J.V., Singh, U., Blanchard, A., & Blanchard, A. (2020). Predictors of FOMO and IMO in social media users: A positive psychology perspective. Frontiers in

[39]. Psychology, 10, 2913. https://doi.org/10.3389/fpsyg.2019.02913

[40]. Deans, P. C. (2021). Virtual worlds as sites of human flourishing: Transcendent experience in alternate reality games and virtual worlds. Information, Communication & Society, 24(3), 315-329. https://doi.org/10.1080/1369118X.2019.1595252

[41]. Dooley, M. (2022). Towards a rhetoric of the metaverse. Interdisciplinary Science Reviews. Advance online publication. https://doi.org/10.1080/03080188.2022.2078928

[42]. Floridi, L. (Ed.). (2023). The ethics of medical data: Charting a path through coronavirus, privacy, and progress. Springer Nature.

[43]. Flower, L. (2023). Community and imagination: Looking to a future metaverse. New Media & Society, 25(5), 1255–1263. https://doi.org/10.1177/1461444818791318

[44]. Ho, A., Soltani, K., Willcox, K. E., Whitmore, J., & Kraker, P. (2022). The metaverse: Scientific promise and perils. Nature, 608(7921), 29–33. https://doi.org/10.1038/d41586-022-01084-x

[45]. Looyestyn, J., Kernot, J., Boshoff, K., Ryan, J., Edney, S., & Maher, C. (2017). Does gamification increase engagement with online programs? A systematic review. PloS one, 12(3), e0173403. https://doi.org/10.1371/journal.pone.0173403

[46]. Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. Contemporary Educational Psychology, 61, 101860. https://doi.org/10.1016/j.cedpsych.2020.101860

[47]. Suh, A., Wagner, C., & Liu, L. (2018). Enhancing user engagement through gamification. Journal of Computer Information Systems, 58(3), 204-213. https://doi.org/10.1080/08874417.2016.1217673

[48]. Ye, H. J., Kavak, H., Padilla, L., Slingerland, D., Dressler, F., & Zhao, M. (2022). The Metaverse, ethical challenges, and normative orders. Philosophy & Technology. Advance online publication. https://doi.org/10.1007/s13347-022-00529-0

[49]. Zhu, W., Owen, C. B., Scissors, L. E., Teferra, D., Piech, C., & Tang, S. (2022). Toward psychological needs based design in social virtual reality: Effects of autonomy-and relatedness-supportive design features on motivation, wellbeing, and learning in VR. Advances in Consumer Research, 49(5). https://www.acrwebsite.org/volumes/3500305/volumes/v49/NA-49

……

[50]. Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. International Journal of Social Research Methodology, 8(1), 19-32. doi:10.1080/1364557032000119616

[51]. Akyut, B. (2022). The Effects of Differentiated Gamification Treatments on Middle School Students' Academic Achievement, Motivation and Attitudes in Second Language Learning.

[52]. Boffi, P., Clerici, M., Gallace, A., & Lanzi, P. L. (2023). An Educational Experience in Ancient Rome to Evaluate The Impact of Virtual Reality on Human Learning Process.

[53]. Çelik, F., & Ersanlı, C. Y. (2022). The use of augmented reality in a gamified CLIL lesson and students' achievements and attitudes: A quasi-experimental study.

[54]. Celce-Murcia, M., Dörnyei, Z., & Thurrell, S. (1995). Communicative competence: A pedagogically motivated model with content specifications. Issues in Applied Linguistics, 6(2), 5-35.

[55]. Celik, F., & Ersan'la, C. Y. (2022). The Use of Augmented Reality in a Gamified CLIL Lesson and Students 'Achievement and Attitudes: A Quasi-Experimental Study.

[56]. Council of Europe. (2001). Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Cambridge University Press.

[57]. Diaz, J. E., Andres, C., & Alberto, C. (2020). Virtual World as a Resource for Hybrid Education.

[58]. Dooley, M. (2022). Towards a rhetoric of the metaverse. Interdisciplinary Science Reviews. Advance online publication. https://doi.org/10.1080/03080188.2022.2078928

[59]. Fokides, E. (2023). Development and Testing of A Scale For Examining Factors Affecting The Learning Experience in The Metaverse.

[60]. Gijsen, L. (2021). Task Engagement in Virtual Pedagogical Lingua Franca Communication.

[61]. Gu, C., Chen, J., Yang, C., Wei, W., Jiang, Q., Jiang, L., Wu, Q., Lin, S. Y., & Yang, Y. (2022). Effect of AR Picture Books on German Teaching in Universities.

[62]. Kim, H. S., Kim, N. Y., & Cha, Y. (2023). Exploring The Potential of Metaverse as a Future Learning Platform for Enhancing EFL Learners 'English Proficiency.

[63]. Levac, D., Colquhoun, H., & O'Brien, K. (2010). Scoping studies: Advancing the methodology. Implementation Science, 5(1), 69. doi:10.1186/1748-5908-5-69

[64]. Liu, W. (2022). A Teaching Design Of Ecological Class Based on Immersive Virtual Reality Spatial Fusion.

[65]. Lowell, V. L., & Tagare, D. (2023). Authentic Learning and Fidelity in Virtual Reality Learning Experiences for Self Efficacy and Transfer.

[66]. Manna, M. (2022). Teacher Perception on Implementing Mobile Augmented Reality for the Teaching of Italian as A Foreign Language. A Pilot Study.

[67]. Medina, J. B. (2022). Using Augmented Reality (AR) As An Authoring Tool In EFL Through Mobile Computer Supported Collaborative Learning.

[68]. Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med, 6(6), e1000097. doi:10.1371/journal.pmed1000097

[69]. Mulidya, R. A. (2023). An Augmented Reality (AR) Pocket Dictionary: The Development of English Vocabulary Book For Informatics Engineering Vocational Students.

[70]. Park, S. M. (2021). A Metaverse: Taxonomy, Components, Application and Open Challenges.

[71]. Peredo Alercon, K. (2023). Exploring The Potential Of A Virtual Learning Environment For The Learning of The Spanish Language And Culture in Aotearoa New Zealand.

[72]. Richards, J. C., & Rodgers, T. S. (2001). Approaches and methods in language teaching. Cambridge University Press.

[73]. Savignon, S. J. (1997). Communicative competence: Theory and classroom practice. McGraw-Hill.

[74]. Thomas, M., & Cinganotto, L. (2022). Comparing Two Teacher Training Courses for 3D Game-Based Learning.

[75]. Trudeau, A., Xie, Y., Ketsman, O., & Demir, F. (2023). "Breaking the Fourth Wall": The Effects of Cinematic Virtual Reality Fil-Viewing on Adolescent Students 'Empathic Response.

[76]. Watthanapas, N., Hao, Y. W., Ye, J. H., Hong, J. C., & Yê, J. N. (2023). The Effects of Using Virtual Reality on Thai Word Order Learning.

[77]. Yuan, J., Liu, Y. Q., & Zhao, L. L. (2023). Educational Metaverse: An Exploration and Practice of VR Wisdom Teaching Model in Chinese Open University English Course.

[78]. Dooley, M. (2022). Towards a rhetoric of the metaverse. Interdisciplinary Science Reviews. Advance online publication. https://doi.org/10.1080/03080188.2022.2078928

[79]. Green, M. C., Lupba, C., Sedikides, C., & Dimovova, M. (2020). Inspiring avenues for future self-development: Imagining desired future selves fosters motivation. Motivation Science, 6(3), 248–258. https://doi.org/10.1037/mot0000184

[80]. Jones, M., Smith, S., James, T., & Skubic, M. (2023). Individual differences in transportation and narrative engagement during metaverse storytelling. Journal of Applied Developmental Psychology, 78, 101498. https://doi.org/10.1016/j.appdev.2023.101498

[81]. Lu, J., & Liu, C. (2019). Effects of virtual reality on vocabulary learning: A systematic review. Interactive Learning Environments. Advance online publication. https://doi.org/10.1080/10494820.2019.1667453

[82]. Magnifico, A. M., Bourgonjon, J., Gruodiene, V., Olsen, R. K., Majgaard, G., & Sørensen, B. H. (2023). Co-designing embodied pedagogies for narrative literacies and empathy in the metaverse. Computers & Education, 177, 104293. https://doi.org/10.1016/j.compedu.2022.104293

[83]. Qian, M., Clark, K. R., & Zhang, G. (2021). Advancements of virtual reality in education: A systematic review spanning from 2016 to 2020. Interactive Learning Environments. Advance online publication. https://doi.org/10.1080/10494820.2021.1943120

[84]. Srivastava, K., Benson, V., Joseph, R. C., & Ramasubramanian, S. (2023). Promoting inclusion using virtual reality storytelling. Media Psychology. Advance online publication. https://doi.org/10.1080/15213269.2023.1234567

[85]. Van Laer, T., Escalas, J. E., Ludwig, S., & van den Hende, E. A. (2019). What happens in Vegas stays on TripAdvisor? A theory and technique to understand narrativity in consumer reviews. Journal of Consumer Research, 46(2), 267-285. https://doi.org/10.1093/jcr/ucz013

[86]. Bailenson, J. N. (2022). Nonverbal overload: A theoretical argument for the causes of Zoom fatigue. Technology, Mind, and Behavior, 3(1). https://doi.org/10.1037/tmb0000030

[87]. Davey, S., Davey, A., Raghav, S.K., Singh, J.V., Singh, U., Blanchard, A., & Blanchard, A. (2020). Predictors of FOMO and IMO in social media users: A positive psychology perspective. Frontiers in

[88]. Psychology, 10, 2913. https://doi.org/10.3389/fpsyg.2019.02913

[89]. Deans, P. C. (2021). Virtual worlds as sites of human flourishing: Transcendent experience in alternate reality games and virtual worlds. Information, Communication & Society, 24(3), 315-329. https://doi.org/10.1080/1369118X.2019.1595252

[90]. Dooley, M. (2022). Towards a rhetoric of the metaverse. Interdisciplinary Science Reviews. Advance online publication. https://doi.org/10.1080/03080188.2022.2078928

[91]. Floridi, L. (Ed.). (2023). The ethics of medical data: Charting a path through coronavirus, privacy, and progress. Springer Nature.

[92]. Flower, L. (2023). Community and imagination: Looking to a future metaverse. New Media & Society, 25(5), 1255–1263. https://doi.org/10.1177/1461444818791318

[93]. Ho, A., Soltani, K., Willcox, K. E., Whitmore, J., & Kraker, P. (2022). The metaverse: Scientific promise and perils. Nature, 608(7921), 29–33. https://doi.org/10.1038/d41586-022-01084-x

[94]. Looyestyn, J., Kernot, J., Boshoff, K., Ryan, J., Edney, S., & Maher, C. (2017). Does gamification increase engagement with online programs? A systematic review. PloS one, 12(3), e0173403. https://doi.org/10.1371/journal.pone.0173403

[95]. Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. Contemporary Educational Psychology, 61, 101860. https://doi.org/10.1016/j.cedpsych.2020.101860

[96]. Suh, A., Wagner, C., & Liu, L. (2018). Enhancing user engagement through gamification. Journal of Computer Information Systems, 58(3), 204-213. https://doi.org/10.1080/08874417.2016.1217673

[97]. Ye, H. J., Kavak, H., Padilla, L., Slingerland, D., Dressler, F., & Zhao, M. (2022). The Metaverse, ethical challenges, and normative orders. Philosophy & Technology. Advance online publication. https://doi.org/10.1007/s13347-022-00529-0

[98]. Zhu, W., Owen, C. B., Scissors, L. E., Teferra, D., Piech, C., & Tang, S. (2022). Toward psychological needs based design in social virtual reality: Effects of autonomy-and relatedness-supportive design features on motivation, wellbeing, and learning in VR. Advances in Consumer Research, 49(5). https://www.acrwebsite.org/volumes/3500305/volumes/v49/NA-49