Agora World: A Glimpse into the Future of Technology in Language Teaching and Learning

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Immersive language learning environments allow students to engage themselves in real-life situations, experiencing language learning in a more interactive and engaging way. Using Agora World as an example, this material review explores the applications of virtual reality and multimedia technologies for language education. The review will contextualize the historical origins of virtual worlds, metaverses, avatars and language acquisition. Pedagogical applications will focus on use cases for language for specific purposes, where language is used in specific contexts or subsets of tasks and skills. In addition, skill-based assessments for language learners in immersive spaces will be discussed. The materials review will conclude by looking forward, hypothesizing on the future of digital language education transformation, and exploring possible macro trends in the future of language learning.

Key words: Agora World, metaverses, virtual reality, multimedia technologies, language for specific purposes, communicative language teaching, advanced learning technologies

The term metaverse was coined by Neal Stephenson in his 1992 sci-fi novel Snow Crash to describe a vision of the physical universe merged with a Virtual Reality (VR). VR uses computer-generated environments to create a simulated experience that can be explored through a headset or other devices. Stephenson's portrayal of VR in *Snow Crash* was influential in shaping popular imagination of the concept of VR. The novel also popularized the term "avatar," referring to a user's digital representation in a virtual world. Today's VR is defined as "a technical system through which a [single] user or multiple users can experience a simulated environment" (Girvan, 2018, p. 1098).

The 2020s have seen a significant shift towards personalized and individualized processes of instruction using multimedia technologies, artificial intelligence (AI), avatars, and simulations in metaverses or other 3D environments. The shift has been driven by the increasing recognition of the limitations of traditional, one-size-fits-all approaches to education, and the need for more adaptive, flexible, and engaging multimedia learning experiences that cater to the unique needs, interests, and preferences of learners. Ellis (1999) highlights that the negotiation of meaning plays a crucial role in achieving successful second language (L2) acquisition. This meaning negation process aids in better comprehension, recognition, and production of new words compared to relying solely on

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modified input. The use of multimedia technologies in language education was foreshadowed in 1979, when Johnnie Johnson Hafernik and Harold Surguine explored the pedagogical rationale for using radio commercials to teach listening comprehension to ESL students in *TESOL Quarterly.* Nearly 40 years later, a *NYSTESOL Journal* contribution by Min Wang and Yvonne Pratt-Johnson (2017) predicted that digital explorations would one day "replace the frustrating task of memorizing inscrutable phrases with collaborative, digital explorations of history, culture, and meaning" (p.88). Helm (2015) stated, "Telecollaboration can be seen as an opportunity for learners to engage in a social, interactive, and collaborative learning environment that can foster the development of language and intercultural communicative competence" (p.188).

Comprehensible Input and Contextualized Learning

Stephen Krashen, the originator of the concept of comprehensible input, wrote extensively about its importance in language acquisition. Establishing sufficient comprehensible input is a key component of language education. In addition, Wong and VanPatten (2003) stated that "learners' internal mechanisms work on the data contained in *input*" (p.408). As language learning depends on extra-linguistic cues, using VR can enhance students' language learning through authentic and immersive experiences. Dalgarno and Lee (2010) identified five main benefits of VR: (1) it can expand students' spatial knowledge of visual stimuli, (2) it allows learners to experience tasks that would not be possible in the real world, (3) it enhances motivation and engagement, (4) it provides opportunities for contextualized learning, and (5) it can make collaborative learning easier.

Since VR is particularly useful in language education, providing valuable contexts for configuring and contextualizing student experiences, in "A Systematic Review of AR and VR Enhanced Language Learning," Huang et al. (2021) found that immersive, realistic situations, including opportunities for live conversations with others, are effective for learners in building fluency and language communication skills. In a metaverse, this means learners can practice their language skills in a virtual street market or a café, helping them to feel more confident when communicating in similar real-world situations.

Using Agora World (2022) as an example, this technology review will focus on the use cases metaverses offer and suggest ways language educators can harness technology for the benefit of language teaching and acquisition. Agora World is a no-code metaverse featuring intuitive builder tools, making it straightforward for language teachers and students to create their own immersive, educational experiences. Metaverses offer unique and engaging ways to practice and improve language skills.

Agora World

'Agora' is a word for the ancient Greek city-centers which doubled as a marketplace and a central place of assembly for citizens. Democracy was established at the Agora, which also served as a venue for academic discussions and a gathering place for the public to learn, exchange ideas, and mingle.

Agora World holds the promise of content-based, project-based, or task-based language learning, making it possible for language teachers to construct original virtual worlds, gallery walks, and learning pathways for L2 learners to master language production. Figure 1 shows a screenshot of an Agora World template simulating a real-world environment as a place for language learning. Agora World templates lend themselves to support spatial orientation abilities and foster both knowledge and application of language for specific purposes (LSP) such as vocabulary related to asking for and giving personal information, talking about places, buildings in cities, and asking for and giving directions.

Figure 1

An Agora World screenshot by the author
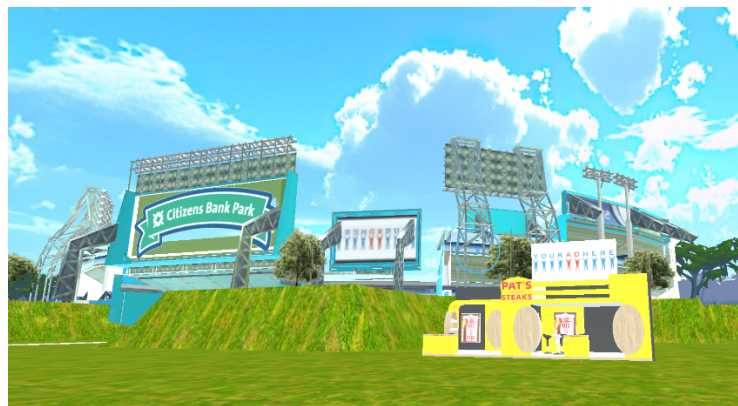
One method of language learning is by first-person experiences that support the development of observational skills in real-world settings and facilitate the four foundational skills of language learning through social and academic interactions. Agora World lends itself to communicative language teaching where language learners acquire vocabularies, grammar and pragmatic features through contextual immersion. John Swales, a pioneer of language for LSP research, introduced the concept of "discourse community" as a means of studying the language used in specific academic and professional contexts (Swales, 1986, p. 4). The main goal of LSP is to provide learners with the linguistic and communicative skills necessary to effectively use language in a particular field of expertise. In *Developments in English for Specific Purposes,* Dudley-Evans and St John state, "ESP is not a monolithic entity but a set of practices that varies not only according to discipline but also according to individual context and learner needs" (Dudley-Evans & St John, 1998, p. 4). LSP is based on the concept of registers, which are varieties of language that are used in specific social contexts or situations. A register is characterized by a particular set of vocabulary, grammar, discourse patterns, and conventions that are appropriate for the communicative goals and expectations of the context in which it is used. Registers can vary according to factors such as audience, purpose, topic, and medium of communication. The LSP approach recognizes the importance of developing learners' pragmatic competence, which refers to their ability to use language appropriately in different social and professional contexts. This includes teaching learners how to interpret and produce a range of communicative functions, such as making requests, giving instructions, negotiating, and persuading, among

others, and how to use appropriate discourse markers and conventions in different communicative situations. Overall, LSP emphasizes the importance of teaching language in a way that is relevant and useful to learners in specific professional contexts.

Development of curriculum and syllabi for in-world teaching should be based on (a) needs analysis; (b) measurable learning outcomes or objectives; (c) assessment; (d) materials selection and development suitable for immersive environments; (e) teaching approaches and instructional tasks tailored to immersive environments. Supporting language learners' oral language development in immersive environments such as Agora World require targeted teaching strategies such as encouraging conversations, modeling syntactic structure, demonstrating and teaching concept words, and according to Norris and Ortega providing ample meaningful opportunities for use of newly-taught language features with high accountability for application.

Below are some Agora World use cases suitable for LSP lessons:

1. Gallery Walks allow students to practice purposeful conversations and make interconnections between language concepts, grammar, idioms and dynamic multimodal understanding of vocabulary.
2. Quests can have themes drawn from genres of fiction, literary devices, topics, or real-world scenarios. Figure 2 shows the author's avatar on a quest in the Philadelphia Agora World template. Quests give students the chance to carry out a task or solve a problem together, experiment with new vocabulary and structures, and base their choices and decisions on their own experience, while permitting teachers to monitor their progress and participation unobtrusively. (Kohnke, 2019)
3. Student-built worlds through Agora template enable learners to build their own exhibits, enhancing them with 3D objects. They can also create stories and media boards to demonstrate the language concepts learned, showcasing learning for portfolios and assessment.

Figure 2

On a quest in the Philadelphia Agora World template

Immersive environments enable educators to access a variety of effective resources to use as part of their curriculum design process to improve L2 instruction delivery methods while also engaging students in personalized learning environments and assessment of their language application.

Additional use cases for educators using VR such as Agora World are assessments for language learners such as:

- Vocabulary and Grammar Assessment: VR can create a language learning environment where the learner is required to interact with objects and perform tasks in the target language. This can be used to assess the learner's vocabulary and grammar skills for LSP lessons. For example, a virtual reality environment could simulate a restaurant scenario where the learner must use specific vocabulary and sentence structures to order food or interact with service staff, for example. Language learners can complete language exercises in groups. This negotiation of meaning is an important factor for successful L2 acquisition (Ellis, 1999).
- Listening Comprehension Assessment: VR can also be used to create listening comprehension assessments where the learner is required to listen to conversations or audio recordings in the target language and answer questions based on what they hear. Unlike mechanical drills the "development of skill is concerned with such issues as accuracy and fluency during communicative interchanges" (Wong, 2003, p. 404).

Agora World: Infrastructure, Assets, and Environments

Agora World provides two free worlds without requiring a paid subscription, offering an assortment of preconstructed templates. As shown in Figure 3, Agora World templates include a Research Expo, an INTURN learning Center, an art gallery, or a blank template offering more advanced users the ability to create 3D objects or upload 3D scans.

Figure 3

Agora World templates screenshot by the author
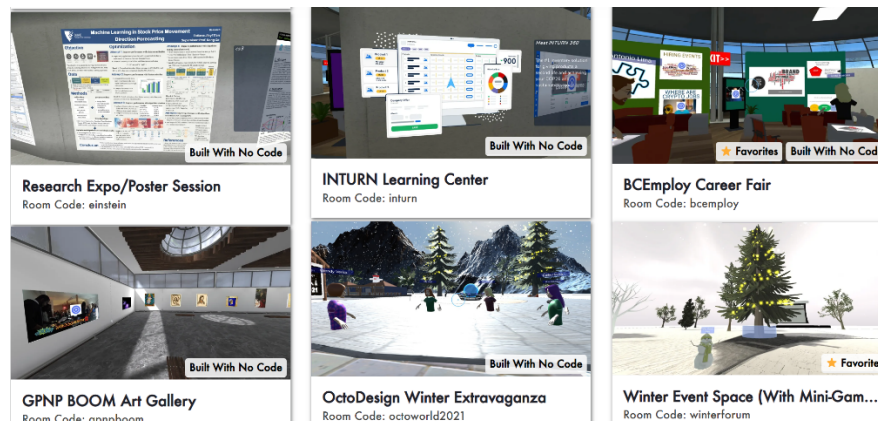
Since each world is unique to its creator, Agora World can be a safe space, requiring a login code for participants to join. The experience is hosted in a private room, not an open or shared space with uninvited participants. Learners must download and install the software before being able to join events. Avatars offer basic customizations for general audiences such as moving, interacting. Avatar customization is simple as depicted in Figure 4.

Figure 4
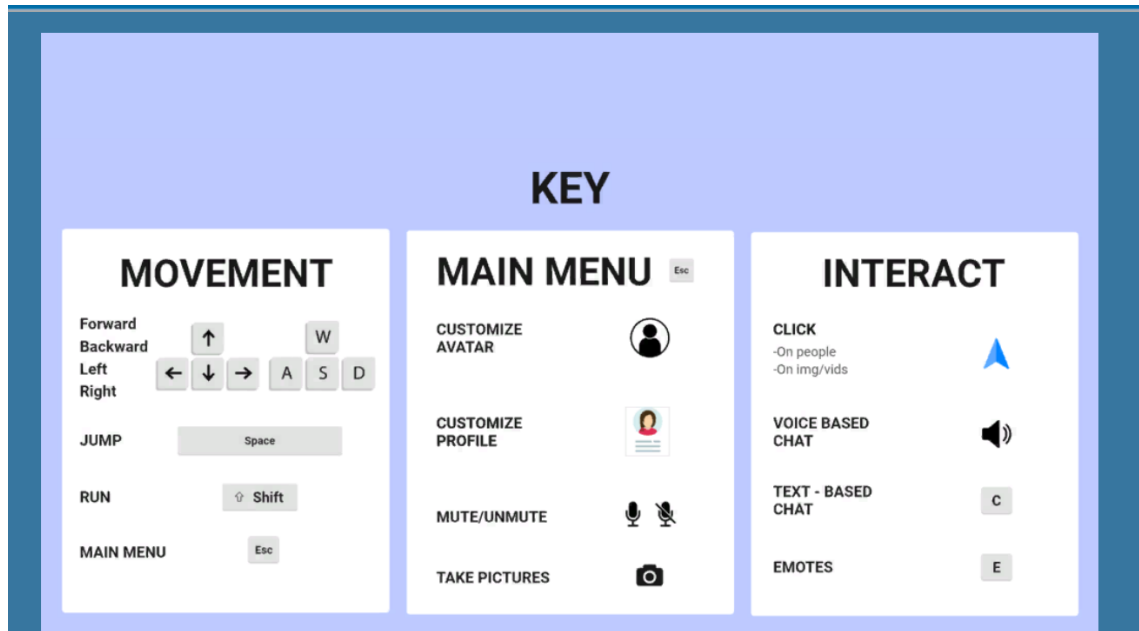
Agora World's interaction and movement

Figure 5 shows a variety of features which are available including user profiles for authentication, event creation layers for customizing activities, chat function, etc. Emotes enable users to express emotion without using words, voice chat capabilities allow conversations between multiple people at once while providing acoustic echo cancellation to ensure clear, and customizable settings such as mic adjustment and network quality optimization to ensure that everyone has an optimal experience regardless of their type of device or connection speed.
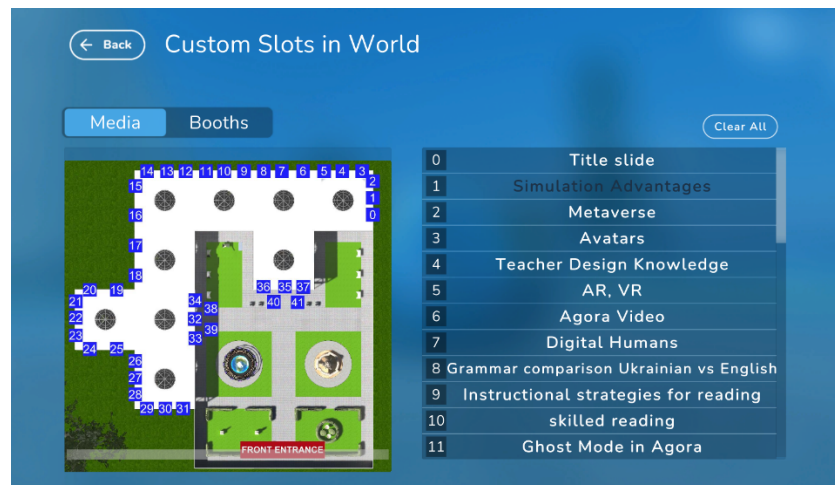
Figure 5

Agora Menu screenshot by the author

Agora World templates feature maps with custom slots as shown in Figure 6, where creators can populate a personalized world with content ranging from images, video links to URLs by uploading content uploaded into slots.

Figure 6

Populating a personalized world screenshot by the author

Combined, these features create a strong toolkit that allows educators without coding experience to develop and deliver meaningful, communicative lessons while fostering social and academic student engagement.

Looking Forward

It is possible that Advanced Learning Technologies (ALTs), such as Agora World, will enable, support, or enhance language teaching and language learning. Macro trends in language education include the widespread acceptance of English as a de facto global Lingua Franca for global communication, a surge in digitized content and online learning, and a growing focus on personalized, self-paced, and self-directed learning methods which are going to shape the future are remote learning environments. With the rise of online and distance learning, ALTs can provide learners with immersive and engaging learning experiences that are not limited by geographical constraints. In addition, language lessons based on Natural Language Processing (NLP) and natural language understanding (NLU) have the potential to revolutionize language learning by providing personalized and adaptive learning experiences for language learners. With the help of NLP, language learners can interact with machines using natural language and receive feedback and support asynchronously, 24/7 and in real-time. Eventually, NLP will be refined for language learning, including Chatbots and virtual tutors. NLP-powered chatbots mimicking a conversation might provide learners with conversational practice in a foreign language within an immersive metaverse such as Agora World. Virtual agents using artificial intelligence to recognize human speech might one day offer immediate feedback on grammar and vocabulary mistakes, providing language learners with explanations and examples through NLU. This means AI-powered virtual agents could use NLU to provide real-time corrections and guidance to language learners, helping them improve their grammar and vocabulary skills. Virtual tutors, powered by NLP and NLU, might provide learners with personalized learning experiences that adapt to their level, pace, and learning goals.

In conclusion, while the future of VR and immersive technologies in language education is promising, teachers and students will be asked to become content creators. While VR provides a range of educational benefits, it is important to realize that educators will hold a crucial role in the learning processes of language learners. One day, teachers will need to curate and create immersive content, design educational scenarios, and facilitate meaningful interactions within VR platforms. Both educators and learners will need to embrace and master new kinds of literacies to harness ALTs and adaptive learning technologies.

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