

The Dissonance between Disengagement and Emergence: The Case of Using VR for Learning English in Higher Education

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Abstract

This paper examines how an immersive virtual reality (VR) environment, built and experienced through a no-code platform, can transform students' relationship with English as a foreign language in higher education. In a series of VR-based learning activities, students designed and enacted interactive VR scenarios in English. The project revealed a striking dissonance in which students who reported longstanding disengagement, anxiety, or lack of confidence in traditional English classes described themselves as playful, expressive, and increasingly agentive within VR. We conceptualize this shift as a move from disengagement to emergent language use, enabled by the altered social presence and perceived distance from the real-world classroom. Students reported high enjoyment, a sense of freedom from external judgment, reduced focus on linguistic correctness, and increased willingness to take risks in English. The paper describes the pedagogical design, analyses student experiences, and discusses implications for technology-enhanced language learning and the design of VR-mediated higher-education courses.

Keywords

Virtual Reality (VR), Language Learning Anxiety, Student Agency and Authorship

1. Introduction

Many higher education students experience English as a space of constraint, marked by anxiety, self-consciousness, and fear of negative evaluation in academic settings where oral participation is central (Lou, 2025; Xie et al., 2022). VR

disrupts these traditional ‘English as a Foreign Language’ (EFL) anxiety patterns by creating safe, immersive spaces for practice, as evidenced by studies showing reduced anxiety, higher motivation, and improved speaking proficiency among middle schoolers in VR compared to classroom activities (Tariq & Ahmad, 2025). VR’s immersive and interactive properties also support deeper encoding and long-term retention, particularly for vocabulary and oral skills (Hsu, 2024).

In this paper, we contend that the combination of immersive presence, mediated disconnection, and student-driven design fosters a new affective-pedagogical space in which disengaged learners can become emergent participants. The anxiety in academic English stems from a mismatch between communicative demands and perceived safety; VR addresses this by providing realistic, task relevant contexts that promote situated learning without real-world social risks. This contextual authenticity simulates university like social interactions, enhancing immersion and learner engagement (Dooly et al., 2023). Beyond anxiety reduction, VR boosts motivation, cognitive elaboration, and language skills across listening, speaking, reading, and writing, with positive effects on exam performance (Raman et al., 2022).

This study situates itself within that landscape through a case study of student-created VR scenarios. This student-centred approach positions learners as co-creators of VR environments, fostering agency, metacognitive awareness, and deeper linguistic investment (Huda et al., 2024). Immersive VR can also induce a compelling sense of ‘being there’ in a fictitious environment, where users think, feel, and behave as if virtual events were real, highlighting the central role of presence in shaping experience (Sanchez-Vives & Slater, 2005). Design features like narrative scenarios enhance performance in content and word choice, while comprehension gains scaffold speaking development (Alfadil, 2020). At the same time, VR’s social affordances enable experimentation, improvisation, and collaboration, improving critical thinking and language skills via problem solving in immersive worlds (Lou, 2025; Xie et al., 2022; Raman et al., 2022), assuming alternate identities in VR fosters engaging and meaningful communication (Dooly et al., 2023; Raman et al., 2022).

Our research questions address several gaps: 1) How does VR participation affect students’ affective experience of English (anxiety, confidence, perceived judgment)? Studies confirm VR’s benefits for motivation and user experience, but the mechanisms of immersion and their persistence require further exploration. 2) How does designing VR scenes with no-code tools influence agency and ownership in English learning, given that existing work highlights VR environments but often overlooks student authorship’s role in affective investment? 3) How can findings inform pedagogical and design principles for VR in higher education, where challenges such as hardware limits, teacher training, and implementation mean that effectiveness depends on tailored design? This case study examines no-code platforms, scaffolding, and authorship, and can illuminate how no-code design platforms, collaborative scaffolding, and student authorship address these

optimization questions in ways existing research has not yet systematized.

2. Theoretical Background

2.1. Language Learning, Anxiety, and Classroom Presence

Foreign language learning, especially oral communication, is strongly associated with anxiety, fear of negative evaluation, and a perceived loss of competence. For many students, the physical classroom becomes a high-stakes arena where mistakes are visible and identity is on the line, which often leads to disengagement characterized by minimal participation, avoidance of speaking, and reliance on safe, scripted responses. Concepts such as language anxiety, willingness to communicate, and perceived competence underscore the interplay between cognition, emotion, and social context in language learning, and when the social context changes, learners' willingness to experiment and their tolerance for ambiguity may also shift. Anxiety hampers oral EFL performance, but VR can foster willingness to communicate through low-stakes immersion: Özgun and Sadık, for example, analyzed 32 studies and reported benefits for speaking despite various implementation challenges (Özgun & Sadık, 2023).

VR further counters EFL anxiety via safe simulations, as Lee et al. show that personalization in VR tools reduces self-consciousness among English learners, while no-code authoring builds a sense of ownership (Huang & Liu, 2025), aligning with Albayrak's design-based EFL game framework (Albayrak et al., 2023). Taken together, these findings resonate with our research questions: VR helps narrow anxiety-confidence gaps, design tools enhance agency, and broader design principles (Huang et al., 2021).

2.2. VR as an Affective and Social Space

Immersive VR offers more than a new interface; it reconfigures presence, co-presence, and how learners perceive "being seen". Avatars, virtual spaces, and spatialized audio produce a sense of social presence, yet at the same time introduce a layer of mediation between the learner's physical body and their virtual embodiment (Ratcliffe & Tokarchuk, 2020). This duality can create a paradoxical experience: learners feel sufficiently "there" to interact meaningfully, yet also sufficiently "protected" to take risks. Indeed, the concept of "mediated disconnection" is powerfully supported by a body of research on the paradoxical state created by high-immersion Virtual Reality (Price et al., 2021).

This state is characterized by a dual consciousness: a strong sense of presence (feeling "I am here" in the virtual environment) co-occurring with a protective psychological distance (knowing "I am not really here") (Derda et al., 2025). We claim that this paradox is not a flaw rather, it is the core mechanism for enabling risk-taking in language acquisition. The notion of disconnection—or more precisely, partial decoupling—from the immediate physical classroom suggests a potential mechanism for reducing perceived judgment. Within VR, learners may feel that "it's not really me" who is speaking or performing, but rather their avatar or

role (Reddington, 2021). This can lower the affective barrier and encourage experimentation with new forms of linguistic identity, risk taking, or pragmatic experimentation.

The research supports our theory that the Avatar acts as a psychological shield: “Avatars create a protective layer that reduces anxiety by distancing learners from direct social exposure. The avatar creates a kind of ‘shield’ that students can hide behind, providing a safe environment to communicate in without being physically on view”, leading to learners feeling “less worried and more willing to take risks since they are not worried about ‘losing face’” (Löllgen et al, 2022; Thrasher, 2022; Kaplan-Rakowski & Gruber, 2021). This detachment enables greater self-confidence, a sense of achievement, and autonomous learning through successful avatar interactions.

Anonymity and reduced social threat are central to how VR reshapes learners’ affective experience. In computer-generated VR, users interact with avatars rather than showing their real faces, which lowers perceived social threat compared to face-to-face or even video settings and offers language learners an environment in which they can make mistakes without feeling embarrassed because they are represented by an avatar and do not show their face, making them more willing to speak (Rus-Calafell et al., 2025). Cartoonlike avatars, in particular, help minimize anxiety by balancing expressiveness with a low-threat appearance, in contrast to hyper-realistic representations that can feel more exposing. Encouragement of experimentation is a key affordance of VR in language learning. The perceived safety of avatar-mediated, low-stakes environments fosters experimentation with new linguistic behaviors, and studies show that VR users significantly outperform traditional classroom learners in vocabulary, grammar accuracy, and comprehension because lowered anxiety enables greater risk-taking and richer peer interaction (Niu, 2025).

Sense of presence refers to the subjective feeling of “being there” in the virtual environment. It is facilitated by immersive sensory cues (visual, auditory, sometimes haptic) and by embodiment via an avatar, with high presence leading to more authentic, spontaneous reactions and deeper engagement with the virtual world. VR’s social presence paradox—simultaneously immersive yet psychologically protective—is also evidenced by Hua et al.’s review, where VR reconfigures embodiment and reduces judgment in language tasks (Hua & Wang, 2023), and is further confirmed by these effects in EFL simulations with enhanced learner satisfaction (Valijärvi et al., 2024). VR reconfigures social presence through avatars and spatial audio, enabling “protected” risk taking: a review of 38 studies found VR boosts engagement, autonomy, and skills like speaking while reducing anxiety via simulated real-life scenarios inaccessible in classrooms (Žnideršič et al., 2025). EFL pilots confirm this duality—immersive yet mediated—leading to “moments of higher than expected” B1-level comprehension and mediation among young learners (Baidya et al., 2024).

Psychological distance refers to the learner’s cognitive awareness of their actual

safety and separation from the virtual scenario. The physical headset, the knowledge of one's real surroundings, and the mediation of the avatar together create a buffer that transforms the virtual space into a psychological safety zone or "protected bubble" (Sanchez-Vives & Slater, 2005). The use of avatars as "psychological shields" is supported by neuroscientific and phenomenological studies on embodiment in VR: when users embody an avatar, they experience a body-ownership illusion (the "Proteus Effect"), in which they unconsciously adopt behaviors congruent with their avatar's identity (Kilteni et al., 2012; Yee & Bailenson, 2007). Crucially, this occurs alongside a persistent, background awareness of their physical self, producing a dual consciousness—"I am acting as my avatar in this world, yet my real self is safe"—that drives mediated disconnection and allows learners to attribute potential social faux pas or linguistic errors to the avatar rather than to their core self, thereby shielding their ego (Maselli & Slater, 2013).

The synthesis of these two states—high presence within a psychologically distant frame—creates an optimal condition for linguistic risk-taking: the user is engaged enough to behave authentically but protected enough to bypass the social-emotional filters of the real world.

2.3. Emergent Participation and Learner Agency

We use the term "emergent" to describe participation that is not fully scripted in advance, but arises in the interaction between learner, task, peers, and environment. When students design their own VR scenes, they do not merely consume a pre-built pedagogical script; they co-author both the narrative and the environment. This design process can foster agency, creativity, and a shift from compliance ("doing the assignment") to ownership ("this is our world, our story"). Emergent participation arises from student authored VR environments, as in task based EFL studies where codesign fostered creativity and ownership, shifting focus from scripted responses to improvised collaboration (Valijärvi et al., 2024). Blended VR with traditional methods enhances agency, with Mandarin learners achieving 78.6% post-test gains through embodied, movement linked tasks (Zhu et al, 2024).

Emergent participation thrives in authored VR, when design steps yielding incidental vocabulary and authentic communication (Valijärvi et al., 2024). Agency grows via task-based VR, per Özgün & Sadık (2023). This 'mediated disconnection' is empirically supported by the VR phenomenon of dual consciousness, where a strong sense of presence within the virtual environment coexists with a protective awareness of psychological distance from it (Sanchez-Vives & Slater, 2005). This paradox creates an optimal state for risk-taking. The embodied avatar functions as a provisional identity, a psychological shield that allows learners to attribute performance to their digital self. Consequently, high-immersion VR redirects cognitive focus from anxious self-evaluation to goal-oriented language use within the simulation (Yee & Bailenson, 2007). This paradox creates an optimal state for risk-taking.

3. Context and Technological Setting

The project took place in a VR lab, in Kinneret Academic College, Isreal. The course was a CEFR level C1, a higher-education English course aimed at students who needed English for academic and professional purposes. The class included students with varied proficiency levels and mixed prior experiences with English instruction, ranging from motivated but anxious speakers to students who had largely disengaged in previous language courses.

The course aimed to develop students' oral communication and interaction skills in English while increasing their confidence and willingness to use the language spontaneously. It also sought to introduce immersive digital environments as learning spaces and to encourage creative, collaborative project-based work in English.

We used FrameVR™ as the primary platform, chosen for its accessibility, multi-user capabilities, and browser-based approach, so that students did not need any prior programming experience. Instead, they used a no-code toolkit to choose or modify 3D environments (such as a café, conference hall, or fictional world), place objects, images, and text elements, script simple interactions or sequences with visual tools, and design scenes that served as backdrops for English-speaking tasks, with an emphasis on lowering technical barriers so students could quickly move from being users of VR to authors of VR spaces.

The teaching methodology combined principles of project-based learning, task-based language teaching, and experiential learning to create a structured yet flexible progression. Students first took part in a warm-up and orientation, during which they were introduced to VR, practiced basic navigation, and experienced a short instructor-led scenario to become familiar with the environment and controls. They then moved into co-designing VR scenarios in small groups, selecting communicative contexts relevant to their academic or professional interests—such as job interviews, international conference poster sessions, startup pitches, emergencies, or cultural tours—and collaboratively building VR scenes required purposeful English communication to function.

Next, the instructor supported role definition and script scaffolding by helping groups clarify communicative goals, assign roles, and identify key linguistic resources, including useful phrases, discourse markers, and domain-specific vocabulary, while encouraging only minimal scripting to leave room for improvisation. The students then enacted their scenarios in VR as avatars, with sessions recorded or observed to foreground participation, spontaneity, and interaction patterns rather than grammatical accuracy. After each VR session, individual and group reflection and debriefing invited students to examine their affective experiences—confidence, anxiety, and enjoyment—as well as their perceived language performance, explicitly comparing how they felt in VR with how they typically feel in traditional classroom.

Although this paper focuses on the pedagogical narrative and qualitative insights, the project also collected data for systematic analysis, including a post-

course questionnaire on language anxiety, self-confidence, and willingness to communicate, short reflective notes written after VR sessions, instructor field notes centered on engagement, risk-taking, and participation patterns, and a range of artifacts from the VR scenarios such as snapshots and videos.

4. Findings: From Disengagements to Emergent Participation

We examined the data that was collected. Among other sources, we analyzed the VR scenarios that students built and presented (see example screenshots in **Figure 1**). During these presentations, students demonstrated how they used the VR scenarios and spoke in English while interacting as avatars.



Figure 1. Screenshots for example from the VR scenarios that the students built.

Following are four categories of findings that we found.

“I forgot it was English”: enjoyment and immersion

Across reflections, students repeatedly described the VR sessions as “fun”, “like a game”, or “not like a normal English class”. The playful nature of building and inhabiting a virtual scene shifted the perceived purpose of language use. English became a tool for doing something in the world—solving a problem, performing a role, entertaining peers—rather than the direct object of evaluation.

Several students reported that during intense moments of interaction, they “forgot” to monitor their English or stopped worrying about mistakes. The sense of immersion and shared presence in a virtual space redirected attention from self-monitoring to joint action.

Disconnection from the physical classroom and reduced judgement

A key pattern in the students’ reflections was a felt sense of partial disconnection from the physical classroom. Behind an avatar, they experienced a kind of shield from direct eye contact, facial expressions, and immediate social cues that typically trigger anxiety; social presence remained—they still felt “with others”—but the intensity of the social gaze was softened. Students described feeling “less judged” when speaking, experiencing fewer pauses caused by self-correction or embarrassment, and expressing opinions or humour they would not normally risk in a traditional class setting. This combination of presence and protection created a distinct affective space in which students could participate more freely. They

were engaged in real, meaningful communication, yet buffered from the full emotional weight of public performance in a physical room, allowing them to take linguistic and interpersonal risks that would otherwise feel too exposing.

No-code VR design as a catalyst for agency

Designing VR scenarios with a no-code tool played a central role in shifting ownership of the learning process. Students were not only participants but also creators of the environment and the tasks, choosing contexts that mattered to them, negotiating narrative details, and making deliberate design decisions about how communication would unfold within their scenes. This creative work positioned them as experts in their own interests and experiences, rather than passive recipients of a preset syllabus. The design process also gave students responsibility for creating meaningful challenges for their peers and encouraged them to think pragmatically about questions such as, “What do we need English for in this scenario?” As a result, language practice emerged organically from their own design choices, rather than from externally imposed drills. The shift from a teacher-designed task to a student-designed world was a key factor in moving learners from disengagement toward emergent, self-driven participation.

Confidence and willingness to take risks

Students linked their enjoyment and sense of freedom directly to increased confidence, reporting that they volunteered more often to speak, used more complex sentences, experimented with new vocabulary or idioms, and stayed in English even when searching for words. The perceived absence of harsh judgment—partly due to the mediated nature of the environment—lowered the affective filter, and as their confidence grew within VR, some students felt that this confidence “leaked back” into other English situations, such as presentations or discussions outside VR.

5. Discussion

The central phenomenon of this case is a dissonance between students’ historical disengagement in English and their emergent, often enthusiastic participation in VR. This dissonance invites us to reconsider what “the language barrier” consists of. In this project, the barrier was less about grammar or vocabulary and more about visibility, vulnerability, and the social expectations embedded in the physical classroom.

VR, particularly when combined with student-driven design, reconfigured these conditions. The playful, co-constructed nature of the environment weakened the association between speaking English and being judged. The language barrier did not disappear; rather, it was reframed as a manageable challenge within a meaningful, self-authored narrative.

The feeling of “freedom” students described did not arise from the absence of structure. The course still had clear communicative tasks, roles, and objectives. What changed was where the constraints came from: instead of external assessment criteria dominating, constraints emerged from the scenarios students

designed (“we need to convince the investor”, “we must coordinate in this emergency”).

This suggests a design principle: use VR not just to simulate a space, but to relocate constraints from teacher-imposed evaluation to narrative-imposed goals. Within that frame, linguistic imperfection becomes part of authentic problem-solving rather than evidence of failure.

For higher-education institutions, this case suggests several implications: integrating VR can meaningfully address affective barriers, particularly for students with prior negative experiences in language learning; no-code tools make it feasible for teachers and students with minimal technical background to create rich, situated tasks; and designing for student authorship of scenarios may be more transformative than simply transferring existing classroom activities into 3D. At the same time, VR is not a universal cure: access to devices, potential motion sickness, and the need for thoughtful facilitation remain important considerations, and VR should be embedded within a broader pedagogical strategy rather than used as a standalone novelty.

6. Conclusion and Future Directions

This paper has presented a case of higher-education students using VR to learn English in a way that transformed their affective experience and participation. Students who had often felt constrained, judged, or disengaged in traditional settings described VR sessions as fun, liberating, and confidence-building. The combination of immersive presence, mediated disconnection from the physical classroom, and student-designed scenarios via a no-code platform enabled a shift from disengagement to emergent language use.

Future work will systematically analyse quantitative and qualitative data from multiple cohorts, compare VR-based tasks with parallel non-VR tasks, and explore long-term transfer of confidence from VR to other English-use contexts. We also aim to refine design guidelines for language educators who wish to adopt similar approaches, emphasizing how VR can be used not only to “deliver” content but to reshape the social and affective ecology of the language classroom. This study holds pragmatic implementation of virtual reality in language education, emphasizing the importance of teacher training, supportive infrastructure, and well-crafted educational content for effective integration.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Albayrak, M. S., Chen, J., & Williams, P. J. (2023). A Quantitative Research on Gamifying Vocabulary Acquisition and Retention in Virtual Reality. *Teaching English with Technology*, 21, 42-57. <https://doi.org/10.56297/bkam1691/dfxc4759>
- Alfadil, M. (2020). Effectiveness of Virtual Reality Game in Foreign Language Vocabulary

- Acquisition. *Computers & Education*, 153, Article ID: 103893.
<https://doi.org/10.1016/j.compedu.2020.103893>
- Baidya, S., Ghosh, P., Mukherjee, A., Bhattacharjee, K., & Das, A. (2024). A Comprehensive Study to Build Immersive Virtual Reality-Powered Language Learning. *International Journal of Recent Trends in Multidisciplinary Research*, 4, 74-78.
https://www.ijrtmr.com/archiver/archives/a_comprehensive_study_to_build_immersive_virtual_reality_powered_language_learning.pdf
- Derda, I., Wouter, M., & Smit, T. (2025). Adaptive Mechanisms of Developing Social Connectedness in Virtual Reality Environments. *Design for Health*, 9, 195-215.
<https://doi.org/10.1080/24735132.2025.2506255>
- Dooly, M., Thrasher, T., & Sadler, R. (2023). “Whoa! Incredible!”: Language Learning Experiences in Virtual Reality. *RELC Journal*, 54, 321-339.
<https://doi.org/10.1177/00336882231167610>
- Hsu, L. (2024). Exploring EFL Learners’ Acceptance and Cognitive Absorption at VR-Based Language Learning: A Survey and Experimental Study. *Heliyon*, 10, e24863.
<https://doi.org/10.1016/j.heliyon.2024.e24863>
- Hua, C., & Wang, J. (2023). Virtual Reality-Assisted Language Learning: A Follow-Up Review (2018-2022). *Frontiers in Psychology*, 14, 1153642.
<https://doi.org/10.3389/fpsyg.2023.1153642>
- Huang, L., & Liu, M. (2025). The Impact of Technology on Foreign Language Anxiety: A Systematic Review of Empirical Studies from 2004 to 2024. *Humanities and Social Sciences Communications*, 12, Article No. 1665.
<https://doi.org/10.1057/s41599-025-05921-6>
- Huang, X., Zou, D., Cheng, G., & Xie, H. (2021). A Systematic Review of AR and VR Enhanced Language Learning. *Sustainability*, 13, Article No. 4639.
<https://doi.org/10.3390/su13094639>
- Huda, N., Elyana, L., Setiawan, R., Yuliantri, R. D. A., Aman, A., Fitri, E. S. M., Kurniawati, I., & Ramadan, S. (2024). The Effectiveness of Virtual Reality Media on Student Learning Outcomes: A Meta-Analysis. *Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi*, 12, 1-17. <https://doi.org/10.21831/jppfa.v12i1.67764>
- Kaplan-Rakowski, R., & Gruber, A. (2021). *The Impact of High-Immersion Virtual Reality on Foreign Language Anxiety*. <https://ssrn.com/abstract=3882215>
- Kiltani, K., Groten, R., & Slater, M. (2012). The Sense of Embodiment in Virtual Reality. *Presence: Teleoperators and Virtual Environments*, 21, 373-387.
https://doi.org/10.1162/pres_a.00124
- Löllgen, R. M., Berger-Estilita, J., Rössler, L. A., & Miledler, L. P. (2022). Avatar and Distance Simulation as a Learning Tool—Virtual Simulation Technology as a Facilitator or Barrier? A Questionnaire-Based Study on Behalf of Netzwerk Kindersimulation e.V. *Frontiers in Pediatrics*, 10, Article ID: 853243. <https://doi.org/10.3389/fped.2022.853243>
- Lou, Y. (2025). The Impact of Virtual Reality Environments on English Language Acquisition: Innovative Immersive Learning Technologies for Communication Skills Development. *Journal of Computational Methods in Sciences and Engineering*, 25, 4616-4632.
<https://doi.org/10.1177/14727978251337950>
- Maselli, A., & Slater, M. (2013). The Building Blocks of the Full Body Ownership Illusion. *Frontiers in Human Neuroscience*, 7, Article No. 83.
<https://doi.org/10.3389/fnhum.2013.00083>
- Niu, H. (2025). The Effects of Immersive Virtual Reality on Language Learning: Causal Effects on CEFR-Aligned Grammatical and Lexical Performance and Within-VR

- Comparative Effects on Communication and Intercultural Competence. *Journal of Educational Computing Research*, 64, 883-923.
<https://doi.org/10.1177/07356331261419686>
- Özgun, O., & Sadık, O. (2023). Implementation of VR Technologies in Language Learning Settings: A Systematic Literature Review. *Educational Policy Analysis and Strategic Research*, 18, 32-61. <https://doi.org/10.29329/epasr.2023.631.2>
- Price, S., Jewitt, C., Chubinidze, D., Barker, N., & Yiannoutsou, N. (2021). Taking an Extended Embodied Perspective of Touch: Connection-Disconnection in iVR. *Frontiers in Virtual Reality*, 2, Article ID: 642782. <https://doi.org/10.3389/frvir.2021.642782>
- Raman, K., Hashim, H., & Ismail, H. H. (2022). Enhancing English Verbal Communication Skills through Virtual Reality: A Study on Engagement, Motivation, and Autonomy among English as a Second Language Learners. *International Journal of Learning, Teaching and Educational Research*, 22, 237-261. <https://doi.org/10.26803/ijlter.22.12.12>
- Ratcliffe, J., & Tokarchuk, L. (2020). Presence, Embodied Interaction and Motivation: Distinct Learning Phenomena in an Immersive Virtual Environment. In *Proceedings of the 28th ACM International Conference on Multimedia* (pp. 3661-3668). ACM.
<https://doi.org/10.1145/3394171.3413520>
- Reddington, V. A. (2021). *The Design, Development, and Determination of a Virtual Reality Classroom*. Electronic Theses and Dissertations, University of Denver.
<https://digitalcommons.du.edu/etd/1979/>
- Rus-Calafell, M., Ehrbar, N., Teismann, T., Schneider, S., Tas, E., Schuster, S. et al. (2025). Using Virtual Reality Social Environments to Promote Outcomes' Generalization of AV-ATAR Therapy for Distressing Voices: A Case Study. *Journal of Clinical Psychology*, 81, 516-525. <https://doi.org/10.1002/jclp.23785>
- Sanchez-Vives, M. V., & Slater, M. (2005). From Presence to Consciousness through Virtual Reality. *Nature Reviews Neuroscience*, 6, 332-339.
<https://doi.org/10.1038/nrn1651>
- Tariq, E. B., & Ahmad, H. (2025). The Use of Virtual Reality (VR) for Language Acquisition: A Comprehensive Analysis with Scientific and Practical Consequences. *American Journal of Education and Practice*, 9, 22-31. <https://doi.org/10.47672/ajep.2627>
- Thrasher, T. (2022). *The Impact of Avatar Self-Representation on Collaboration in Virtual Worlds. Saying "Au Revoir" to Anxiety in a Heartbeat: The Benefits of Virtual Reality for Language Learning*. Doctoral Dissertation, University of Illinois at Urbana-Champaign.
- Valijärvi, R.-L., Partanen, R., Grönstrand, H., Rajaniemi, P., & Jalonen, J. (2024). Designing a VR Speech Simulation Game for Foreign Language Learning and Teaching. *Language Education & Technology*, 4, 55-78.
<https://www.langedutech.com/letjournal/index.php/let/article/view/70>
- Xie, Y., Liu, Y., Zhang, F., & Zhou, P. (2022). Virtual Reality-Integrated Immersion-Based Teaching to English Language Learning Outcome. *Frontiers in Psychology*, 12, Article ID: 767363. <https://doi.org/10.3389/fpsyg.2021.767363>
- Yee, N., & Bailenson, J. (2007). The Proteus Effect: The Effect of Transformed Self-Representation on Behavior. *Human Communication Research*, 33, 271-290.
<https://doi.org/10.1111/j.1468-2958.2007.00299.x>
- Zhu, Z., Kopcha, T. J., Jin, S., Ding, A. E., Lord, D., Innocencio, D. et al. (2024). Blending Immersive Virtual Reality and Traditional Language Instruction in Foreign Language Learning. *The Journal of Applied Instructional Design*, 13, No. 4.
<https://doi.org/10.59668/2033.18648>

Žnideršič, K., Špruk, N., Marolt, M., & Pesek, M. (2025). Language Learning with VR: The Effects of Immersive Gamification on Student Motivation and Knowledge. In *Proceedings of the 17th International Conference on Computer Supported Education* (pp. 102-110, Volume 1). SCITEPRESS-Science and Technology Publications.
<https://doi.org/10.5220/0013347400003932>