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From Headsets to Language Fluency: Investigating Engagement and Learning with VR in Middle School Spanish

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Abstract

This exploratory study investigates the use of immersive virtual reality (IVR) to support world language acquisition in middle school classrooms. Seventh and eighth grade Spanish students used head-mounted display (HMD) VR headsets in conjunction with the ImmerseMe language learning platform to simulate conversational interactions in authentic virtual environments. To analyze the impact of this experience on learners, the study applied the Cognitive Affective Model of Immersive Learning (CAMIL), which identifies presence and agency as central affordances influencing affective and cognitive outcomes. The CAMIL model was adapted for this context by grouping six original factors—interest, motivation, self-efficacy, embodiment, cognitive load, and self-regulation—into three developmentally appropriate domains. Data were collected through student surveys and teacher observations, and results were organized thematically based on the adapted model. Students reported high levels of social and physical presence, moderate motivation, and increased confidence in pronunciation. However, limited agency within the VR platform and technical barriers occasionally diminished engagement or led to cognitive overload. Findings suggest that IVR can enhance engagement and perceived learning in language classrooms, particularly when presence and agency are balanced and instructional design supports learner autonomy. This study contributes a revised version of the CAMIL framework tailored to younger learners and offers practical implications for the design and deployment of immersive learning environments in K–12 education.

Keywords: Virtual Reality, Language Learning, Middle School Education, Cognitive Affective Model of Immersive Learning (CAMIL), Student Engagement

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1. INTRODUCTION

Virtual reality (VR) is emerging as a promising tool in education, simulating real-world experiences to deepen engagement. It has been used to teach everything from surgical techniques to historical events, and its use in K–12 classrooms is expanding.

Recent research has extended VR's reach into higher education business courses, using HMD-based platforms to support experiential learning. For example, a multi-site ISCAP study implemented Meta Quest headsets to simulate business scenarios, finding that while immersion increased student engagement, practical barriers such as setup time and limited content control impacted outcomes (Mentzer et al., 2025). Similarly, VR has been applied in public speaking instruction to enhance learner confidence in delivery and posture awareness, suggesting a broader promise for communication-based disciplines (Patterson et al., 2025).

As technology evolves, educators are exploring how immersive virtual reality (IVR), particularly through head-mounted displays (HMDs), can enhance instruction across content areas.

World language education presents a natural fit for IVR due to its reliance on contextual, social, and sensory experiences. Traditional language instruction often struggles to provide authentic linguistic and cultural exposure. IVR, by contrast, allows learners to engage in simulated real-world conversations, explore virtual cultural environments, and practice listening and speaking in safe, controlled spaces. This is especially valuable in middle school classrooms, where students may be developing foundational language skills without access to study abroad programs or native-speaking environments.

Although research on IVR in higher education is growing, relatively little is known about its impact in middle school settings, particularly for students at novice language proficiency levels. Most existing studies focus on adult learners or technical training, leaving a gap in understanding how younger students experience immersive technologies in the language learning process. Furthermore, few frameworks have been adapted to account for the cognitive, emotional, and behavioral differences in adolescent learners.

To address this gap, this study examines the use of HMD-based VR in 7th and 8th grade Spanish classrooms through the lens of the Cognitive Affective Model of Immersive Learning (CAMIL). Originally designed for adult learners, CAMIL identifies presence and agency as key psychological affordances that shape affective and cognitive learning outcomes. This study adapts the CAMIL model to better suit the developmental characteristics of middle school learners and applies it to qualitative data gathered from student surveys and classroom observations.

Beyond its pedagogical contributions, this study also reflects the growing responsibility of business schools to demonstrate positive societal impact. The AACSB 2020 Business Accreditation Standards explicitly call on accredited institutions to align their missions with initiatives that improve the lives of stakeholders, including through community partnerships and educational outreach (AACSB, 2023). In many regions, business schools face increasing pressure from administration to build ties with local and regional schools, both to foster name recognition and to strengthen future enrollment pipelines. At the same time, AACSB Standards 1.4 and 9.1 highlight the importance of societal impact activities that extend beyond higher education, including initiatives that advance the United Nations' Sustainable Development Goal 4: Quality Education (SDG 4), which emphasizes inclusive, equitable, and lifelong learning opportunities. By engaging middle school learners in immersive language education, this project illustrates how business faculty can contribute to the societal impact mission while also innovating in pedagogy and research.

The following sections provide a review of the existing literature and an overview of the adapted theoretical framework, followed by a description of the classroom implementation and methodology. Results are organized according to the revised CAMIL constructs, and the paper concludes with implications for instructional

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design, platform development, and future research on immersive learning in secondary education.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Every new educational technology has positive and negative aspects associated with its implementation. Immersive virtual reality (IVR) is no different. It offers promising benefits for students and educators, while also introducing challenges related to cost, accessibility, health (simulator sickness), and instructional design (Cabrera-Duffaut et al., 2024; Kaimara et al., 2022).

This study is guided by the Cognitive Affective Model of Immersive Learning (CAMIL) developed by Makransky and Petersen (2021), which explains how immersive technologies affect learners through both psychological and instructional dimensions. At the heart of the model are two mediating affordances, presence and agency, which influence a set of six learner-centered factors: interest, motivation, self-efficacy, embodiment, cognitive load, and self-regulation. CAMIL holds that immersive environments increase learning when they optimize these cognitive and affective states.

The original CAMIL framework is detailed extensively in Makransky and Petersen (2021), including a comprehensive figure of the six constructs; given space constraints, we focus here on our adapted version while directing readers to the original publication for the full model.

Adaptation of CAMIL for Middle School Language Learners

While CAMIL has been widely applied in higher education and adult learning contexts, this study explores its utility in middle school Spanish language classrooms using a head-mounted display (HMD) IVR. Based on student responses and classroom observation, we propose a modified version of CAMIL tailored to this younger learner population (see Figure 1).

In this adapted model, presence and agency are conceptualized as interactive affordances of the IVR environment, rather than independent predictors. The model visualizes presence and agency in a bidirectional relationship, emphasizing how increased control (agency) can deepen the sense of "being there" (presence), and vice versa. These affordances collectively influence three consolidated domains of student learning:

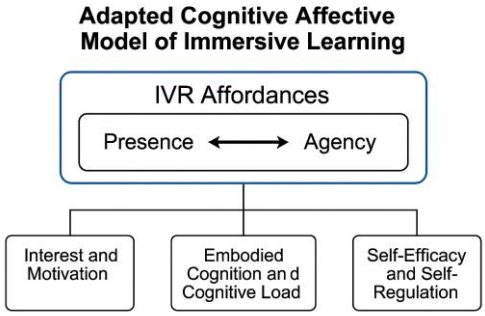

Figure 1: Adapted CAMIL Model

- Interest and motivation: These were deeply connected in student reflections. While many students found IVR novel and engaging, sustained motivation was influenced by lesson relevance, perceived difficulty, and ease of use.
- Embodied cognition and cognitive load: Students often described strong immersion and real-world application of language skills. However, technical glitches, motion sickness, and visual overstimulation occasionally hindered their ability to focus or remain in the experience.
- Self-efficacy and self-regulation: Though these constructs were less frequently articulated, observations indicated that most students were able to remain on task and expressed confidence in pronunciation tasks, even if actual gains were not measured.

This adapted model maintains the theoretical integrity of CAMIL while aligning more closely with the developmental, behavioral, and technological realities of middle school students using IVR for language acquisition.

Presence and Agency

Presence refers to the feeling of "being there" in a virtual space and encompasses physical, social, and self-presence (Ijsselsteijn & Riva, 2003, as cited in Makransky & Petersen, 2021). Presence encompasses three dimensions: physical presence, which is a sense of being located in the virtual environment as though physically there; social presence, which is the feeling of being with others, such as avatars or AI agents, and self-presence, which involves awareness of oneself as a participant in the environment (Lombard & Ditton, 1997; Lee, 2004)

Agency, defined as the perception of control over one's actions and environment, plays a parallel role. When learners feel they can influence their virtual experience, their engagement and confidence increase (Moore & Fletcher, 2012, as cited in Makransky & Petersen, 2021). In this study, students reported high levels of presence but experienced only limited agency, as they could not navigate freely or adapt content difficulty within the ImmerseMe platform.

Affective and Cognitive Factors

CAMIL originally identifies six affective and cognitive dimensions. Based on our student data and classroom context, we have clustered these into three broader domains:

- Interest and motivation: Students' enthusiasm was often tied to novelty and the ability to self-select pacing and task focus. Some noted that lessons felt too repetitive or too difficult, which dampened motivation over time. Others appreciated the gamified feel of the experience, suggesting further use of leveling or rewards could enhance engagement.
- Embodied cognition and cognitive load: Immersive environments stimulated focus and attention, especially in simulations of real-world Spanish-speaking locations. However, several students reported simulator sickness, blurry visuals, or feeling overstimulated. These are common issues in HMD-based VR (Çoban et al., 2024; Freina & Ott, 2015). Reading comprehension can also be compromised in VR, as it demands significant cognitive resources, particularly among younger learners (Çoban et al., 2024; Kaimara et al., 2022).
- Self-efficacy and self-regulation: While not frequently mentioned directly, these traits were evident through students' persistence and self-monitoring during headset use. Many students perceived improvements in their pronunciation and verbal confidence, though these gains were anecdotal and not formally measured.

Implementation Considerations

Effective IVR integration requires careful design and scaffolding. Prior VR experience can ease the transition and reduce anxiety (Makransky & Petersen, 2021). For some students, including those with ADHD or ASD, IVR may provide a lower-stress alternative, though excessive cognitive load or distractions can reduce engagement (Lin & Lan, 2015; Kaimara et al., 2022)

Health and usability factors are also important. Some students experienced dizziness or discomfort during use, particularly those new to VR. Health risks such as those linked to screen exposure, blue light, and simulator sickness are well-documented and should be managed with proper guidelines and time limits (Kaimara et al., 2022; Çoban et al., 2024).

This experience aligns with prior usability research where students reported challenges navigating VR systems, such as headset calibration, disorientation, and content pacing mismatches (Javadi et al., 2024; Mentzer et al., 2025). Across immersive educational settings, usability appears to significantly influence student satisfaction, particularly when learners feel they lack control or clarity over what the system expects of them.

Engagement and Knowledge Transfer

Multiple studies suggest that IVR increases student engagement due to its multisensory, game-like format (DeWitt et al., 2022; Legault et al., 2019). Students in this study reported increased enjoyment and participation, even among typically reserved learners. High levels of presence and embodiment were key drivers of this engagement. However, for novice learners, especially those with limited vocabulary, retention was sometimes difficult due to the rapid pace and lack of repetition.

IVR supports the acquisition of factual, conceptual, and procedural knowledge, particularly when the learning environment simulates real-life application and allows for reflection and feedback. Transfer of learning from IVR to classroom or real-world use remains a vital consideration and was a goal of this study's lesson design (Makransky & Petersen, 2021).

3. METHODOLOGY

This section describes the study's design, participants, instructional context, and methods of data collection and analysis. The implementation of immersive virtual reality (IVR) in a middle school Spanish classroom was examined through an exploratory qualitative approach, guided by the adapted CAMIL framework. Data were collected from student reflections and classroom observations, allowing for an in-depth analysis of learners' affective and cognitive responses to the use of head-mounted VR technology.

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This study was guided by the research question: "How does immersive virtual reality (IVR), through the affordances of presence and agency as conceptualized in an adapted CAMIL framework, influence engagement and perceived learning outcomes among middle school Spanish learners?"

Research Design
This study used an exploratory qualitative research design to investigate how immersive virtual reality (IVR) supports language learning among middle school students. Guided by the Cognitive Affective Model of Immersive Learning (CAMIL), the study focused on the roles of presence and agency in shaping student engagement, motivation, and perceived learning outcomes. CAMIL was adapted for this context to reflect the developmental characteristics of middle school learners, consolidating the original six cognitive and affective factors into three domains: interest and motivation, embodied cognition and cognitive load, and self-efficacy and self-regulation.

Participants and Setting
The study was conducted in spring 2025 at a public K–8 school in the rural community of central Massachusetts. A total of 30 seventh graders and 38 eighth graders enrolled in Spanish classes, taught across multiple sections by the same teacher. Students were novice learners in their first or second year of Spanish. Participation in the VR activities was part of regular instruction and not tied to additional assessment or grading. All students used their own Chromebooks in class and had the option to use the VR platform or an alternative version accessed via browser if needed.

This project was supported through a faculty research grant from Nichols College and a U.S. Department of Education grant (Grant #P116Z230123), and it was conducted as a collaboration between a university faculty member and the middle school Spanish teacher.

Technology and Platform
Students used Meta Quest 3 headsets (see: http: https://www.meta.com/quest/quest-3/) to access ImmerseMe (see: https://immerseme.co/), a commercial VR platform designed to facilitate guided language conversations in culturally relevant, immersive environments. The platform allowed students to choose from a menu of real-world scenarios, such as dining in a restaurant or exploring a marketplace, and practicing scripted conversations with AI-driven characters (Briand, 2021; Karageorgakis, 2022; Aros et al., 2024). While ImmerseMe provided pacing flexibility and some scenario choices, it offered limited interactivity beyond responding to preprogrammed prompts.

Figure 2: Classroom Setting

The headsets were rotated among students. Twenty were loaned to the school, each assigned a city name. With five class sections, each device was shared by five different students. Extra headsets were provided for when technology issues arose. The devices were stored in a secure location and sanitized regularly, although battery drainage and controller alignment occasionally posed challenges. Students were given instructions on how to use the devices and navigate the platform, but many were using HMD-based VR for the first time. Students did an excellent job taking care of their supplies and helped develop norms together for how to successfully use the devices.

Instructional Design
The VR experience was integrated into a broader unit on conversational Spanish. Over the course of ten weeks, students completed between 10 and 20 VR sessions, each lasting approximately 30 minutes or less per session. The teacher selected relevant ImmerseMe lessons that aligned with classroom objectives (e.g., greetings, food and drink, body parts), while students were encouraged to self-select difficulty levels or scenarios within those constraints.

In most lessons, students were allowed to choose between speaking, typing, translating, or listening activities depending on their comfort level. While the VR platform was intended to provide opportunities for autonomous, low-stress speaking practice, not all students responded equally to the experience due to individual differences in comfort, cognitive load, or prior

exposure to immersive technologies.

Data Collection
Data were collected through two rounds of open-ended student questionnaires administered via Google Forms, once in May and once in June. The May data provided a comprehensive first impression, while the June survey served as a follow-up to identify any changes in perception. The teacher observed that most students declined to complete the second survey unless their opinions had changed, citing end-of-year fatigue. As a result, the May data served as the primary basis for analysis since almost every student declined to take the survey a second time.

Additional qualitative data were collected through researcher field notes and classroom observations, including informal conversations with students about their experiences. No formal recordings were used, but the researcher documented observations regarding headset usage, off-task behavior, student engagement, and technical issues. These notes provided important contextual information to supplement student reflections. The teacher would take notes while students used the devices, after monitoring proper handling. At the end of the school day, the teacher would then reflect on the success of the day's lessons and add more observations to their notes.

Data Analysis
Survey responses and observation notes were coded thematically using the adapted CAMIL framework. Responses were grouped into five primary constructs: presence, agency, interest and motivation, embodied cognition and cognitive load, and self-efficacy and self-regulation. Student quotes were selected to represent common themes and divergent opinions and were anonymized by grade level and gender.

Ethical Considerations
The study received Institutional Review Board (IRB) approval through Nichols College. All student participants had parental consent, and student assent was obtained in accordance with ethical research guidelines. All responses were anonymous, and no audio, video, or screen recordings were captured. Students had the option to opt out of the VR activity or switch to a Chromebook version of the platform if they experienced discomfort.

4. RESULTS

Findings from student surveys and teacher observations are presented in alignment with the study's research questions, examining how presence and agency, as framed within the adapted CAMIL model, influence engagement and perceived learning outcomes. Student feedback was analyzed thematically across five key constructs: presence, agency, interest and motivation, embodied cognition and cognitive load, and self-efficacy and self-regulation. Direct quotations from students are included to illustrate common perceptions, challenges, and variations in experience.

Overview of Data Collection
Students completed a qualitative questionnaire twice—once in May and again in June. The June data were less robust due to survey fatigue, end-of-year disengagement, and the fact that students were instructed to complete the second survey only if their opinions had changed. Approximately 90% of students opted not to complete the second survey. Most responses remained stable; one notable exception involved a student shifting from initially enjoying the VR experience to later describing it as "repetitive and annoying." A common complaint was classroom background noise affecting speech recognition in the VR microphone. It should be noted that the microphones often heard the students, but the ImmerseMe program did not always convey the correct speech-to-text. Students with speech impediments were especially troubled by this and all students at least once expressed frustration for the website and device not hearing what was said.

Presence
Student responses indicated varied experiences with presence. Most students experienced social presence through simulated interactions within the ImmerseMe platform. One male 8th grader noted the value of "speaking to a real person," which increased his confidence. Students also described physical presence in comments like:

- "While I was using it, it was like I was actually there" – Female, Grade 8
- "When we were in the cities it made it feel so real" – Male, Grade 7

Self-presence was observed through students recognizing their avatars or describing their appearance in VR. While many noted feeling immersed, others expressed that the lack of interaction with the VR environment limited the full experience of presence.

These findings support the CAMIL model's emphasis on presence as a critical IVR affordance. Students experienced both physical

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v11 n6442

and social presence, which likely contributed to their cognitive engagement and feelings of immersion.

Figure 3: Students Actively Engaged

Agency

Students had limited agency within the ImmerseMe platform. Several commented on the lack of control over the environment or the limited ability to tailor difficulty levels. One 8th grader noted:

- "I can never find a lesson that is in my perfect level in Spanish. It is either too hard or too easy."

Another student suggested a more gamified structure to enhance engagement and increase motivation:

- "If the VR was set up so it's like a quest game… it could motivate the learning experience." – Male, Grade 8

Although the platform provided some choice within lessons, students could not navigate freely or adjust settings dynamically, which restricted perceived agency.

While many students reported feeling immersed and "actually there" within the VR environments, their experience of agency often constrained the potential benefits of presence. One student shared,

- "I like to use VR to learn Spanish because I can go at my own pace, but… it's a lot of time I'm stuck online and I would rather not spend my whole day behind screens,"

reflecting how limited control over content flow and platform design may temper the motivational benefits of high presence. Another remarked,

- "I like using them, the only downside is how long it takes to get in"

These comments underscore that presence alone is insufficient. Without meaningful agency, students may become disengaged or frustrated, even in richly immersive environments.

Consistent with CAMIL, limited agency constrained students' ability to navigate and control their experience, moderating the positive effects of presence. This reinforces the importance of balancing both affordances to sustain engagement and support learner autonomy.

Interest and Motivation (Combined)

Interest and motivation were strongly expressed by most students, especially those who had not previously used VR. For many, the novelty and personal relevance of the lessons contributed to engagement:

- "I found the topics that were more personal or aimed towards me the most helpful, because they were more interesting." – Female, Grade 8

Students appreciated working at their own pace and being in a different environment:

- "I like using VR to learn Spanish because I can go at my own pace." – Female, Grade 8
- "It makes class even more interesting… you can challenge yourself or just practice at the level you feel comfortable on." – Male, Grade 8

However, some voiced concerns about the tedium of repetition, technical barriers to entry, or overstimulation. One student noted:

- "It was very quick and I didn't get a lot of time to process the words." – Female, Grade 7

Despite frustrations, many learners expressed a desire to continue using the tool, provided the usability improves.

This combination of interest and motivation aligns with CAMIL's assertion that affective engagement increases when students experience high presence and a sense of personal relevance. However, diminished agency and technical challenges appeared to temper this engagement over time.

Embodied Cognition and Cognitive Load (Combined)

Students reported feeling fully immersed in the language-learning context, often drawing comparisons to real-life conversations or travel experiences:

- "It feels like I'm having a full Spanish conversation in the real world where I will actually use Spanish." – Male, Grade 8
- "It helps to capture my attention, since the only thing I can see is the lesson." – Male, Grade 8

That said, cognitive load emerged as a challenge for some. A handful of students described issues with simulator sickness, blurry visuals, or overstimulation:

- "I struggled with staying in the headset because it made me feel woozy." – Female, Grade 8
- "I don't like VR because it gives me motion sickness." – Male, Grade 8

These cognitive limitations, while not universal, suggest the importance of limiting headset time and offering alternative platforms when needed.

As outlined in CAMIL, immersive sensory input can enhance embodiment and deepen conceptual engagement. At the same time, cognitive overload, particularly from discomfort or system limitations, can reduce learners' ability to fully benefit from these experiences.

Self-Efficacy and Self-Regulation (Briefly Mentioned)

While these were less directly addressed in survey responses, some students reported feeling more confident after using ImmerseMe:

- "I feel like since I've started [VR lessons], my pronunciation of Spanish is getting much better." – Male, Grade 8

The teacher observed that most students followed through on their tasks and stayed engaged. However, because the researcher lacked visibility into what students were doing inside the headsets, verifying on-task behavior was difficult. Notably, while some students joked about using the devices for games, no off-task behavior was confirmed.

Although these factors were less overtly referenced, student persistence and self-monitoring reflect the role of self-regulation in immersive environments. This is consistent with CAMIL, which links strong regulation to lower cognitive load and improved learner confidence.

These findings highlight the interdependence of presence and agency as conceptualized in the adapted CAMIL model; their balance appears essential to sustaining student motivation and regulating cognitive load in immersive learning environments.

5. CONCLUSIONS AND FUTURE WORK

This study addressed the research question of how immersive virtual reality (IVR), through the affordances of presence and agency in an adapted version of the Cognitive Affective Model of Immersive Learning (CAMIL), can enhance world language instruction in middle school classrooms. The research examined how two key IVR affordances, presence and agency, influenced affective and cognitive learning outcomes in 7th and 8th grade Spanish learners. The modified model synthesized six original CAMIL factors into three domains more suitable for a K–12 setting: interest and motivation, embodied cognition and cognitive load, and self-efficacy and self-regulation.

Findings suggest that most students responded positively to the immersive experience. High levels of social and physical presence contributed to their engagement and enjoyment. Many appreciated the ability to work at their own pace, and several students reported increased confidence in their pronunciation. However, limited agency within the ImmerseMe platform, technical frustrations, and overstimulation occasionally hindered deeper learning and sustained motivation. The results also indicated that while affective engagement was high, cognitive challenges such as simulator sickness, poor visual clarity, and lack of agency reduced learning efficacy for some students.

The study affirms CAMIL's relevance in secondary education. When presence and agency are balanced, immersive technologies can support language practice, cultural exposure, and autonomy. Success depends less on novelty than on thoughtful design, pacing, and usability.

Importantly, this work demonstrates that research with middle school learners is not only relevant but integral to the mission of higher education business schools. By leveraging immersive learning expertise to enhance world language instruction in K–12 classrooms, we provide a model of community engagement that fulfills both institutional and accreditation priorities. For administrators, such initiatives strengthen name recognition and establish long-term relationships with prospective students and

families. For accrediting bodies, they provide tangible evidence of societal impact, aligning with AACSB Standards 1.4 and 9.1, which call on schools to create meaningful change through teaching, scholarship, and engagement (AACSB, 2023). In this sense, the study advances a dual contribution: it refines theoretical understanding of immersive learning through an adapted CAMIL framework, while also illustrating how business schools can authentically partner with local educational communities to achieve positive societal outcomes.

Future Work

This exploratory research lays the groundwork for more systematic inquiry into IVR in K–12 environments. Future studies should use tools that let instructors view student activity inside the headset in real time. Additional quantitative measures, such as pre- and post-assessments of vocabulary retention or oral proficiency, could validate and expand on the perceptual data gathered here. Comparative studies between traditional, video-based, and immersive instruction would also help isolate the specific affordances of IVR. Finally, the integration of gamified elements and differentiated learning paths could help improve student agency and motivation over time.

By continuing to refine both the technology and pedagogy of IVR, educators and researchers can better understand how to harness its full potential to support diverse learners in the language classroom.

In summary, the study found that IVR fostered strong social and physical presence but limited agency, a balance that shaped students' engagement, motivation, and confidence in language learning—highlighting both the promise and the design challenges of immersive technologies in K–12 education.

Limitations

While this study provides insight into IVR in middle school language learning, several limitations must be noted. First, it was conducted in a single school with one teacher, which may limit generalizability and introduce instructional bias. Second, findings were based on qualitative surveys and observations rather than formal assessments of proficiency or vocabulary retention. Third, technical constraints, limited platform functionality, lack of teacher visibility, and occasional discomfort, may have shaped student engagement. Finally, follow-up data collection was reduced by end-of-year fatigue, limiting longitudinal comparisons.

Despite these limitations, the study contributes valuable evidence for the adapted CAMIL framework and highlights practical considerations for the integration of IVR into K–12 language instruction. Future research should address these constraints through expanded sampling, formal assessment tools, and comparative classroom implementations.

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APPENDIX A

VR TPS Nichols Qualitative post-research questions

VR Specific Questions

1. Have you used VR headsets before this experience in Spanish class?
    a. If so, how would you describe your experience, and for what did you use the VR headset?
2. How do you feel about using technology like VR in your learning process overall?
3. Were there any parts of the VR experience that you found challenging or difficult? Can you explain?
4. How do you think the use of VR could be adjusted to better support your learning?
5. What kind of activities or elements in the VR experience did you find most engaging or helpful?
6. How do you think the use of VR might be useful for learning other subjects or skills?
7. In what ways do you think VR can be improved to better support your learning experience?
8. Do you believe that using VR in language learning will be helpful for other subjects or areas of study? Why?

Spanish Specific Questions

1. What was your initial reaction when you first used a Virtual Reality headset in your Spanish class?
    a. What did you like about it?
    b. What did you dislike?
2. How did using the VR headset help you engage with the Spanish language compared to traditional learning methods in class?
3. In what ways did the use of VR influence your involvement or interest in the Spanish language?
4. Can you describe a specific experience or activity in the VR environment that helped you understand Spanish?
5. How do you feel that VR technology influenced your motivation to practice or learn Spanish outside of class?
6. In your opinion, how effective is VR in helping you develop your Spanish skills?
7. Were there any challenges or difficulties you encountered while using the VR headset to learn Spanish?
    a. If so, how did you overcome them?
8. Do you think VR technology can help you feel more confident in speaking Spanish? Why or why not?
9. How do you think using VR to practice Spanish will impact your ability to understand and communicate in real-life situations?
10. What would you tell a friend about using VR to learn Spanish? Would you recommend it? Why or why not?
11. How do you think your perception of learning languages has changed after using VR technology in your Spanish class?