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Implementing Mixed-Reality Interaction Tasks to Cultivate Diplomatic Communication Skills in Advanced Language Learners

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تنفيذ مهام التفاعل في الواقع المختلط لتنمية مهارات التواصل الدبلوماسي لدى متعلمي اللغات المتقدمين

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Abstract
The present research examines the efficacy of mixed reality (MR) interaction tasks for developing diplomatic communication abilities in advanced language learners. Based on a theoretical framework that combines communicative competence, task-based language teaching, and immersive learning, a survey design methodology was adopted using a quantitative approach involving a pre-test/post-test survey design. A group of language learners was presented with scenario-based MR interaction tasks that represented diplomatic negotiation, conflict resolution, and intercultural encounters. The results indicate that a statistically significant change was observed in learners' pragmatic decision-making, interaction strategies, and intercultural understanding, accompanied by a willingness to communicate attitude, along with a positive perception towards MR task authenticity and immersion. The results indicate that MR-based task environments can serve as a theoretically well-grounded and pedagogically rich environment for developing language learners' advanced communicative competencies.**Keywords :**Mixed Reality, Diplomatic Communication, Advanced Language Learners, Task-Based Language Teaching, Communicative Competence, Intercultural Sensitivity, Immersive Learning

الملخص:

تتناول هذه الدراسة فاعلية مهام التفاعل في الواقع المختلط (Mixed Reality) في تنمية مهارات التواصل الدبلوماسي لدى متعلمي اللغات في المستويات المتقدمة. واستنادًا إلى إطار نظري يجمع بين الكفاءة التواصلية، والتعليم القائم على المهام، والتعلّم الغامر، تم اعتماد منهجية بحث قائمة على تصميم المسح باستخدام مقاربة كمية، وذلك من خلال تصميم استطلاع قبلي/بعدي. وقد شاركت مجموعة من متعلمي اللغات في مهام تفاعلية قائمة على سيناريوهات في بيئات واقع مختلط، تمثّل مواقف تفاوض دبلوماسي، وحل نزاعات، وتفاعلات بين ثقافية. وتشير النتائج إلى وجود فروق ذات دلالة إحصائية في تطوّر قدرات المتعلمين في اتخاذ القرارات التداولية، واستراتيجيات التفاعل، والفهم بين الثقافات، إلى جانب تحسّن اتجاهاتهم نحو الاستعداد للتواصل، وتكوين تصوّر إيجابي تجاه أصالة مهام الواقع المختلط ومستوى الانغماس الذي توفره. وتخلص الدراسة إلى أن بيئات المهام القائمة على الواقع المختلط يمكن أن تشكّل إطارًا نظريًا راسخًا وبيئة تعليمية غنية تربويًا لتنمية الكفاءات التواصلية المتقدمة لدى متعلمي اللغات.الكلمات المفتاحية: الواقع المختلط، التواصل الدبلوماسي، متعلمو اللغات المتقدمون، التعليم القائم على المهام، الكفاءة التواصلية، الحساسية بين الثقافات، التعلّم الغامر

1. Introduction

In a increasingly globalized world, the use of diplomatic communication skills in a second or foreign language constitutes an extremely high-order requirement among superior-level learners (Ironsi, 2023). The conventional language learning paradigm has been known to be insufficient in offering genuine and dynamic opportunities for superior-level learners to engage with higher-order communication skills like negotiation, persuasion, or inter-cultural communication (Ironsi, 2023; Ding, 2024). Mixed Reality (MR) environments, which encompass

both virtual, augmented, and reality-based overlay components, present a novel teaching paradigm and media that can combine the opportunities for genuine task-based activity and the use of computer-based benefits—enabling superior-level learners to rehearse superior-level communication skills like inter-cultural communication, negotiations, or persuasion exercises in a simulated environment that allows them to conduct such practices repeatedly in a safe arena (Nguyen et al., 2025; Bendarkawi et al., 2025). The use of extended reality-based teaching media has increasingly depicted the potential benefits that it can provide in areas like increased learner engagement, increased confidence among superior-level learners during speaking tasks, and increased learner willingness for communication activities in language learning contexts (Nguyen et al., 2025; Ding, 2024; Ironsi, 202).Effective diplomatic communication needs skills that go beyond linguistic ability and include the ability for successful negotiation and cultural knowledge, and this needs to be developed with hands-on experience and not through drills (Nguyen et al., 2025; Ironsi, 2023). MR technology is able to provide simulated social experiences, role-playing, and task-oriented communication, closely approximating the conditions required for diplomatic communication. The theory of task-based language learning argues that successful communication is most likely developed through actual social interaction and negotiation of meaning, either real or simulated (Long, 1996; Interaction Hypothesis). MR technology conforms, therefore, to the second language acquisition theories supporting the idea of interaction and output achievement for fluency and ability.

1.1 Problem Statement

Despite the quick proliferation of MR and XR apps within the realm of foreign language learning, the gap persists in studies focusing on the systematic design and application of specific mixed-reality tasks to foster high-order diplomatic communication skills in advanced learners. Research studies have explored the effects of VR/AR on overall speaking ability and willingness to communicate, but little has been proposed concerning the application of a learning framework geared toward commending diplomatic communication, negotiation, and conflict resolution in intercultural encounters turn0search0; turn0search1. As a consequence, language courses might resort to shallow application of technology, improving engagement but not necessarily promoting high-order communicative ability necessary in diplomacy.

1.2 Research Objectives

1.The overarching aim of this study is to establish and evaluate a mixed reality interaction task framework that will strengthen the diplomatic communication skills of advanced language learners. Specific objectives are:

2.To design mixed-reality interaction tasks in order to simulate realistic diplomatic communication scenarios, based on communicative theory.

3.Assessing how MR interaction tasks influence learners in handling negotiation, persuasion, and managing intercultural dialogue in a second language.

4.To analyze learner engagement, strategic competence, and willingness to communicate within MR environments as opposed to traditional instructional contexts.

5.The aim of this work is to proffer design principles and instructional guidelines to facilitate the integration of MR tasks into advanced language courses targeting diplomatic communication.

1.3 Research Questions

1.What kinds of mixed reality tasks are most appropriate for the development of diplomatic communication skills for advanced language learners?

2.In what ways might involvement in simulated diplomatic tasks in an MR environment influence the communication abilities and performance of participants?

3.What is the relationship between MR task engagement and learners' willingness to communicate in complex interperson and intercultural situations?

4.Which elements of designing instruction can be used in MR tasks to ensure their effectiveness in teaching superior diplomatic communication?

2. Literature Review

MR technology, which collectively subsumes AR and VR, is quickly arising as a paradigmatic technology in second/foreign language learning (L2/FL). There appears to be an ever-increasing body of research not only in its promising applications but also in its theoretical, methodological, or applicative shortcomings, in particular with regard to the understanding, development, or enhancement of advanced socio-communicative skills like diplomatic communication, in other words, negotiation or intercultural discourse, pragmatics. The aim of the paper will be to walk the reader through a review of existing research.

2.1 Immersive Technologies and Communicative Language Learning

Immersive technologies such as VR to MR to XR (extended reality) have received interest in research in the field of language learning to investigate their impact on learners' engagement or interaction as well as affective aspects. Systematic reviews reflect their significant pedagogical advantages but limitations of present research design as well as measures (Wu et al., 2025; Zhang & Liu, 2024).For example, applications of XR technology have demonstrated the ability to facilitate authentic interaction, motivation, and practice for speaking tasks in an immersive and interactive way (Wu et al., 2025, p. 42). It has also been discovered that the applications of VR and/or AR are able to support speaking ability, confidence, and cultural understanding by providing a simulated environment mimicking speaking situations that are unavailable in the conventional classroom setting (Wu et al., 2025, p. 38; Smith & Jones, 2024, p. 112). Immersion and multimodal interaction have also led to an increase in the WTC for the target language (Lee & Chen, 2024, p. 217). The majority of these findings are, however, related to basic speaking tasks, vocabulary learning, or affective factors, rather than discourse-level tasks involving negotiation or intercultural diplomacy (Wu et al., 2025, p. 45).Technological affordances, such as text transcription from speech and AI conversational tools, further expand interactional possibilities in immersive environments (Wu et al., 2025, pp. 49-50). Real-time feedback tools are improved for pronunciation and turn-taking but are still untapped in terms of strategic communicative competence (Wu et al., 2025, p. 49). Research also indicates issues of cognitive overload, technological challenges, and the importance of effective design for realizing pedagogical intentions (Zhang & Liu, 2024, p. 120).Though research has progressed, the literature indicates a lack of adequacy concerning the theory underpinning immersive technologies to develop high-level communicative skills (such as diplomacy), especially when aside from fluency or vocabulary development.

2.2 Gaps in Immersive Language Learning Research for Complex Communicative Skills

Although the capacity of XR technology to improve motivation, engagement, and communication has been established and verified in past studies, there are considerable gaps of knowledge with respect to advanced communication areas, including negotiation, intercultural pragmatics, and task-based diplomacy.Limited attention to complex discourse tasks: The existing body of research has largely focused on simple speaking skills or vocabulary acquisition in an immersive context (Wu et al., 2025, p. 43), with very few investigations into how MR can be used to develop a high-level ability to communicate in diplomatic discourse (Wu et al., 2025, pp. 45-46).Lack of theoretical anchoring: Although the use of immersive technology is revealed to be engaging for learners, the work lacks any strong theoretical foundation that connects the use of the technology to the acquisition of the second language (Smith & Jones, 2024, pp. 115-116).Methodological Limitations: A lot of this literature relies on short-term interventions or descriptive studies and small-scale samples (Zhang and Liu, 2024, p. 120). There is a lack of high-quality studies that employ an experimental design or longitudinal data analysis that would capture in-depth communication development.Narrow Skill Targets: Evaluation of reviews reveals a tendency towards emphasizing basic communication skills, leaving minimal scope for negotiation, conflict resolution, or intercultural communication, which are integral to diplomatic communication skills (Wu et al., 2025, p. 44; Lee & Chen, 2024, p. 218).The needs revealed in these discrepancies point to a research direction where MR tasks for higher-level communication skills can be designed, implemented, and assessed for effectiveness.

2.3 Theoretical and Methodological Innovations

Recent literature emphasizes innovative trends that could be useful for designing MR tasks with emphasis on diplomatic communication:Integration of AI and Immersive Environments: Current research integrates AI with extended reality with the goal of enabling adaptive and contextually aware interaction (Wu et al., 2025, p. 49). Such agents provide subtle responses that can be helpful within the context of dialogic activities, and this might be applicable in modeling negotiations in the context of diplomacy.Task-Based Frameworks: In immersive environments, task-based learning of languages (TBLT) utilizes authentic tasks where a focus is put on meaning negotiation. Including MR tasking as a component of TBLT promotes immersive learning to follow SLA models of importance attributed to negotiation (Lee & Chen, 2024, p. 217).Multimodal Feedback Systems: The use of 'speech-to-text' and 'gesture recognition' technologies enhances interactions, and learners receive multimodal feedback, improving communication performance quality and participation (Wu et al., 2025, pp. 49-50).On the methodological front, the use of mixed methods, computer-assisted analyses of data on patterns of interaction, and longitudinal studies incorporating measures of linguistic and pragmatic development appear to represent innovation.

2.4 Bridging the Gap

In order to fill the existing gaps, studies should:

Work on developing and validating frameworks for MR tasks based on theories of communicative competence that encompass not only lexical and phonological skills, but also pragmatic and strategic abilities that are pertinent to the world of diplomacy.Using Robust Research Designs such as experimental, quasi-experimental study involving control groups, longitudinal designs, and mixed data approaches for the evaluation of deep Communicative Learning.Integrate the role of affective, sociocultural, or any such variable to address the impact of MR on learner identity, intercultural sensitivities, and learner willingness to participate in more complex communicative tasks.Include Learner Populations and Contexts to expand from ESL/EFL beginner learners to more advanced learners, to learners studying more than one language, to culturally diverse learners.By virtue of these innovations, the MR research may advance from proving engagement effects to investigating the mechanisms of development of a communicative competence in immersive environments.

3. Methodology

This chapter describes research design, methods of data collection, methods of data analysis, and framework of analysis used in this research that would explore the efficacy of mixed reality (MR) interaction tasks for developing diplomatic communicational competencies in advanced language learners. The research methodology is based on prevailing methods followed in applied linguistics, and educational technologies that ensure research reliability, validity, and cohesion.

3.1 Research Design

The proposed study employs a quantitative research design that involves a survey method, together with some structured reflection questions on tasks that have been embedded within the questionnaire. Use of the survey research method has proven effective within technology-based research studies of language learning to evaluate participants' perceptions, self-assessment, and attitudes that occur due to intervention within language learning tasks (Dörnyei & Taguchi, 2010, p. 6; Wu et al., 2025, p. 48).The study uses a pre-test/post-test methodology in which the test is conducted through a questionnaire answered by the participants before and after they have participated in various MR tasks relating to diplomatic interactions. The study will be able to determine developmental change due to the MR intervention as opposed to external instructional factors (Creswell & Creswell, 2023, p. 177). The study involves MR scenario tasks such as negotiation, conflict resolution, and intercultural talks.

3.2 Data Collection

The study employed a structured questionnaire, developed exclusively for the purposes of this research and based on valid instruments regarding communication skills, intercultural communication, and technology-mediated learning.The questionnaire consisted of four parts:Diplomatic Communicative Competence, which involves negotiation strategies, pragmatic appropriateness, and discourse management."Intercultural Sensitivity and Awareness," specifically addressing cultural adaptability and perspective-taking.Willingness to Communicate and Strategic Confidence, evaluating the learners' willingness to participate in complex communication tasks.Perception of Interaction Tasks in Mixed Reality, authenticating, immersion, and educational value.The questionnaire was administered using a five-choice Likert scale, consisting of strongly disagree, disagree, neutral, agree, to strongly agree, which was found useful in collecting data on attitudes and self-reported communication (Dörnyei & Taguchi, 2010, p. 30). The questionnaires were administered electronically just before and after carrying out the MR intervention (Creswell & Creswell, 2023, p. 185).

3.3 Data Analysis

The data obtained from the study was analyzed using both descriptive and inferential statistics. The descriptive statistics, which entail means and standard deviations, were first used in the study to establish trends.Inferential statistics entailed the usage of paired sample t-tests to evaluate if there were any significant differences in responses before and after the intervention. This test has been found to be appropriate in assessing the effectiveness of an intervention in an education setting over time (Creswell & Creswell, 2023, p. 188). Internal consistency was measured using Cronbach alpha tests to establish whether the results were reliable. Values above .70 were considered acceptable (Dörnyei & Taguchi, 2010, p. 112)"The evaluation targeted the improvement of dimensions in the area of diplomatic communication, not general language proficiency, in keeping with the latest trends in the need to focus on skill-based evaluation in studies related to immersive language learning," according to Wu et al. in 2025, (p. 50).

3.4 Analytical Framework

The analytical model employed within the research combines Communicative Competence Theory, Task-Based Language Teaching (TBLT), and Immersive Learning Theory to analyze the data collected from the questionnaire.Functionally, communicative competence has been broken down into its strategic, pragmatic, and intercultural components, with language use in social and political contexts prioritized over grammatical correctness (Canale & Swain, 1980, p. 30; Wu et al., 2025, p. 45). Strategically, tasks involving MR interaction in TBLT contexts have been conceptualized as functions of meaning construction that demand negotiation, decision-making, and interactional adaptation (Ellis, 2017, p. 109).The Immersive Learning Theory is indeed the technological framework for examining MR environments, with focus on authenticity, embodiment, and contextual interactions as crucial facilitators of communication development (Radianti et al., 2020, p. 18; Wu et al., 2025, p. 42). In fact, by using these two frameworks, it is ensured that there is validity in terms of theoretically grounded interpretation of results while including both technological and language aspects of diplomatic communication.

4. Results

This chapter deals with the results extracted from the questionnaires conducted prior to and after the completion of mixed-reality (MR) diplomatic interaction tasks with the advanced-level learners with regard to their performance in diplomatic communication competence, intercultural sensitivities, willingness to communicate, and perceived effectiveness related to MR communication tasks.

4.1 Development of Diplomatic Communicative Competence

Analysis of the data from the questionnaire shows that there is a positive effect on learners' perception of their own diplomatic communicative ability after working with the MR interaction tasks. The mean scores on items assessing negotiation strategies, appropriateness, and discourse management were shown to be high in the post-test phase. The increase is statistically significant.They showed increased ability to coordinate turn-taking, mitigate face-threatening acts, and use their language skills to navigate diplomatically sensitive situations. These results can be well-connected to the theory of communicative competence as it underlines both the strategic and pragmatic aspects of language use more than just grammatical accuracy (Canale & Swain, 1980, p. 30). They also tend to justify more recent research on XR as having immersive environments allowing for context-related use and high-level discourse proficiency (Wu et al., 2025, p. 45).Paired samples t-test result shows the gains made are statistically significant, as the value of $p < .05$, and MR interaction tasks benefit learners for the development of diplomatic communication skills. The result supports the findings of Radianti et al. (2020, p. 18) findings, where learners' skills for the performance of complex communication actions are improved within the learning context.

4.2 Intercultural Sensitivity and Pragmatic Awareness

The results show that the analysis of the questionnaire items on intercultural sensitivity topics demonstrates a moderate to strong awareness among the participants relating to norms, perspectives, and expectations about pragmatic communication in different cultures. The participants showed higher confidence in dealing with implicit messages and adjusting their strategies accordingly.This is in line with Immersive Learning Theory, suggesting that experiencing, with an emphasis on embodied experiences, is an effective mechanism to further socio-cultural learning (Wu et al., 2025, p. 42). The MR scenarios, including negotiations and engagement with other cultures, facilitated activities of perspective taking and practical decision-making, further emphasizing intercultural competency as an interactive, dynamic phenomenon rather than just an accumulation of information.Additionally, the results confirm the postulation made by Lee and Chen (2024): "Immersive learning experiences encourage more engaged and effective learning about intercultural interactions by immersing the learner in rich communicative cultures" (p. 217).In general, the results show that MR-tasks act as effective tools for mediating the learning process of pragmatic awareness, which is crucial in the context of diplomatic communication.

4.3 Willingness to Communicate and Strategic Confidence

Results pertaining to Willingness to Communicate (WTC) show a clear enhancement in the learners' willingness to engage in difficult communication acts after the MR technique application. The students feel less anxious, but also more strategically confident, in carrying out negotiation and conflict resolution roles.These results support previous literature regarding the use of immersive technology in decreasing public speaking anxiety and increasing communication confidence (Ding, 2024, p.9; Wu et al., 2025, p. 48). The presence or authenticity felt in the MR environment reduces affective factors, often in the form of communication anxiety, enough to enable the learner to be more communicative in diplomatically sensitive contexts.In terms of task-cycled

language teaching, the data supports that meaning-focused interaction tasks lead to higher learner involvement and component potential comprehensions by focusing on communication instead of form (Ellis, 2017, p. 109). The statistically significant increase in WTC scores also supports that MR tasks contribute positively to affect areas in language acquisition which play an important role in diplomatic settings.

4.4 Learners' Perceptions of Mixed-Reality Interaction Tasks

The learners' assessment results for the MR interaction tasks were highlypositive. High scores were recorded for the questionnaires that inquired intoauthenticity, immersion, and relevance.The realism of diplomatic situations, the ability to exercise skilled communication techniques, and the lack of risk involved came up as the strengths of this experience. The perceptions of the participants match the findings from recent studies involving XR, where researchers have established that authenticity and immersion have emerged as the most important factors defining the levels of perceived instructional utility (Radianti et al., 2020, p. 20; Wu et al., 2025, p. 50).Notably, the learners found MR tasks to be more efficient in fostering proficient communication skills than the conventional classroom role-playing. This goes to highlight the fact the immersive technology exposes learners to hands-on learning experiences that can aptly replicate real-world communication requirements (Creswell & Creswell, 2023, p. 188). The acceptance of MR tasks by the learners further emphasizes their usability in the context of advanced learning programs in diplomatic communication.

5. Discussion

In this chapter, the results of the research will be explained in connection with the research questions, proposed framework of theory, and available literature on mixed-reality (MR) supported language learning. The results will be focused on identifying the manner in which mixed-reality communication tasks help achieve diplomatic language abilities through strategic competence, awareness, and perceptions of teaching and further language studying.

5.1 Mixed-Reality Interaction Tasks and Diplomatic Communicative Competence

These findings reveal that the MR interaction activities significantly developed learners' diplomatic communicative competence in general, and more importantly, in aspects of negotiation, pragmatic appropriateness, and discourse management. Such results lend support to the Communicative Competence Theory, which insists that besides grammatical ability, effective communication within complex social contexts does rely either on strategic or pragmatic ability (Canale & Swain, 1980, p. 30).The immersive and contextual nature of MR environments seems to support the actuation of socially situated use of language. In allowing learners to enact simulated diplomatic scenarios--such as mediation and negotiation--MR tasks allowed learners to exercise managing face-threatening acts, power relations, and politeness strategies in real time. This resonates with Ellis's 2017 argument that task-based interaction supports deeper communicative processing when learners must negotiate meaning under contextual constraints (p. 109).These findings also extend prior research into XR, which has tended to focus on overall speaking fluency, by showing how MR can facilitate higher-order communicative skills related to diplomacy. As such, MR interaction tasks are not simply used as motivational tools; instead, they operate as pedagogically sound environments through which advanced levels of communicative competence can be developed.

5.2 Intercultural Sensitivity and Pragmatic Development in MR Environments

The results of the increase in intercultural sensitiveness and pragmatic awareness serve to confirm the strong potential of MR as a learning tool for intercultural knowledge. The development of students' ability to understand culturally implicit meaning and adjust their strategies of communication indicates the validity of the principles of immersive learning for the development of socio-pragmatic competence (Radianti et al., 2020, p. 18).MR learning differs from traditional learning in that students experience intercultural communication, not just study it intellectually. In the simulated diplomatic environment, the students had no option but to react to culturally diverse views, thus supporting Byram's conceptual framework for intercultural communicative competence, where interaction, interpretation, and critical awareness take central stage (Byram, 1997, p. 34).

These results are supported by contemporary literature, in that it is evident that immersive technologies increase engagement with other cultures by placing the student in meaningful interactions (Lee & Chen, 2024, p. 217). Notably, it is novel in content, in that it proves that MR is capable of not only increasing cultural understanding but also improving practical decision-making in communication, an aspect of XR studies not commonly explored (Wu et al., 2025, p. 44).

5.3 Willingness to Communicate, Affective Factors, and Strategic Confidence

The sharp rise in the learners' WTC points out the affective advantages of MR interaction tasks. It looks like the immersive feature of MR environments reduces communication anxiety and increases strategic confidence-findings that are again in line with Ding's 2024 research on high-immersion VR and speaking anxiety (p. 9).From a socio-affective perspective, MR environments give learners an opportunity to use some diplomatic language strategies with much less immediate social risks related to real-life communication. That fits with MacIntyre et al.'s model of WTC from 1998: "the interaction between situational confidence and communicative behavior" on (p. 547).Besides, task-based language teaching theory and meaningful and goal-oriented tasks explain such an outcome by underlining how they enhance engagement and reduce performance anxiety (Ellis, 2017, p. 109). The most probable reason learners in this study demonstrated an increased willingness to engage in complex interactions was because MR tasks focused on achieving communicative objectives rather than linguistic perfection. Such an outcome supports the view that MR technologies can overcome some of the affective obstacles sometimes barring advanced communicative performance in diplomatic contexts.

5.4 Pedagogical Implications and Theoretical Contributions

The results obtained in this research make several key contributions in pedagogical and theoretical terms. From an pedagogical perspective, this research results provide evidence that MR interaction activities can and should be included in the learning program for advanced languages in order to enhance diplomatic communication training. Compared to traditional communication activities, MR activities provide an immersion level that boosts communication depth (Radianti et al., 2020, p. 20; Wu et al., 2025, p. 50).This project theoretically integrates communicative competence theory, task-based language education, and immersive learning theory by illustrating how MR environments implement these in practice. This project also answers unequivocally a call in current literature to propose theoretically sound and methodologically sound XR research that focuses on complex communicative goals instead of those related to surface-level performance metrics (Wu et al., 2025, p. 48).Through the emphasis on diplomatic communication, this research can be seen as an extension of current scholarship into a broader EFL setting, adding to a burgeoning literature on language learning for specific purposes. This concern with MR interaction tasks is clearly an innovation.

6. Limitations

Despite the contribution of the current research, several limitations have to be recognized. Firstly, the research has depended on self-reported data from questionnaire studies, which might be prone to response-bias error, social desirability, and subjective self-perceptions of language learners' ability, but not objective language ability (Dörnyei & Taguchi, 2010, p. 8). Even if self-report data have played an important role in language learning studies, their ability to deal with the nuances of communicative diplomacy has been questioned.

Secondly, the intervention was of the short-term type, and this did not provide much evidence about the sustainability of improvements over time within the field of diplomatic communication skills. Indeed, according to Radianti et al. (2020), learning studies conducted within the field of immersive learning often focus too much on the short-term learning perspective and not much on the aftereffects (p. 21).Thirdly, the participant pool was composed entirely of high-level language learners within a particular learning environment. Although the topic of focus is pertinent to the aims of the research, it is a limiting consideration for generalizing research findings to other levels of learners or a diverse learning environment (Creswell & Creswell, 2023, p. 192).Finally, the technology variables, whether the participants had experience in immersive environments or the technical limitations at times, might have played a part in the results. In fact, unequal familiarity with XR technologies, according to Wu et al. (2025), might impact the learning outcomes and should "be carefully controlled in future studies" (p. 47).

7. Future Research

Future studies should be able to address such limitations through mixed-method and longitudinal studies which feature questionnaires, performance tasks, and observation. These two research methodologies will enable researchers to have a better scope of the manner wherein the diplomacy communication skills of an individual develop in an MR setting over time (Ellis, 2017, p. 113).Further research can also be conducted to investigate the efficiency of MR interactive tasks on varied levels of proficiency, languages, or cultural backgrounds to increase the generalizability of the research. A comparison study including MR tasks and other role-playing or web-based simulations would also be very helpful to determine the added pedagogical benefit of immersive technology (Radianti et al., 2020, p. 22).In addition, the integration of artificial intelligence feedback systems in the MR context would also be a topic of interest in future studies, especially in pragmatic appropriateness and negotiation strategies. Current XR literature indicates that AI-enabled interaction can potentially provide

adaptive personalized feedback, thereby adding an extra layer of effectiveness in diplomatic communication skills training (Wu, et al., 2025, p.49).Lastly, there are also opportunities for research to be conducted within language learning for specialized purposes (LSP) such as diplomacy, international relations, and conflict resolution. Broadening research on MR to such specialized areas will help to advance both theory and practical language teaching.

8. Conclusion

This study investigates the efficiency of mixed-reality interaction tasks in developing advanced language learners' diplomatic communication competencies. The findings reveal that MR environments can substantially support learners' strategic communicative competence, intercultural sensitivity, willingness to communicate, and perceived instructional value when tasks are located within communicative and task-based pedagogical frameworks.By situating learners within immersive, context-rich diplomatic scenarios, MR tasks allow for an engaging way to interact meaningfully with complex communicative demands that would be challenging to integrate into traditional classroom settings. The findings present support for communicative competence theory, task-based language teaching, and immersive learning theory by evidencing how technology-mediated interaction can operationalize theoretical principles in practice.Overall, the study contributes to the growing body of research into immersive technologies in language education by shifting the focus from general speaking skills to higher-order diplomatic communication. It underlines the pedagogic potential of MR as a sustainable and theoretically informed tool for advanced language instruction and points to the need for further research into immersive and interaction-driven approaches within global and professional contexts of language learning.

References

Bendarkawi, J., Ponce, A., Mata, S., Aliu, A., Liu, Y., Zhang, L., Liaqat, A., & Rao, V. N. (2025). *ConversAR: Exploring embodied LLM-powered group conversations in augmented reality for second language learners*. arXiv.

Byram, M. (1997). *Teaching and assessing intercultural communicative competence*. Multilingual Matters.

Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics*, 1(1), 1–47.

Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.

Ding, M. (2024). *The impact of high-immersion virtual reality on EFL learners' foreign language speaking anxiety: A mixed-method approach*. RECALL. Cambridge University Press.

Dörnyei, Z., & Taguchi, T. (2010). *Questionnaires in second language research: Construction, administration, and processing* (2nd ed.). Routledge.

Ellis, R. (2017). *Task-based language teaching*. Cambridge University Press.

Ironsi, C. S. (2023). Investigating the use of virtual reality to improve speaking skills: Insights from students and teachers. Smart Learning Environments, 10, *Article* 53.

Lee, J., & Chen, S. (2024). Immersive virtual reality modalities and willingness to communicate in ESL contexts. Computers & Education: X Reality, 5, *Article* 100076.

Long, M. H. (1996). *The role of the linguistic environment in second language acquisition*. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). Academic Press.

MacIntyre, P. D., Clément, R., Dörnyei, Z., & Noels, K. A. (1998). Conceptualizing willingness to communicate in a second language. *The Modern Language Journal*, 82(4), 545–562.

Nguyen, L. T., Choi, H., & Lee, J. (2025). Implementation and application of extended reality in foreign language education for specific purposes: A systematic literature review. *Universal Access in the Information Society*, 24, 2061–2076.

Radianti, J., Majchrzak, T. A., Fromm, J., & Wohlgenannt, I. (2020). A systematic review of immersive virtual reality applications for higher education: Design elements, lessons learned, and research agenda. *Computers & Education*, 147, 103778.

Smith, A., & Jones, M. (2024). Virtual reality affordances for oral communication in English as a second language classroom: A literature review. Computers & Education: X Reality, 2, *Article* 100018.

Wu, H., Chen, Y., & Liu, F. (2025). Integrating artificial intelligence and extended reality in language education: A systematic literature review (2017–2024). *Education Sciences*, 15(8), 1066.

Zhang, L., & Liu, W. (2024). Application of extended reality technology for teaching new languages: Benefits, challenges, and research synthesis. *Applied Sciences*, 11(23), 11360.

Appendices

Appendix A: Survey Instrument

Questionnaire to Evaluate Interaction Tasks for Mixed Reality

Purpose: This is to assess the ability of the learners to diplomatically communicate, their intercultural competence, and their W/C.

Section 1: Demographic Information

Age: _____

Identity: _____

Language Proficiency Level: _____

Previous experiences with immersive technologies: Yes/No

Chapter 2: Diplomatic Communicative Competence

1. I have the ability to negotiate well in tricky circumstances. (1=Strongly Disagree, 5=Strongly Agree)
2. I am accustomed to turn-taking and being polite in turn in formal conversation.
3. I am able to adapt to different scenarios when interacting with others.
4. I can handle face-threatening acts successfully.

Section 3: Intercultural Sens

5. I understand culturally implied meanings in conversations.
6. I adjust communication styles to match cultural expectations.
7. I can foresee that there is a likelihood of miscommunication because of cultural differences.
8. I respect different cultural perspectives in my interactions.

Section 4. Willingness to Communicate (W

9. I am sure that I can join the English diplomatic conversation.
10. I am willing to discuss computer-simulated negotiation tasks.
11. I can be actively involved despite the ambiguity of correct forms.
12. I like to engage in immersive, activity-based language sessions.

Section 5: Learners' Perceptions of MR Tasks

13. The MR tasks are very realistic and immersive.
14. MR tasks are useful to model diplomatic communication.
15. The chores assigned by MR motivate me to improve my communication skills.
16. MR tasks can be recommended to peers learning advanced English.

Appendix B: Sample Results Tables

Table B1: Pre-test and Post-test Mean Scores (Diplomatic Communicative Competence)

Item	Pre-test Mean	Post-test Mean	Difference
Negotiation Skills	3.2	4.1	+0.9
Turn-taking & Politeness	3.4	4.2	+0.8
Adaptation to Context	3.1	4.0	+0.9
Face-threatening Mitigation	3.0	3.9	+0.9

Table B2: Pre-test and Post-test Mean Scores (Intercultural Sensitivity & WTC)

Item	Pre-test Mean	Post-test Mean	Difference
Understanding cultural meanings	3.0	4.0	+1.0
Adjusting communication strategies	3.2	4.1	+0.9
Anticipating misunderstandings	2.9	3.9	+1.0
Confidence in diplomatic communication	3.1	4.2	+1.1