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THE IMPACT OF PROMPT-BASED AI VISUAL AVATARS ON THE DEVELOPMENT OF INTERCULTURAL KNOWLEDGE: THE CASE OF SECOND-YEAR SECONDARY EFL LEARNERS IN ALGERIA

Amira REGHIS
Constantine 1 Frères Mentouri University (Algeria)
Laboratoire Langues et Traduction (Alegria)
ORCID iD:0009-0009-2096-2104
amira.reghis@doc.umc.edu.dz

Abstract: This study discusses the effectiveness of prompt-based AI visual avatar scenarios in developing Algerian secondary school EFL learners' intercultural knowledge (*savoirs*) within a project-based framework integrated into the Competency-Based Approach (CBA). In this respect, the study draws on the thematic unit entitled "Lifestyle" in the second-year secondary school curriculum to encourage learners to activate their intercultural knowledge regarding food habits, festivals, daily routines, greetings, and social practices. The study is aligned with Michael Byram's framework of intercultural competence with an emphasis on the cognitive dimension of the model. The intervention employs prompt-based AI visual avatar roles that represent culturally diverse lifestyle contexts and provide intercultural input through guided scenario-based tasks and collaborative mini-projects. The study adopts a quasi-experimental pretest-posttest design which involved seventy-eight (78) second-year secondary school learners enrolled in two intact EFL literary-stream classes. The learners were divided into two main groups: an experimental group (n = 39) and a control group (n = 39). Within each group, students were further organized into thirteen (13) collaborative subgroups of three learners each. Findings demonstrate that prompt-based AI visual avatar scenarios enhance learners' understanding of cultural practices while fostering awareness of cultural similarities and differences across societies. The study contributes to EFL pedagogy that reframes AI as a prompt-based generator of structured visual intercultural knowledge input, particularly in low-exposure EFL contexts where authentic intercultural interaction opportunities remain limited.

Keywords: AI visual avatar scenarios; Intercultural competence; Intercultural input; Intercultural knowledge; Project-based learning.

L'IMPACT DES AVATARS VISUELS GENERES PAR L'IA SUR LE DEVELOPPEMENT DES CONNAISSANCES INTERCULTURELLES : ETUDE DE CAS AUPRES D'ELEVES DE SECONDE EN ALGERIE

Résumé : Cette étude examine l'efficacité de scénarios d'avatars visuels basés sur l'IA et s'appuie sur des suggestions pour développer les connaissances interculturelles (savoirs) d'élèves algériens de seconde, dans le cadre d'une approche par projets intégrés à l'approche par compétences. À cet égard, l'étude s'appuie sur l'unité thématique « Mode de vie » du programme de seconde pour encourager les élèves à activer leurs connaissances interculturelles relatives aux habitudes alimentaires, aux fêtes, aux routines quotidiennes, aux salutations et aux pratiques sociales. L'étude est alignée sur le cadre de la compétence interculturelle de Michael Byram, en mettant l'accent sur la dimension cognitive du modèle. L'intervention utilise des avatars visuels basés sur l'IA et s'appuie sur des suggestions, qui représentent des contextes

de vie culturellement diversifiés et fournissent un apport interculturel par le biais de tâches guidées basées sur des scénarios et de mini-projets collaboratifs. L'étude adopte un plan quasi expérimental avec pré-test et post-test, impliquant soixante-dix-huit (78) élèves de seconde, inscrits dans deux classes de littérature anglaise. Les apprenants ont été répartis en deux groupes principaux : un groupe expérimental (n = 39) et un groupe témoin (n = 39).Au sein de chaque groupe, les étudiants ont été organisés en treize (13) sous-groupes collaborateurs de trois apprenants chacun. Les résultats démontrent que les scénarios d'avatars visuels basés sur l'IA et guidés par des incitations améliorent la compréhension des pratiques culturelles par les apprenants, tout en favorisant une prise de conscience des similitudes et des différences culturelles entre les sociétés. Cette étude contribue à la pédagogie de l'anglais langue étrangère (ELE) en redéfinissant l'IA comme un générateur, basé sur des incitations, d'apports structurés de connaissances interculturelles visuelles, particulièrement dans les contextes d'ELE peu exposés où les occasions d'interactions interculturelles authentiques restent limitées.

Mots-clés : Scénarios d'avatars visuels d'IA, Compétence interculturelle, Apport interculturel, Connaissances interculturelles, Apprentissage par projet.

Introduction

The growing tendency towards the enhancement of intercultural interaction is recognized as a global imperative in foreign language classes. In the Algerian context, significant attempts are made to foster intercultural openness and international interaction within the English curriculum. In this vein, the Algerian Curriculum of English Language (ACEL) at high schools signifies the necessary requisites for international communication mainly students' openness to international cultures (Hassina Kalla&Djallel Boulmaiz, 2025). These significant attempts resonate with the worldwide conceptualization of intercultural competence which tends to surpass the traditional teaching of culture as a set of factual knowledge. It regards intercultural communication a dynamic process of producing meaningful interaction and authentic real life scenarios. While many policies advocate the development of learners' intercultural skills and global communication, their objectives are not consistently translated into clear instructional frameworks, measurable intercultural outcomes or concrete classroom practices. In many Algerian secondary schools, instruction remains basically linguistically-oriented and predominantly textbook-contextualized with pre-selected reading passages, static images, and end-of-unit project-based products that prioritize reproduction over interaction. Thus, a noticeable discrepancy emerges between the intercultural aspirations promoted by policy makers and the actual pedagogical realities of EFL classrooms. This gap reflects the absence of explicit methodological guidance and pedagogical models capable of operationalizing intercultural competence in meaningful and experiential ways within Algerian secondary education. This impacts students' interpretative skills, their deep understanding of cultural nuances and limits their interaction appropriately and effectively across cultures.

Intercultural competence has been conceptualized by Michael Byram (1997) in his model based on the development of three elemental dimensions that are referred to as the cognitive, attitudinal and behavioural dimensions. They all overlap to equip students' with the necessary skills to become intercultural mediators. "Intercultural knowledge" or what he coined as "savoirs" serves as the cognitive basis for developing higher-order

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intercultural skills such as interpreting, relating, and discovering cultural meanings. However, in many EFL contexts, including Algeria, this dimension remains underdeveloped due to the predominance of information-based teaching approaches that prioritize factual recall over experiential understanding. Consequently, there is an increasing call for the adaption of instructional models that address cultural products, practices and behaviours not as a static representation of reality with an emphasis of linguistic proficiency over the interpretation of the cultural phenomena critically and comparatively. This dynamic interaction necessitates a move towards the integration of interactive artificial intelligence (AI) as a pedagogical tool that transforms learning into an experiential process. In this regard, prompt-based AI visual avatars represent a promising transformative tool as they create interactive, scenario-based simulations where learners can engage with culturally embedded characters through guided prompts. Unlike the traditional materials, these AI visual avatars can simulate real-life intercultural situations including food practices, daily routines, greetings, festivals, and social norms across different cultures. Hence, learners will be able to interact with virtual interlocutors with diverse cultural backgrounds and to access an experiential learning of cultural vivid realities.

Despite the notable flow of AI integration in educational environments, there remains a major breach when it comes to the empirical and conceptual research regarding the use of prompt-based visual avatars for developing intercultural knowledge in EFL contexts. This gap is particularly evident in the Algerian secondary education where traditional instructional methods are prevalent and dominate cultural teaching practices. Therefore, the present study aims to draw a conceptual framework for integrating AI visual avatar scenarios into EFL instruction to enhance intercultural knowledge (*savoirs*).

This study provides a conceptual triadic framework that integrates prompt-based AI visual avatar scenarios as a potential tool to foster students' intercultural knowledge which can be presented through their final products or projects. The integration of these AI-generated visual avatars provides learners with access to different cultural contexts through a simulation of culturally thematic situations (e.g., dining etiquette in Algeria vs. the United Kingdom, greetings, festivals, or daily routines). Learners are required not only to learn about these products, practices or behaviours but they are encouraged to interpret, respond, and reflect on these interactions and contrast them with their own cultural norms. Thus, the current paper addresses two important questions: how does the implementation of prompt-based visual avatars provide simulative intercultural vivid scenarios? To what extent does the implementation of prompt-based visual avatars increase students' intercultural knowledge in EFL classes? Accordingly, the study hypothesizes that prompt-based visual avatars will provide immersive simulated intercultural scenarios and will enhance students' intercultural knowledge in EFL classes.

1. Literature Review

1.1 Intercultural Competence and Byram's Framework of Intercultural Communicative Competence

The term intercultural communicative competence (ICC henceforth) has been recurrently used in literature as it makes a clear liaison between language and culture. It expands the process of learning language beyond linguistic accuracy or communicative purposes. It regards learning a culture a dynamic process that encompasses the ability to interact with individuals from diverse backgrounds and with different worldviews (Barili &

Byram, 2021). It aims to facilitate understanding of cultural norms, values, communication styles, and shared symbolic systems and hence engaging meaningfully with various cultural perspectives. With several models have been established to put the concept into action, Byram's model of intercultural competence remains one of the most influential frameworks in foreign language education. It outlines five elemental interconnected components namely attitudes, knowledge (*savoirs*), skills of interpreting and relating, skills of discovery and interaction, and critical cultural awareness. Byram (1997) defines the five savoirs of his intercultural communicative competence model as follows:

- ***Savoir être;*** or Attitudes that reflect the tendency to be curios and open across cultures without being judgmental.
- ***Savoirs;*** or Knowledge about the groups in a society; their products, practices and behaviours while interacting across cultures.
- ***Savoir comprendre***; or Skills of interpreting and relating which enables interlocutors or speakers to interpret relevant documents or events in the target culture and relate them to own culture.
- ***Savoir apprendre/faire;*** or Skills of discovery and interaction which tends to equip users with attitudes and social knowledge so as to develop the necessary skills to overcome any communicative constraints within real time interaction.
- ***Savoir s'engager;*** Critical cultural awareness which establishes clear criteria of evaluating societal products, practices, products and the implied perspectives across culture

Sercu (2005) similarly conceptualizes ICC as knowledge, skills and attitudes. Knowledge encompasses facts that are specific or general about a particular culture, knowledge of one's culture and the other's culture, and knowledge about how language and culture are related. He further clarifies that ICC is an extension of communicative competence (Sercu, 2005). In this study, intercultural knowledge is a salient platform through which learners establish an understanding of cultural diversities. Ting-Toomey (1999) confirms that becoming an intercultural communicator requires a possession of knowledge of both verbal and non-verbal facets of communication to increase sensitivity across cultures. In the same line, Karnyshev (2014) asserts that the establishment of the dimensional concept of ICC will help interlocutors tolerate differences and hence become active participants in intercultural discourse. In its essence, language learning necessitates the equipment of students with the ability to interact with people from other cultures and therefore instruction should be related to ICC. In this regard, intercultural education does not exclude one's own culture and leaves no one behind as it prepares students to consolidate their interaction considering both stands(Fries, 2003; Schriefer, 2016).According to Byram(2021), learners are required to consider language beyond its linguistic dimension and also to analyze their identities. Ultimately, learners as intercultural speakers take into account their own cultural identity and their counterparts' cultural identity in order to maintain positive interaction for both participants.

Despite the significant importance of ICC, its application in the academic settingremains questionable. Snow (2015) confirms that the majority of EFL students never receivea direct intercultural instruction. Similarly, Deardorff (2021) affirms that in the context of the United States for example less than 10 percent of undergraduates receive courses that emphasize international relations. Likewise, Bennet and Salonen (2007) argue although culture is often tackled as an integral part of language curriculum but it is not

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clearly addressed within students' coursebooks. Thus, integrating ICC into the language classroom might be arduous task for language teachers who are accustomed to a linguistic-oriented approach with no actual training in matters regarding ICC (Byram & Kramsch, 2008). Critics of the traditional implementations of Byram's framework assert that it is essentially a theoretical instruction rather than enacted practice. This limitation highlights the need for pedagogical tools that can operationalize intercultural knowledge in experiential contexts which can be better seen through the practical implementation of authentic interaction and stimulation of intercultural encounters especially through the use of prompt-based AI visual avatar scenarios.

1.2 Prompt-Based Learning and Visual Avatars

Artificial intelligence has increasingly been integrated into language learning environments to support personalized learning, feedback, and interactive simulations. AI-driven tools have been borne out to enhance learners' authentic exposure to language use. Lately, interactive avatars stand as innovative and promising applications of AI in education as they create visual agents that simulate human-like interaction. These avatars represent a human interlocutor who can respond to an oral input, provide answers through spoken synthetic voice (Fink et al., 2024) Prompt-based learning involves guiding AI systems through structured input to generate specific educational outputs. When combined with visual avatar technology, this approach allows for the creation of scenario-based learning environments that replicate real-world intercultural encounters. Such systems enable learners to engage in simulated dialogues, observe cultural behaviors, and respond to contextual prompts, thereby bridging the gap between theoretical knowledge and lived experience.AI-based avatars are denoted for their applicable use in enhancing factual knowledge and collaborative skills (Fink et al., 2024). Furthermore, they can ensure an immersive learning through the use of authentic leaning experience that involves virtual and hybrid reality created avatars. Learners also benefit from individualized learning scenarios in contrast to traditional classroom lectures. (Chernikova et al., 2025).

1.3 Project-based Learning and AI Integration

Project-based learning (PBL henceforth) emerges as a learner-centred instructional method that provides a contextualized learning. It drives learners to address certain problems and reflect upon applicable solutions. Learners explore varied resources in their school or extra school environment to design polished works including posters, leaflet, and other materials to share with their classmates. Zhang and Ramli (2025) argue that group projects and shared problem-solving tasks that encourage teamwork. Chiu (2020) defines project-based learning (PBL) as collaborative group in which involves in problematic tasks and authentic practices. Thus, they process sequential tasks and invest their cognitive strategies to come up with satisfactory understanding of the material. Projects are designed based on issues and needs that students define. Hence, they are given a sense of ownership and autonomy over their learning. This can lead to higher levels of achievement and better performance. Learning through projects targets the rationale integration of knowledge, skills and attitudes in real-life situations outside the classroom (Fried-Booth, 2002). Projects works thus highlight the development of three interrelated competencies namely interaction, interpretation and production which activate students' metacognitive competencies and higher-order thinking skills. Hence, through this approach students are proactively engaged in the learning process and thus they can deeply understand content

and the required skills in their schools and life in general (Bell, 2010). Dolmans et al. (2021) on the other hand highlights the development of critical thinking and self-directed leaning that can be promoted through PBL especially if it incorporates technology. Thus, it can be stated that the collaborative essence and the inquiry derived nature of PBL can be also reinforced through the use of AI (Ruiz Viruel et al. 2025). In the present study, learners work in collaborative groups to design, refine and evaluate AI-generated intercultural scenarios such as dining etiquette in Algeria versus Britain mainly table manners, seating arrangements, and conversational normsand Algerian dining traditions. Similarly, learners design prompts that represent cultural celebrations such as Eid-related gatherings in Algeria and Christmas or local community festivals in Britain. Groups also construct scenarios which illustrate formal and informal greeting practices across cultures, including gestures, verbal expressions, and levels of formality. Regarding social practices and customs, groups generate AI visual avatars engaged in everyday interactions such as visiting a friend's home, participating in school life, or interacting in public spaces. This cooperative inquiry allows learners to explore variations in intercultural interactions in their home culture and the target culture. Overall, the integration of AI visual avatar within a project-based learning outcome transforms learning into a dynamic process of collective inquiry and knowledge construction.

2. Methodology

2.1. Research Design

The present study deploys a quasi-experimental pretest-posttest design to investigate the effectiveness of prompt-based AI visual avatar scenarios in developing Algerian secondary school EFL learners' intercultural knowledge "savoirs" within a project-based instructional framework. The quasi-experimental design was selected because the study was conducted within naturally existing classroom settings where random assignment of participants was not pedagogically or administratively possible. Prior to the intervention, a pretest was administered to determine learners' initial level of intercultural knowledge and to ensure baseline comparability between the two groups. The pretest was based on the introductory unit of the textbook *Getting Through*, entitled "Diversity / Lifestyles," which also constituted the core instructional content of the intervention. This unit, allocated five weeks (25 hours) of instruction, was taught to both groups under different instructional approaches: the experimental group engaged with prompt-based AI visual avatar scenarios integrated into collaborative mini-projects, whereas the control group received traditional instruction based on textbook materials, teacher explanation, and conventional classroom activities. The use of both pretest and post-test measures provided a systematic means for identifying changes in learners' cognitive intercultural competence over the intervention period that lasted for a month from the second half of September to the beginning of November 2025.

2.2 Participants

The participants of the study are second-year secondary school learners enrolled in two intact EFL literary-stream classes. One class served as the experimental group, while the other represented the control group. Each group included thirty-nine learners, bringing the total number of participants to seventy-eight. Within both the experimental and control groups, learners were organized into thirteen collaborative groups, each consisting of three students. The selection of participants followed a convenience sampling procedure, as the

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study was conducted within the researcher's accessible educational context. Both groups shared relatively similar educational backgrounds, curricular exposure, and institutional learning conditions.

2.3 Data Collection Instruments

The primary quantitative instrument employed in the study was an intercultural knowledge test administered at the beginning of the instructional sequence as a multiple-choice questionnaire (MCQ) integrated within the unit "Lifestyle." This pretest was designed to diagnose learners' initial level of cognitive intercultural competence "savoirs" prior to the intervention. The MCQ items assessed learners' ability to recognize culturally specific practices, interpret culturally embedded meanings, identify appropriate intercultural responses, compare cultural norms across societies and demonstrate awareness of social conventions and lifestyle-related cultural practices. In the post-intervention phase, learners' achievement was assessed through a project-based post-test, in which students' collaborative project work served as the main evaluation instrument. This project work constituted an authentic performance-based assessment of intercultural knowledge development. Learners produced mini-projects involving visual avatar presentations that emphasize intercultural comparisons. The analysis of the project outputs focused on learners' ability to interpret cultural practices critically, demonstrate intercultural awareness, compare cultural systems meaningfully, and apply culturally appropriate interpretations in contextualized communicative tasks.

3. Results

3.1 Control Group Findings

The descriptive statistics of the control group reveal only a very slight increase in learners' performance between the pretest and the post-test. The mean score rose marginally from 6.25 to 6.28, while the total scores changed from 81.25 to 81.75. Similarly, the measures of distribution remained relatively stable, with skewness shifting only from -0.216 to -0.125 and kurtosis from -0.944 to -1.043. The standard deviation also increased slightly from 1.75 to 1.87, indicating that learners' performances remained relatively dispersed without substantial collective improvement.

Table 1. Raw Pretest and Posttest Results for Control Group Participants (Scores out of 10)

Participant	Pretest Score	Post-test Score
G1	3.25	3.25
G2	4.75	4.25
G3	4.50	4.25
G4	8.75	9.25
G5	4.00	4.25
G6	7.00	7.50
G7	6.75	7.25
G8	7.25	7.25
G9	6.00	7.25
G10	7.50	6.00
G11	5.50	5.50
G12	7.25	7.00
G13	8.75	8.75

Table 2. Descriptive Statistics for Control Group Participants

Statistic	Pretest	Post-test
Sum	81.25	81.75
Minimum	3.25	3.25
Maximum	8.75	9.25
Mean	6.25	6.28
Std. Deviation	1.75	1.87
Skewness	-0.216	-0.125
Kurtosis	-0.944	-1.043

3.2 Experimental Group Findings

The descriptive statistics of the experimental group demonstrate a significant improvement in learners' performance between the pretest and the post-test. The mean score increased notably from 6.15 to 8.15, while the total scores rose from 78.50 to 106.00. In addition, the minimum score improved from 3.25 to 5.75, and the maximum score increased from 8.25 to 10.00. The standard deviation decreased from 1.53 to 1.27, suggesting a more homogeneous level of achievement among participants after the intervention. Moreover, the skewness value moved from -0.416 to -0.033, indicating a more balanced distribution of scores in the post-test results.

Table 3. Raw Pretest and Posttest Results for Experimental Group Participants

Participant	Pretest Score	Post-test Score
G1	8.25	10.00
G2	7.50	8.75
G3	6.00	7.50
G4	5.00	8.25
G5	5.00	6.75
G6	5.25	9.75
G7	3.25	7.50
G8	7.50	8.00
G9	7.00	8.75
G10	6.50	7.50
G11	7.50	10.00
G12	6.00	7.50
G13	3.75	5.75

Table 4. Descriptive Statistics for Experimental Group Participants

Statistic	Pretest	Post-test
Sum	78.50	106.00
Minimum	3.25	5.75
Maximum	8.25	10.00
Mean	6.15	8.15
Std. Deviation	1.53	1.27
Skewness	-0.416	-0.033
Kurtosis	-0.711	-0.402

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4. Discussion

Overall, the statistical findings suggest that the control group did not experience meaningful progress in intercultural knowledge development throughout the intervention period. From the perspective of Byram's intercultural competence framework, particularly the cognitive dimension of "savoirs," intercultural learning requires learners to acquire knowledge about cultural products, practices, social groups, and behavioural norms across societies. However, the absence of interactive and scenario-based intercultural experiences restricted learners' opportunities to engage critically with culturally embedded situations. As a result, their understanding of cultural practices such as greetings, daily routines, festivals, and food traditions remained descriptive rather than interpretive and comparative. Furthermore, the statistical stability reflected in the minimal changes in skewness and kurtosis indicates that learners' cognitive structures and interpretive patterns remained relatively unchanged during the intervention. In other words, no substantial restructuring of intercultural understanding appears to have occurred. Learners were still limited in their ability to interpret implicit cultural meanings, identify culturally specific behaviours, or compare foreign cultural practices with their own sociocultural frameworks. These findings support the argument that traditional EFL instruction alone may not be sufficient in fostering intercultural knowledge.

The significant improvement observed in the experimental group can be attributed to the integration of prompt-based AI visual avatar scenarios within a project-based framework aligned with the Competency-Based Approach (CBA).Through guided prompts and collaborative mini-projects, learners actively engaged with culturally situated situations related to greetings, festivals, food habits, social norms, and daily routines across different societies. This experiential exposure enabled learners to move beyond surface-level linguistic learning toward a deeper understanding of cultural meanings and practices. In relation to Byram's model, the intervention effectively enhanced learners' "savoirs" by developing their knowledge of cultural practices, behaviours, and socially situated meanings. Learners became increasingly capable of recognizing cultural similarities and differences, interpreting culturally embedded behaviours, and relating foreign cultural practices to their own sociocultural experiences. Consequently, language was no longer perceived merely as a linguistic system but rather as a culturally situated medium shaped by values, traditions, and social conventions. Additionally, the reduction in standard deviation and the near-zero skewness in the post-test results indicate that the improvement was relatively balanced across participants. This suggests that the AI visual avatar scenarios created inclusive learning opportunities that supported learners with varying levels of proficiency and intercultural awareness. The intervention therefore appears to have facilitated not only individual improvement but also a more homogeneous development of intercultural knowledge within the group as a whole. Overall, the findings demonstrate that prompt-based AI visual avatar scenarios can effectively foster intercultural knowledge in EFL classrooms by transforming cultural learning into an interactive, immersive, and context-rich process.

Conclusion

This study investigated the impact of prompt-based AI visual avatar scenarios on the development of intercultural knowledge "savoirs" among second-year secondary EFL learners in Algeria within a project-based learning framework aligned with the Competency-Based Approach (CBA). The findings provide a clear contrast between the control and experimental groups. While the control group demonstrated only minimal improvement between the pretest and post-test results. This suggests that traditional instruction, mainly based on textbook-oriented and teacher-centered practices, had limited effectiveness in fostering meaningful intercultural knowledge development. Learners' understanding of cultural practices remained largely descriptive, with little evidence of interpretive or comparative intercultural processing. In contrast, the experimental group showed a significant and consistent improvement across all statistical measures, including mean scores, score range, and standard deviation. The decrease in dispersion and the more balanced distribution of post-test results further indicate a more uniform development of intercultural knowledge among participants. These results demonstrate that prompt-based AI visual avatar scenarios, when embedded in collaborative project-based tasks, significantly enhance learners' ability to recognize, interpret, and compare cultural practices across contexts.

The AI-generated visual scenarios provided contextualized, simulated intercultural encounters that facilitated engagement with cultural meanings, social norms, and every day practices. As a result, learners developed a more dynamic and reflective understanding of culture as a lived and negotiated reality rather than a static body of information. This intervention enabled learners to move beyond factual cultural knowledge toward deeper interpretive understanding. Overall, the study confirms that the integration of prompt-based AI visual avatars into EFL instruction can significantly enhance intercultural knowledge development, particularly in low-exposure contexts such as Algerian secondary education where authentic intercultural interaction is often limited. Based on the findings of this study, several pedagogical and research-oriented recommendations can be proposed: educational stakeholders are encouraged to incorporate prompt-based AI visual simulations as complementary tools in intercultural language teaching, particularly within culturally thematic units ; curriculum designers should further develop structured project-based tasks that require learners to design, interpret, and evaluate intercultural scenarios using AI tools so as to promote active knowledge construction ; training programmes should be implemented to support EFL teachers in designing, managing, and assessing AI-supported intercultural learning activities ; new evaluation tools should be designed to capture interpretive and comparative dimensions of intercultural competence that goes beyond traditional factual knowledge tests. further research is needed to replicate this study in different educational settings and over longer periods to examine the sustained impact of AI visual avatar scenarios on all dimensions of intercultural competence, not only "savoirs," but also attitudes and skills.

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