

Digital Linguistic Autobiographies in Immersive Spaces: Unlocking Metalinguistic Awareness and Multilingual Identities¹

Letizia Cinganotto, Giorgia Montanucci

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Abstract

This chapter describes an educational experience at the University for Foreigners of Perugia aimed at fostering metalinguistic awareness through digital linguistic autobiographies in immersive virtual environments. Students reflect on their language learning paths and intercultural experiences by designing multilingual, multimedia virtual spaces. The process involves four phases: introduction to linguistic autobiography and technologies, planning, creation, and group presentation with reflection. This approach promotes awareness of multilingual repertoires, intercultural competences, and shows the potential of immersive tools for active, learner-centered multimodal storytelling.

Key words: Digital Linguistic Autobiography, Metalinguistic Awareness, Immersive Environments, Multilingualism

1 Introduction

In recent years, linguistic autobiographies have emerged as a powerful pedagogical tool to enhance plurilingual competence and metalinguistic awareness among language learners.

Linguistic autobiography is a well-established reflective practice in language teaching, enabling learners to articulate their language histories while developing awareness of their multilingual repertoires. Traditionally presented in written or oral narrative form, autobiographies have recently evolved through the integration of digital media, multimodal storytelling, virtual embodiment, and Artificial Intelligence. Immersive platforms extend this evolution further, allowing learners to inhabit autobiographical space rather than merely recount it. This study examines how immersive tools support the construction of multilingual identity, and how the resulting linguistic output differs qualitatively from conventional autobiographical texts. It includes a case study from the University for Foreigners of Perugia to illustrate practical implementation and discusses implications for language education in the digital era, aiming to enrich scholarly dialogue on integrating personal narratives with innovative methodologies and technologies.

¹The paper was designed collaboratively by the authors. In particular, Letizia Cinganotto wrote paragraphs 4, 5, 6; Giorgia Montanucci wrote paragraphs 1, 2, 3.

2 Linguistic Autobiographies as Tools for Plurilingual and Metalinguistic Awareness

Linguistic autobiography, rooted in autobiographical pedagogy and narrative psychology (Demetrio, 1996; Bruner, 1992), centers on individuals' relationships with their languages. It encourages learners to reflect on their language experiences, fostering metalinguistic awareness, identity construction (Demetrio & Favaro, 2016), and intercultural competence, while also fostering empathetic communication (Cognigni, 2020; Siegel, 2021) and valuing their heritage languages, which are often marginalized in formal educational settings. Furthermore, linguistic autobiography serves as a valuable tool for de-invisibilizing students' identities and languages, making visible often overlooked linguistic and cultural experiences (Russo, 2022). This approach aligns with the recommendations of the Council of Europe, which has promoted the use of the European Language Portfolio (ELP) in schools (Council of Europe, 2000; MIM, 2005). It encompasses a tripartite focus including pedagogical, intercultural, and meta-reflective dimensions (Pisano et al., 2025) and represents evolving experiences that vary according to the language, the moment of acquisition, and the moment of narration (Pavlenko, 2007).

Linguistic autobiographies can take multiple forms, including narrative, questionnaire, or drawing, depending on learners' age, educational goals, and the designed learning activities. They have been extensively experimented with across diverse learning contexts, such as schools, academic settings with international students, and adult education (Serena, 2025; Duso, 2025). Accordingly, recent technological advancements offer promising opportunities for implementing immersive environments in the creation of linguistic autobiographies, which will be further explored in the following paragraph.

3 Digital Linguistic Autobiographies in Immersive Environments

Virtual worlds have been widely recognized in the scientific literature as powerful tools within Computer-Assisted Language Learning (CALL) (Dooly & Vinagre, 2022; Parmaxi, 2023). These immersive environments can offer learners emotionally impactful and authentic contexts that are crucial for meaningful language interaction and task performance (Cinganotto, 2019). In such spaces, language learners can navigate a 360-degree virtual environment, engage with the surroundings from a first-person perspective, and project their identity through avatars, digital personas that function much like characters in videogames. This hybrid setting merges digital artifacts and physical objects while integrating multisensory information, closely aligning with the concept of the metaverse (Wiederhold & Riva, 2022). A key advantage of these virtual worlds and metaverse environments lies in their capacity to generate factual, conceptual, and procedural knowledge that is fully transferable to corresponding social contexts (Dengel, 2022). Recent initiatives for Italian teachers and students, such as the immersive training initiative in "Edmondo", a virtual world

based on OpenSim technology created by INDIRE for foreign language learning and communication, have shown the possibility of building a bridge between gaming virtual worlds and social virtual environments (Cinganotto, 2017). As Wu *et al.* (2024) highlight, innovative technologies have inspired a new educational framework for language learning in the metaverse, based on five dimensions: transdisciplinarity, pedagogy, technology, actors, and learning.

The following table offers a comparative overview of three major approaches to linguistic autobiography, highlighting their respective modalities, forms of identity construction, and levels of output richness.

Tab. 1: *Comparative approaches to linguistic autobiography*

Approach	Modality	Identity Construction	Output Richness
Traditional Autobiography	Linear written text	Retrospective self	Medium
Digital Storytelling	Text + audio + visual	Sequential identity	High
Immersive Autobiography (VR)	Embodied 3D multimodality	Lived, navigable multilingual self	Very high + affective layered output

When applied to digital linguistic autobiographies, immersive environments like Spatial² can offer an innovative pedagogical context whereby learners can actively construct rich, multimedia representations of their plurilingual trajectories within virtual spaces. The situated, user-driven nature of virtual worlds can foster a reflexive learning process integrating personal narrative with social and digital interaction, thus extending traditional autobiographical practices into a multisensory, authentic framework that resonates with contemporary theories of situated and experiential language learning (Lan, 2020).

The subsequent section explores a case study of implementing digital linguistic autobiographies at the University for Foreigners of Perugia, with a focus on the integration of autobiographical narration into an immersive digital environment.

4 Implementing Digital Linguistic Autobiographies: A Case Study at the University for Foreigners of Perugia

Within the framework outlined above, a case study was conducted with a cohort of seven students enrolled in the Bachelor’s degree program in Digital Humanities for Italian at the University for Foreigners of Perugia. The activity centered on the creation of digital linguistic autobiographies, designed to engage students in reflective practices regarding their plurilingual experiences and metalinguistic awareness using immersive digital tools. The primary aim of the activity was to enhance students’ plurilingual and metalinguistic awareness through the design and reflection of linguistic autobiographies. Specifically, the task guided learners in producing a multimedia and multilingual self-narrative that visually represented their linguistic repertoires. At the same time, it enabled them to explore the affordances of Spatial for

²<https://www.spatial.io/>

constructing immersive narrative environments, thereby strengthening their digital literacies.

The activity was structured into four phases. The first phase introduced students to linguistic autobiography as a reflective and instructional practice, while familiarizing them with the features of Spatial.

During the second phase, students engaged in structured reflection to plan their autobiographies. They responded to guided questions about their birthplace, mother tongue, language use at home, effects of relocation, significant linguistic influences, acquired languages and contexts, key milestones, and associated emotions and challenges.

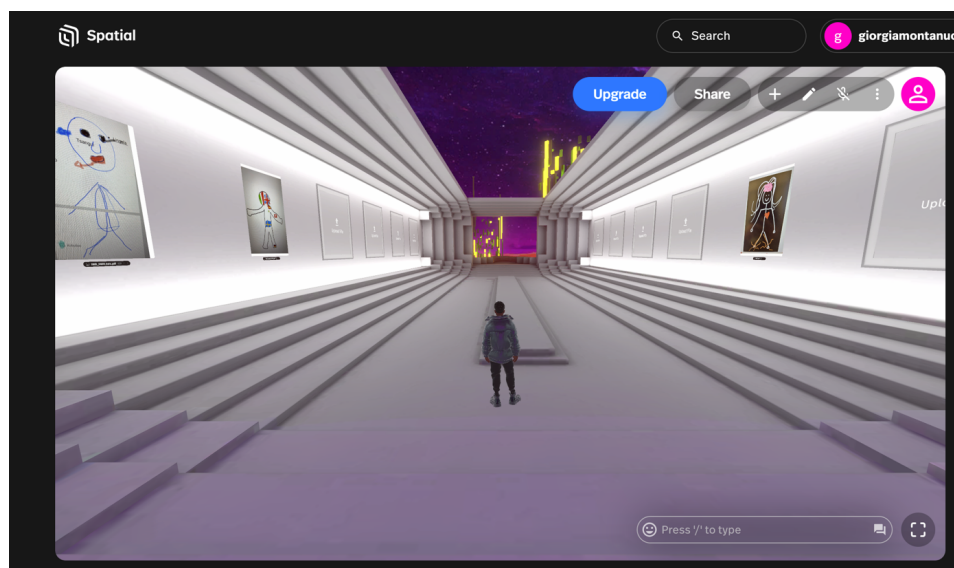


Fig. 1: Virtual space created by students for digital linguistic autobiographies in Spatial

In the third phase, students created immersive multilingual digital linguistic autobiographies in Spatial, working individually or in pairs. They represented their languages through drawings based on a stylized human figure, visually mapping their linguistic repertoires to deepen metalinguistic reflection and plurilingual awareness.

The final phase focused on presentation and critical reflection, during which students showcased their virtual autobiographies and explicated their drawings, including the specific body parts associated with each language. A teacher-led closing session then explored the usability and educational potential of Spatial, with guiding questions addressing which platform features facilitated or hindered the task and how such immersive tools might be employed for foreign language learning.

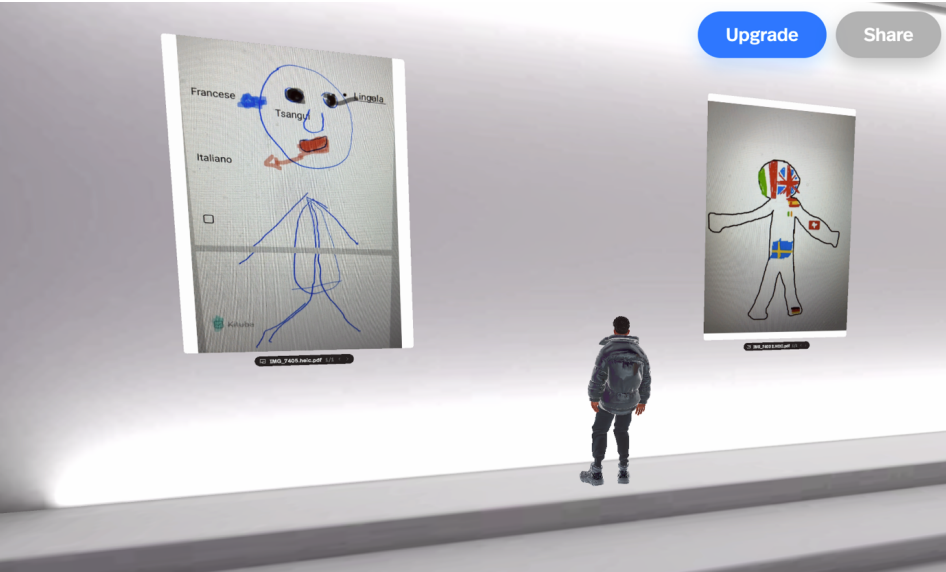


Fig. 2: Visual representation of a linguistic autobiography through drawing

Tab. 2: Workflow of the activity phases

Phase	Description
1. Introduction	Introduction to linguistic autobiography as a reflective practice; orientation to the core features of Spatial.
2. Reflective Planning	Guided reflection on students' linguistic histories (origins, languages acquired, key experiences, emotions). Planning supported by notes, digital materials, and preliminary access to Spatial.
3. Immersive Creation	Creation of immersive multilingual autobiographies in Spatial; visual mapping of linguistic repertoires onto a stylized human figure to foster metalinguistic and plurilingual awareness.
4. Presentation and Reflection	Presentation of virtual autobiographies; teacher-led discussion on the usability and educational potential of Spatial for language learning.

5 Results and Discussion

Following the completion of the task, a mixed-methods questionnaire was administered to collect participants' perceptions and feedback concerning the activity. This questionnaire incorporated both quantitative and qualitative elements to provide a multifaceted understanding of the educational experience. Specifically, the questionnaire included multiple-choice questions that gathered categorical data and open-ended questions, which were analyzed using thematic analysis to inductively identify recurrent patterns (Braun & Clarke, 2006).

The participants in the study, aged between 19 and 38 years, represented a diverse international cohort, including Chinese, French, Italian, and Spanish nationalities. All reported advanced proficiency in Italian, either as a second language or as native speakers. Notably, 85.7% of the participants indicated that they had no prior experience using immersive tools such as Spatial before engaging in this activity. The overall evaluation of the digital linguistic autobiography experience was predominantly positive, with responses clustering around “very positive” or “positive” assessments. When asked, using a 5-point Likert scale, to what extent the activity had facilitated reflection on their individual language learning journeys, the majority of participants rated the experience with a score of four, indicating considerable perceived effectiveness. Furthermore, 71.4% of learners reported an increased metalinguistic awareness as a direct result of participation in the activity.

The qualitative feedback gathered from participants reveals profound appreciation for the linguistic autobiography as both a reflective and identity-constructing tool.

Many students emphasized the activity’s capacity to foster self-awareness and metalinguistic reflection. One participant explained: “The activity allowed me to trace and revisit key moments that shaped my language learning journey”. Another participant stated: “I have seen my linguistic trajectory black on white, and it was particularly motivating, inspiring me to expand my multilingual repertoire over time”. A further respondent noted: “This autobiography helps us understand ourselves more clearly”, adding that “it highlights even minimal language competencies as integral parts of my linguistic self-perception”.

Regarding challenges, some participants pointed to the difficulty of summarizing a multifaceted linguistic biography succinctly. One learner commented: “Condensing a complex linguistic biography requires deep reflection, which is hard to express fully in short responses”. Another observed the evolving nature of an autobiographical perspective, explaining: “My linguistic autobiography changes over time; migration has reshaped how I reconstruct my linguistic profile”. A practical issue also emerged, as a participant remarked: “I couldn’t use a tablet for this activity; I needed a laptop for it to work properly.”

The open comments also highlighted the pedagogical and emotional value of the immersive platform. Learners described the tools as excellent, stimulating, and “fun” and emphasized their educational potential. One student reflected: “This experience touched my heart, because every language I have learned connects me deeply not only to the language but also to its cultural context”. Another student stressed the broader significance of such practices, noting: “Activities like this help us improve language learning in a meaningful and personalized way”.

6 Conclusion

This study demonstrates that immersive linguistic autobiographies generate a qualitatively distinctive form of narrative production when compared to traditional writ-

ten or digital storytelling formats. The spatial organisation of memory, the heightened density of metalinguistic reflection, and the presence of emotionally layered representations suggest that embodied virtual narration enables learners to develop a more articulated and experientially grounded understanding of their linguistic selfhood. Although the sample size remains limited, the findings indicate that immersive autobiographical practices foster narrative richness and support processes of multilingual identity consolidation.

Overall, immersive autobiographical narration emerges as a promising direction for multilingual research, assessment, and pedagogical innovation.

In conclusion, advancing this line of inquiry will require longitudinal and empirically grounded research that examines the durability of metalinguistic gains, the role of avatar embodiment in shaping linguistic and affective behaviour, and the extent to which narrative density may be anticipated from learners' initial self-positioning profiles.

Letizia Cinganotto, former Senior Researcher at INDIRE, Italy, is an Associate Professor of language education at the Università per Stranieri di Perugia, Italy, where she is also a Rectoral Delegate for International Relations and a member of the Board of Directors of the Centre for Language Evaluation and Certification (CVCL).

Giorgia Montanucci is PhD in Linguistics and Language Teaching at the Università per Stranieri di Perugia. She is a member of the Teaching and Learning Italian with AI Research Group. Her research focuses on technology-enhanced language learning, CLIL, and AI for language education.

References

- BRAUN, V., & CLARKE, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- BRUNER, J. S. (1992). *La ricerca del significato: Per una psicologia culturale*. Bollati Boringhieri.
- CINGANOTTO, L. (2017). English language, immersive teaching and game-based learning in a teacher training project promoted by Indire. *Form@re*, 17(1), 158–175. <https://doi.org/10.13128/formare-20172>
- CINGANOTTO, L. (2019). Gamification and virtual worlds for language learning. *Form@re*, 19(1), 133–148. <https://doi.org/10.13128/formare-24770>
- COGNIGNI, E. (2020). Le autobiografie linguistiche tra ricerca e formazione: Approcci e metodi di analisi. *Italiano LinguaDue*, 12, 406–418.
- COUNCIL OF EUROPE. (2000). *European language portfolio (ELP): Principles and guidelines*. <https://rm.coe.int/16804586ba>
- DEMETRIO, D. (1996). *Raccontarsi: L'autobiografia come cura di sé*. Raffaello Cortina Editore.
- DEMETRIO, D., & FAVARO, G. (2016). *Didattica interculturale: Nuovi sguardi, competenze, percorsi*. FrancoAngeli.
- DENGEL, A. (2022). Cos'è l'apprendimento immersivo? In *Proceedings of the 8th International Conference of the Immersive Learning Research Network (iLRN)* (pp. 1–5). IEEE. <https://ieeexplore.ieee.org/document/9815941>
- DOOLY, M., & VINAGRE, M. (2022). Research into practice: Virtual exchange in language teaching and learning. *Language Teaching*, 55(3), 392–406. <https://doi.org/10.1017/S0261444821000069>

- DUSO, E. (2025). Chi ha lingua in bocca, può andar per tutto: Studenti universitari stranieri e autobiografia linguistica in italiano L2. *Italiano LinguaDue*, 17(1), 511–551.
<https://doi.org/10.54103/2037-3597/29100>
- LAN, Y. J. (2020). Immersion, interaction and experience-oriented learning: Bringing virtual reality into FL learning. *Language Learning & Technology*, 24(1), 1–15.
<https://doi.org/10.64152/10125/44704>
- MINISTERO DELL'ISTRUZIONE E DEL MERITO. (2005). *L'Europa dell'istruzione: Parlare il mondo. Cittadinanza europea e educazione alle lingue. Il portfolio europeo delle lingue: Informazioni di base.*
- PARMAXI, A. (2023). Virtual reality in language learning: A systematic review and implications for research and practice. *Interactive Learning Environments*, 31(1), 172–184.
<https://doi.org/10.1080/10494820.2020.1765392>
- PAVLENKO, A. (2007). *Autobiographic narratives as data in applied linguistics*. Oxford University Press.
<https://doi.org/10.1093/applin/amm008>