

L2 as embodied ecology: language learning, care, and inclusion for migrants

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Abstract: Second language (L2) learning for migrants and refugees is an embodied and ecological process in which bodily, relational, and technological dimensions jointly contribute to the construction of belonging. This study presents the results of a national survey involving 168 educators engaged in L2 literacy. The findings highlight a strong preference for communicative and active methodologies, as well as the central role of digital technologies and blended learning in personalizing learning pathways and ensuring educational continuity. Key challenges concern cultural differences, emotional vulnerability, and gaps in teacher education. From an embodied perspective, L2 emerges as a relational practice that enables learners to inhabit new social spaces. The contribution proposes an integrated model grounded in pedagogical innovation, educational care, and inter-institutional collaboration.

Keywords: L2 literacy; embodied cognition; inclusive education

1. Introduction

For migrants and refugees, linguistic competence is not merely an educational goal but a key condition for social participation. Beyond labour market access, language enables self-narration, relationships, and recognition as active subjects within a shared social space. L2 literacy therefore cannot be reduced to a technical focus on grammar and vocabulary, but must be understood as a cognitive, biographical, and ethical-political process through which identities and forms of belonging are continuously renegotiated. From a poly-identity perspective, migration trajectories appear as evolving stories in which languages, cultures, and relationships intertwine, transforming uprooting into new forms of rootedness (Morin, 2021).

Educational systems supporting these processes, however, are marked by persistent tensions. Research highlights the effectiveness of communicative, active, collaborative, and blended approaches in addressing vulnerability and discontinuous biographies (Baldacci & Mariani, 2024; Damiani & Agrusti, 2020). Digital technologies can foster continuity and learning communities under conditions of mobility, yet they are not inherently inclusive. International debates on artificial intelligence emphasize the need for human-centred governance capable of aligning innovation with rights and social justice (Byram & Wagner, 2023; OECD, 2022; UNESCO, 2023), as poorly mediated digital solutions risk amplifying existing inequalities.

In this context, universities and third-sector organizations play a crucial role. Through their Third Mission, universities can integrate research, training, and social



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intervention (Giacconi et al., 2024; Piazza & Rizzari, 2019; Zoletto & Zanon, 2019), while third-sector actors engage directly with migrants' complex life trajectories, experimenting with inclusive practices (Riccio & Tarabusi, 2024). Educators act as mediators between institutional frameworks and lived experience, often working under conditions of fragmentation, limited professional development, episodic uses of technology, and weak psycho-social support (Cuconato & Signorini, 2024; Damiani & Agrusti, 2020; UNHCR, 2022).

Against this backdrop, the present exploratory study gives voice to teachers, educators, and third-sector practitioners involved in L2 literacy. It examines teaching methodologies, digital integration, obstacles, and forms of inter-institutional collaboration, asking how innovative strategies and technologies can enhance L2 literacy as a pathway to social and economic integration. L2 literacy is thus framed not merely as a skill, but as an embodied, relational, and environmental process in which bodies, technologies, relationships, and rights converge, opening the way to more humane forms of inclusion.

2. Theoretical framework

For refugees and migrants, L2 learning cannot be reduced to the acquisition of linguistic structures but unfolds as a continuous border-crossing across countries, work trajectories, temporary housing, institutions, and educational settings throughout the life course. At the intersection of language education, intercultural pedagogy, and educational technologies, L2 literacy emerges not merely as a curricular language distinct from the mother tongue, but as part of a broader process of humanization involving dignity, recognition, and the right to speak within a new social context (Baldacci & Mariani, 2024). From this perspective, language learning is intrinsically connected to conditions of mobility, vulnerability, and discontinuous biographies.

Research consistently highlights the effectiveness of communicative, collaborative, and experiential approaches in L2 education for migrants, as they foster learning environments where meanings are enacted, negotiated, and co-constructed through interaction (Cottini, 2016; Scardigno et al., 2018). Such approaches shift the focus of teacher education beyond methodological competence toward the capacity to design habitable learning spaces, integrate presence and distance, and sustain learners' cognitive and embodied participation under conditions of instability. In this sense, pedagogy is called to respond not only to linguistic diversity, but also to the fragility of life contexts in which learning takes place.

At the same time, migration and integration processes are increasingly shaped by globalization and technological change. Digital technologies and artificial intelligence influence access to education, citizenship, work, and everyday services, positioning linguistic competence as a gateway to both physical and digital environments (Cuconato & Signorini, 2024). Inclusive, personalized, and especially blended learning models thus play a crucial role in countering educational poverty and ensuring continuity in learning pathways (Baldacci & Mariani, 2024; Damiani & Agrusti, 2020). However, innovation is not inherently inclusive: without adequate linguistic and digital literacy, technologically mediated systems may reproduce or amplify existing inequalities, prompting calls for ethical safeguards and human-centred governance (OECD, 2022; Scardigno et al., 2018).

In the labour market, L2 competence enables migrants to understand contracts, access protections, and negotiate rights within increasingly precarious and platform-mediated employment contexts (Caroli Casavola et al., 2023; Chiaromonte et al., 2020). Across educational, social, and occupational domains, scholarship emphasizes that technological innovation must remain grounded in care, responsibility, and ethical orientation (Byram & Wagner, 2023; Mortari, 2022). European policies promote lifelong learning and hybrid methodologies to support continuity amid changing legal and living conditions (D'Agostino & Sorce, 2016; OECD, 2022), while universities, through their Third Mission, are increasingly involved in integrating education, guidance, and social support (Giacconi et al., 2024). Initiatives such as UNINETTUNO's University for Refugees (Carci & Caforio, 2019), ReGap (Damiani & Gomez Paloma, 2021), and START-ER (Campalastri et al., 2023) illustrate how blended learning and multidisciplinary care can effectively sustain inclusion.

Overall, continuing education emerges as a pathway of care that fosters skills, belonging, and poly-identity across the life course (Morin, 2021; Mortari, 2019). Within this horizon, L2 literacy is framed as an embodied and relational practice through which migrants can inhabit new social spaces. This conceptual framework provides the grounding for the empirical investigation presented in the following sections, which focuses on the perceptions and practices of university students who are also teachers working in blended L2 contexts (Xodo, 2020).

3. Methodology

The study adopted a mixed-methods design aimed at combining an overview of L2 teaching practices with attention to participants' professional experiences in migrant education contexts. The sample consisted of 168 teachers and university students enrolled in the Degree Programme in Primary Education Sciences and the TFA (Active Training Internship) at Link Campus University, all involved, directly or indirectly, in L2 literacy activities with migrants and refugees.

Quantitative data were collected through a structured questionnaire investigating teaching methodologies, the perceived role of digital technologies, and recurring challenges in ensuring continuity of L2 pathways. Data were analysed using descriptive statistics and relational matrices to explore associations among methodological choices, uses of digital tools, and reported practices, with particular attention to personalization and structural barriers.

Qualitative data were gathered through semi-structured interviews with a purposive subgroup of participants, focusing on relational and contextual dimensions of L2 teaching, such as perceived vulnerability, professional adaptation, and everyday pedagogical strategies. Qualitative materials were analysed thematically and used to support the interpretation of quantitative findings.

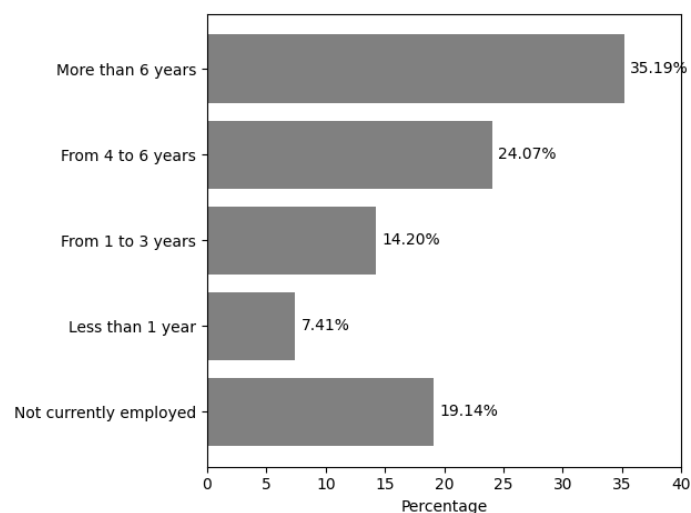
The study aims to identify prevalent L2 teaching strategies, examine the contribution of digital and blended approaches to educational and social inclusion, explore forms of collaboration between universities and third-sector organizations, and highlight structural factors affecting the effectiveness of L2 pathways for migrants.

4. Results

The data go beyond descriptive percentages, offering a picture of how L2 teaching for migrants and refugees is enacted in everyday practice. Participants'

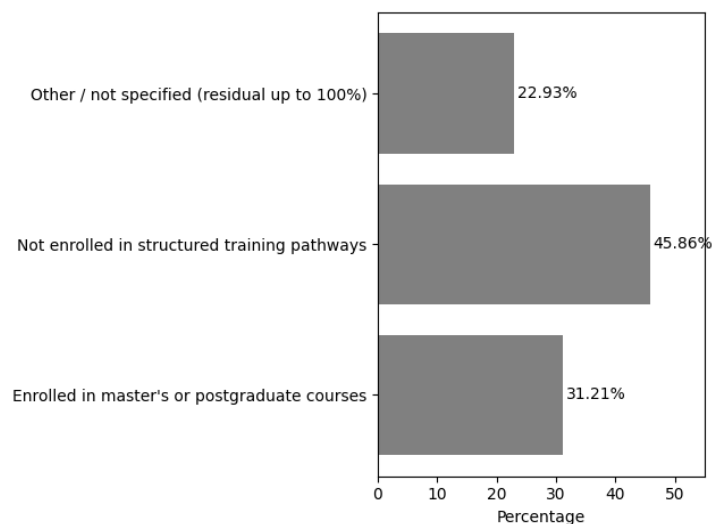
responses combine professional profiles, pedagogical orientations, uses of digital technologies, recurring challenges, and emerging directions of change. The sample is heterogeneous in terms of experience: 35.19% report more than six years of professional activity, 24.07% between four and six years, while early-career profiles and currently non-employed participants are also represented. Overall, the group reflects a composite configuration in which experienced and less experienced perspectives coexist, alongside diverse approaches to L2 teaching and varying familiarity with educational contexts (Figure 1).

Figure 1. Years of professional experience.



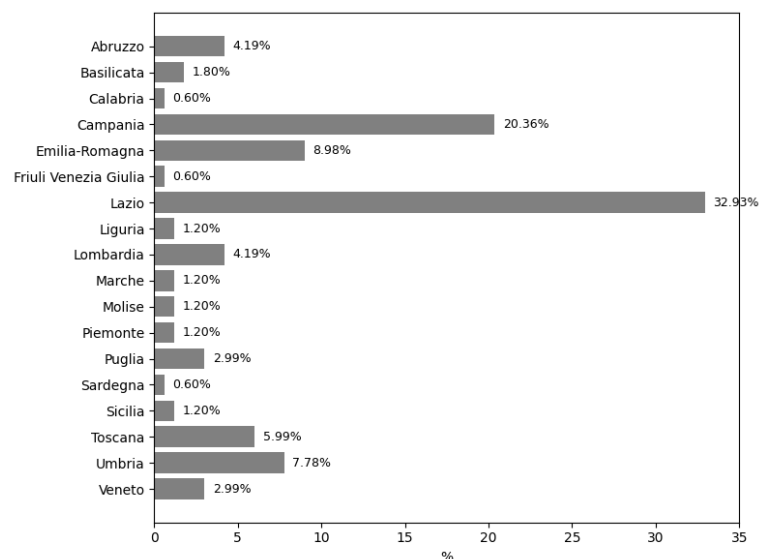
From a training perspective (Figure 2), the sample appears heterogeneous: 31.21% of participants are enrolled in master's programmes or postgraduate courses, while 45.86% are not currently attending any structured training pathways. When read in conjunction with years of professional experience, this finding suggests a need for continuing professional development that is not always met by adequate institutional responses, particularly for those who work on a stable basis within L2 contexts.

Figure 2. Current training status



The geographical representativeness, ensured by the participation of respondents from different Italian regions (Figure 3), provides a picture that is not confined to a single territory but is distributed on a national scale.

Figure 3. Geographical representativeness

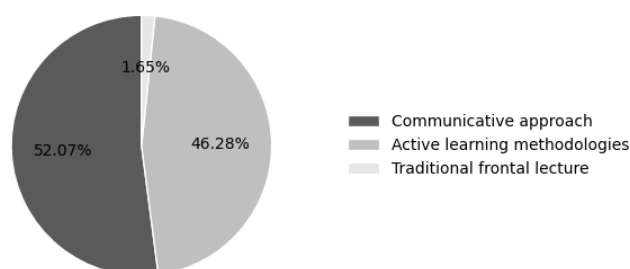


4.1. Teaching methodologies adopted

A central focus of the investigation concerns the methodological choices actually implemented in L2 pathways. The data indicate a clear prevalence of approaches that emphasize interaction, activity, and direct learner engagement. The

communicative approach accounts for 38.89% of the preferences, while active learning methodologies, such as collaborative projects, role-playing, and experiential activities, represent 34.57% (Figure 4).

Figure 4. Methodological choices in L2 pathways

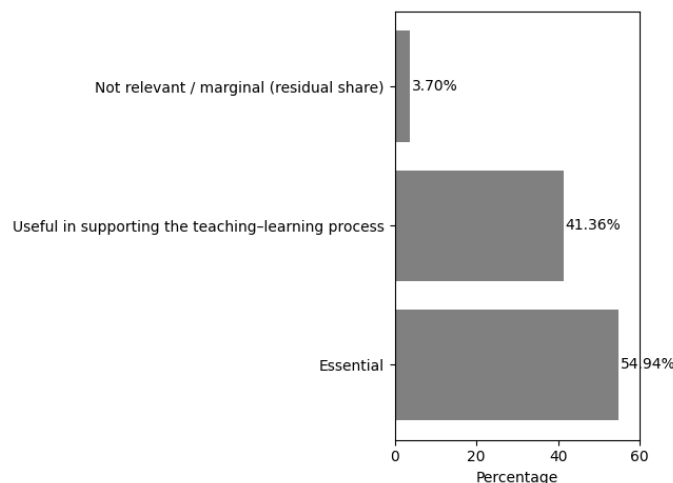


Traditional frontal lecturing is marginal, reported by only 1.23% of respondents, indicating a consolidated shift in perceptions of effective L2 teaching within culturally and linguistically heterogeneous contexts. Effectiveness is increasingly associated with meaningful communicative engagement rather than unidirectional content transmission. Accordingly, collaborative learning (51.23%) and personalized learning (27.78%) emerge as core pedagogical approaches, reflecting teachers' recognition of the need for differentiated pathways adapted to learners' biographies and competence levels. In the absence of a shared starting level, personalization is understood not as an optional strategy but as a necessary condition to prevent marginalization in the learning process.

4.2. The role of digital technologies

The use of digital technologies in L2 pathways is perceived by the vast majority of respondents as an integral component of educational work. More than half of the sample (54.94%) consider these tools essential, while 41.36% regard them as useful in supporting the teaching–learning process (Figure 5). Only a residual proportion does not attribute a significant role to them.

Figure 5. Perceived role of digital technologies in L2 pathways



A similar trend emerges in attitudes toward blended learning: 49.69% of respondents consider blended instruction to be fundamental, while 37.27% regard it as useful but not indispensable. What is increasingly taking shape is a model of instructional design that flexibly combines face-to-face moments with online activities, thereby ensuring continuity of learning even for those experiencing housing, employment, or family instability. For migrants and refugees, this translates into a greater opportunity to remain engaged in educational pathways, even when everyday life entails frequent mobility or sudden changes.

4.3. The challenges of L2 teaching

When moving beyond methodological choices and the tools employed, what becomes evident is the concrete weight of the challenges that permeate L2 contexts on a daily basis. The most frequently reported difficulty concerns the management of cultural and linguistic differences, indicated by 50% of respondents (Figure 6).

Figure 6 – Main challenges in L2 contexts.



L2 learning environments are characterized by pervasive linguistic and cultural diversity, with multiple languages, scripts, and symbolic systems coexisting within the same classroom. This complexity is intensified by the strong heterogeneity of learners' competence levels (18.18%), which makes the identification of a shared starting point largely impracticable. At the same time, institutional support is perceived as insufficient by a portion of the sample (8.44%), a finding that becomes particularly significant in light of the fact that 82.10% of teachers report no prior experience in teaching Italian to migrants, and only 16.67% have partial experience. These data reveal a structural tension in which L2 is recognized as crucial for inclusion, while teachers operate in highly complex contexts without specific training or adequate organizational recognition. Overall, plurality emerges not as an exception to be managed, but as the ordinary condition of educational work, requiring educators to continuously adapt their practices to prevent marginalization and exclusion.

4.4 The impact of L2 literacy on social and labour integration

The data highlight the central role of L2 literacy in migrants' lives, with 72.05% of respondents indicating a strong impact on access to employment, understood as the ability to navigate procedures, workplace communication, and rights. Digital tools are also seen as particularly supportive for vulnerable groups (49.69%), enabling flexible and continuous learning under unstable conditions. A further key finding concerns inter-institutional collaboration: 70.51% of respondents emphasize that stronger cooperation among schools, universities, and third-sector organizations could significantly improve L2 pathways. Overall, participants identify priorities such as pedagogically informed uses of digital technologies, stronger psycho-social support, and targeted teacher education. In this framework, L2 literacy is understood not only as a functional competence, but as a transformative and situated process that supports migrants' social participation and inclusion.

5. Discussion

The findings clearly highlight the central role of L2 literacy in shaping migrants' social and labour trajectories. More than 72.05% of respondents recognize that second-language competence significantly affects access to employment, not merely as linguistic knowledge but as the ability to understand administrative procedures, communicate effectively with employers, and navigate systems of rights and duties. In this sense, language emerges as a key resource for participation, agency, and social positioning (Baldacci & Mariani, 2024; Damiani & Agrusti, 2020).

At the same time, the data emphasize the enabling role of digital technologies, particularly for groups exposed to heightened vulnerability. Nearly half of the respondents (49.69%) underline how digital tools can provide concrete support for learners such as unaccompanied minors and refugee women, for whom educational continuity is often threatened by mobility, care responsibilities, and precarious living conditions. Flexible learning pathways, online resources, and the possibility of studying across non-conventional times and spaces thus appear as necessary conditions to prevent interruption and exclusion from learning processes (Cuconato & Signorini, 2024; Damiani & Agrusti, 2020).

A further and highly significant result concerns the collaborative dimension of educational systems. According to 70.51% of participants, stronger cooperation among schools, universities, and third-sector organizations could substantially improve L2 literacy pathways. This perception reframes language education as a shared responsibility embedded in a network of actors, rather than as the isolated task of a single institution, highlighting the importance of integrated and multi-level approaches to inclusion (Bocci, 2020; Damiani & Gomez Paloma, 2021; Giaconi et al., 2024).

Overall, the results point to several priority directions for action. First, respondents stress the need to strengthen the pedagogically informed use of digital technologies, not merely as technical supports, but as tools for personalizing learning, developing flexible materials, and maintaining contact with learners at risk of disengagement (OECD, 2022; UNESCO, 2023). Second, there is a clear call for more structured psycho-social support to accompany language learning. Especially in biographies marked by trauma or prolonged precarity, L2 acquisition cannot be reduced to a technical process, but requires contexts of educational care capable of addressing emotional, relational, and social dimensions (Campalastri et al., 2023; Mortari, 2023; Riccio & Tarabusi, 2024).

Finally, the findings consistently bring teacher education to the centre of the discussion. While the growing diffusion of communicative, active, and collaborative methodologies represents an encouraging trend (Cottini, 2016; Scardigno et al., 2018), it is not sufficient on its own. For L2 literacy to function as a genuine space of inclusion rather than as a collection of linguistic exercises, educators need targeted and continuous professional development. This includes preparation for managing cultural and linguistic diversity in everyday practice, using technologies in a pedagogical rather than purely instrumental way, and critically understanding both the potential and the limits of blended and personalized approaches (Baldacci & Mariani, 2024; Byram & Wagner, 2023).

From this perspective, L2 literacy emerges not merely as a functional competence, but as a transformative and situated process: a slow, relational form of work through which migrants can renegotiate their presence within the social space,

supported by educational practices that recognize difference, listen to it, and actively seek to turn it into a resource for learning and participation (Morin, 2021; Xodo, 2020).

6. Conclusion

This study conceptualizes L2 literacy as a relational and embodied practice rather than a neutral body of knowledge to be transmitted. Language emerges as a condition for voice, belonging, and access to social spaces, highlighting its pedagogical relevance in contexts of migration and mobility (Cottini et al., 2021).

The findings indicate that communicative, collaborative, and blended approaches support continuity in learning pathways under unstable life conditions, positioning digital technologies as relational tools rather than merely technical supports. At the same time, the study points to the structural fragility of L2 contexts, characterized by heterogeneity, discontinuous biographies, and uneven institutional support.

These results suggest that the transformative potential of L2 literacy cannot rely on isolated practices alone but requires structured training pathways and stable collaboration among schools, universities, and third-sector organizations. Within this framework, L2 literacy contributes to the humanization of social spaces, enabling migrants to inhabit new contexts through language within relationships of educational care.

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