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BRIDGING COMMUNICATION GAPS IN HEALTHCARE THROUGH MEDIATION: THE PULSE 2.0 BEST PRACTICE[1]

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Abstract: Mediation represents a process in which language serves as a tool for constructing and negotiating meaning, essential for social participation and the communication dynamics associated with it (CoE 2020). The right to health is one of the main pillars of social security systems in European countries with democratic traditions (Fondazione ISMU ETS 2024: 103). In the healthcare sector, mediation emerges as a core competency, particularly as globalization and global migration over the past two decades have led to increasing numbers of professionals – including physicians, nurses, nursing assistants, and caregivers – relocating across the globe. However, in the processes of language assessment, mediation has long been overlooked or reduced to written or oral interaction, as well as to practices such as interpreting and translation (Barni and Machetti 2006). In this context, the spread of the Learning-Oriented Assessment (LOA) model (Purpura and Turner 2018), now also applied to L2 Italian within Scenario-Based Assessment (Purpura 2021), represents an innovation. This approach makes it possible to integrate mediation into multimodal mechanisms, leveraging both technological tools and the dynamics of interactive communication. This study examines best practices and challenges in linguistic and cultural mediation within healthcare settings, using the Erasmus+ PULSE 2.0 project, a European consortium, as a case study, with a particular focus on its application in Italy. The project was designed to enhance language, communication, and intercultural skills essential for medical workplaces in the nursing and caregiving sectors. Adopting an LOA approach, PULSE 2.0 accounted for the multiple factors involved in language use and treated assessment as interrelated with learning and teaching across defined dimensions.

[1] This text is the outcome of a joint reflection, and the bibliographic research was likewise conducted collaboratively. Responsibility for the individual sections is as follows: sections 1 and 2, together with their subsections (2.1 and 2.2), were authored by Sabrina Machetti, whereas sections 3, 4, 5, and 6 were authored by Giulia Peri.

Within this framework, it integrated mediation as a central component, offering an innovative model for addressing these complex competencies. The PULSE 2.0 project developed two key tools: a language assessment tool measuring proficiency in healthcare contexts and a digital learning tool for self-training. These tools have improved healthcare professionals' linguistic and intercultural competencies, enhancing employability and communication in diverse medical settings.

Keywords: mediation; healthcare; technology; L2 Italian; language learning and assessment.

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1. Introduction

Mediation is a process in which language enables communication and learning through (co)constructing meaning, interpreting texts, and conveying ideas, and is essential for social participation (CoE 2020).

Analysed within the communicative dynamics of new global societies – characterized by evolving linguistic and cultural trajectories and repertoires (Piccardo 2022) – mediation emerges not only as something that requires recognition and conscious management, but also as a process demanding continuous adaptation to diverse contexts (Machetti and Siebetcheu 2017). Among these, the healthcare setting stands out, where the right to health should represent one of the main pillars of social security systems in European countries with democratic traditions (Fondazione ISMU ETS 2024: 103).

Those who have studied the healthcare sector have repeatedly highlighted how mediation emerges as a core competency – particularly as globalization and global migration over the past two decades have led to a growing number of professionals, including physicians, nurses, nursing assistants, and caregivers, relocating across the globe (Gavioli 2009; Baraldi and Gavioli 2022). These same studies clearly show that the complexity of communicative dynamics is not necessarily linked to the presence of citizens with a migrant background and, in many cases, represents a real obstacle to the exercise of the right to health.

This contribution explores best practices and challenges in linguistic and cultural mediation in healthcare, using the Erasmus+ PULSE 2.0 project – a European consortium – as a case study, with particular attention to its application in Italy. The project is designed to enhance language, communication, and intercultural skills essential for medical workplaces in the nursing and caregiving sectors. What makes PULSE 2.0 particularly innovative is its integration of technology not merely as a support tool, but as a structural component of the learning and assessment process. Mediation is not treated as an abstract communicative activity, but as a situated, multimodal and teachable practice. This integration of technology, learning, assessment and mediation represents a novel and impactful approach, particularly within the healthcare sector, and will be explored in detail in the following sections.

2. Mediation

2.1. Mediation activities and strategies

In the field of linguistic sciences, the conceptualization of mediation as a fundamentally semiotic activity has only emerged relatively recently (Machetti and Siebetcheu 2017). This focus is central to the most important document on European language policy, the Common European Framework of Reference for Languages. Learning, Teaching, Assessment (CEFR; CoE 2001) and in the more recent CEFR Companion Volume (CEFRCV; CoE 2020), which represents the expansion and enrichment of the CEFR. Both the CEFR and the CEFRCV consider mediation as an essential and irreplaceable component in the processes of

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constructing and negotiating meaning and sense, and they discuss its characteristics, which go well beyond a merely instrumental function.

In mediation, the user/learner acts as a social agent who builds bridges and conveys meaning within or across languages. Language plays a key role in creating spaces for communication and learning, collaborating to construct meaning, supporting understanding, and appropriately sharing information in social, educational, cultural, linguistic, or professional contexts (CoE 2020: 90). From this definition, it follows that the use and learning of a language – through interaction with other sign systems and contact with other languages – requires users/learners to engage in three mediation activities (*ibid.*: 91):

a) of texts, which "involves passing on to another person the content of a text to which they do not have access, often because of linguistic, cultural, semantic or technical barriers";

b) of concepts, which facilitates "access to knowledge and concepts for others, particularly if they may be unable to access this directly on their own";

c) of communication, which is essential to "facilitate understanding and to shape successful communication between users/learners who may have individual, sociocultural, sociolinguistic or intellectual differences in standpoint".

Together, these processes underpin communication across the diverse settings in which it occurs. Without them, communicative effectiveness – always dependent on the situation – is at risk, potentially leading to misunderstanding or breakdown. When viewed in this way, mediation emerges as a 'normal' process, inherent and integral to communication, insofar as it enables the production, transmission, and negotiation of meaning. As Machetti and Siebetcheu (2017) argue, to communicate is to mediate, and this holds true whether communication occurs among users/learners who share the same language and culture or among those with different linguistic and cultural repertoires. Drawing on Vedovelli's (2019) notion of a global (Italian) linguistic space and considering the various communicative dynamics that unfold within it, mediation can be described as a process that defines and traverses this space. It involves multiple actors and therefore engages a variety of domains, contexts, and levels of competence. The linguistic space is conceived as a model of both individual competence and collective usage. It is no longer conceived as the gradual progression toward more advanced linguistic levels within a single norm shaped by the values of the dominant group, but rather as the ability to select appropriate usages, and thus reference norms, according to the contextual conditions of the communicative event (Machetti and Vedovelli 2012: 188).

This perspective aligns closely with what is proposed in the CEFRCV, which conceptualizes mediation as a set of activities and strategies that vary according to the user/learner's level of linguistic-communicative competence and their specific communicative needs. This diversification follows the CEFR model, unfolding along two dimensions: vertically, as a sequence of levels that describe the learner's competence, and horizontally, as the domains of use, communicative contexts, skills, and text types involved (Vedovelli 2010: 64). It is presented as a component that can be taught, learned, and assessed. Mediation activities span the various dimensions of the linguistic space, but their macro-

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characteristics in terms of knowledge and know-how are shaped by interaction with the context and vary according to its specific features.

In the healthcare context, *mediating a text*, understood as conveying specific information and explaining data takes shape, for example, in relaying:

a) information on times, places, etc. from announcements or written artefacts (e.g., an announcement in an emergency room, an email communicating the date, time, and location of a medical appointment);

b) sets of directions or instructions (e.g., directions for reaching a hospital department);

c) specific, relevant information from informational texts like brochures, or from longer, complex texts such as medical reports or discharge letters.

Mediating a text can also involve selecting and explaining empirical data, for instance by interpreting the salient points from a blood test or an X-ray report. It may also mean processing text, which may take the form of:

a) summarising the main points in a source text (e.g. the diagnosis and prognosis provided by a doctor after an outpatient consultation);

b) collating such information and arguments from different sources (e.g. a conversation with the doctor / with a colleague and the discharge / handover letter after a hospital stay or at the end of a work shift);

c) recognising and clarifying to the recipient the intended audience, the purpose and viewpoint of the original (e.g. understanding the possible treatment options proposed by a doctor).

In addition, in healthcare settings with many patients from migrant backgrounds, *mediating a text* may require translating written material, providing an approximate version that captures essential information and, in some cases, nuances. For those training for healthcare professions or already working in this field, *mediating a text* can also mean note-taking (during lectures, seminars, meetings, etc.), even when starting from different levels of competence in the language of the source text. This may range from recording information as simple bullet points, to noting what appears important, to selecting what to include or omit.

A similar reflection applies to mediation understood as an activity aimed at *mediating concepts, facilitating collaborative interaction with peers, and collaborating to construct meaning*. In the healthcare context, these activities primarily involve staff members (nurses, doctors, healthcare assistants, etc.) who engage in collaborative participation by consciously managing their own role and contributions to group communication. They include orientating teamwork by reviewing key points and defining next steps, using questions and contributions to move the discussion forward productively; and balancing turn-taking to ensure that individual input complements that of other group members. When mediation is understood as *collaborating to construct meaning*, the focus shifts to cognitively framing collaborative tasks by agreeing on aims, processes and steps; co-construct ideas and solutions; eliciting and examining others' reasoning to identify inconsistencies; and summarising discussions while defining next steps. The CEFRCV views mediation as managing interaction, including leading activities, facilitating communication, reorienting discussions, and encouraging conceptual talk to build coherent, logical discourse.

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Finally, *mediating communication* involves practices that, while often routine in healthcare, gain particular significance when citizens with a migrant background are involved as patients or professionals. Central to these activities is the interplay of different levels that supports mediation fostering a pluricultural space. This entails promoting understanding of cultural norms, showing sensitivity and respect for diversity, and addressing misunderstandings arising from sociocultural or linguistic differences. Similar practices occur in informal contexts, such as conveying or summarising messages. In delicate situations, mediation focuses on exploring differing viewpoints, building common ground, and facilitating perspective shifts toward mutual understanding or resolution.

Every mediation activity requires the activation of *strategies* that are appropriate to conventions, conditions, and constraints of the communicative context (CoE 2020: 117). Such strategies include *explaining a new concept* (by linking to prior knowledge, adapting language, or breaking down complex information) and *simplifying a text* (by amplifying a dense passage or streamlining its content). In healthcare, these strategies can be observed, for instance, in conversations between colleagues that draw on shared knowledge; in doctor–patient interactions where the doctor adopts a lower register than with a colleague to ensure understanding; or when highly technical language is adapted to a style more typical of everyday conversation.

2.2. Mediation and technology

Although technology plays a significant role in mediation, the relationship between the two remains relatively underexplored. In this study, technology is not interpreted merely as support for a process or as a tool to facilitate activities and strategies, but as an integral component of the construct itself. It is therefore treated as something to be learned, taught and assessed. Whenever we communicate within a language use domain – such as the healthcare sector – we inevitably engage multiple dimensions of language ability (see Purpura 2024), whether consciously or not. Among these, the technological dimension has become increasingly central. It is no longer an external add-on, but a core element in the construction and negotiation of meaning. This view is consistent with the LOA model (Turner and Purpura 2016; Purpura and Oh 2024) and the SBA approach (Banerjee 2019; Purpura 2021), and more broadly with frameworks that view language learning, teaching, and assessment as processes whose construct includes technology (Purpura 2016; Chapelle and Voss 2017). Following this view, technology is tied both to the efficiency of technical achievements and to the ways it intersects with other factors in the educational process. This is particularly evident in learners' digital and computer literacy skills, which are now fundamental components of communicative competence in professional settings. The notion of technology here is broad, encompassing uses in learning, teaching, and assessment, from audio and video recording equipment, statistical software, and data-management systems to advanced applications, such as speech recognition and natural language processing, which are increasingly used in language education and testing.

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This perspective is further enriched by viewing language learning, teaching, and assessment as mediation processes (Machetti and Siebetcheu 2017; Dendrinos 2024). From this standpoint, language competence can be seen as a gradual process of constructing knowledge and know-how, where systematicity is in constant dialogue with transience. Although this transience makes such competence inherently unstable, it also enables its continuous development. The outcome of this process – namely the learner's evolving abilities to understand, produce, and mediate meaning – unfold along a learning continuum where mechanisms of regular creativity must be balanced with those of irregular creativity. The interplay of these two forces renders linguistic processing largely unpredictable and uncontrollable. This perspective helps explain why encountering a new language involves continuous acts of mediation, and why the learner can be understood as a learner–mediator.

Mediation is also central to teaching processes, particularly in the sense highlighted – provocatively – by Vedovelli (2008), who argues that language is not much taught, but rather offered or gifted. In this view, the teacher is not merely a transmitter of informational content but a mediator of the communicative flows that shape the language classroom. Acting as a mediator, the teacher increases the communicative density of the classroom environment by stimulating learners' interests, supporting the discovery of their 'hidden' competences, and strengthening those already visible and active.

This view also extends to assessment, which is inseparable from learning and teaching (CoE 2001). Assessment, too, can be regarded as a form of mediation, activated through the selection of elements (in both their regular and irregular manifestations) relevant to learning, the design of activities that engage learners in recognising and managing these elements, and the collection of evidence that underpins the assessment process.

As Dendrinos (2024: xviii) points out, mediation tasks usually require test-takers to extract information needed to complete a given task and to use it purposefully in producing a new text in the target language. This new text often differs from the source in communicative purpose, genre, semiotic mode, and discursive environment. Successful performance requires mediation literacy: learners, as test-takers, must be able to select only the information relevant to the task, relocate it in a new discursive context, and articulate it in genre-specific language in order to create new meaning.

In contemporary contexts, these processes are increasingly designed, performed, and assessed in digital environments. Digital platforms, online resources, and assessment tools not only provide the environment in which mediation occurs, but also shape its very forms, influencing how learners, teachers, and assessors enact their roles. In this sense, technology becomes an inseparable dimension of mediation in both education and professional domains such as healthcare. This conceptualisation of technology as an integral dimension of language learning, consistent with the LOA and SBA, will be further elaborated below with particular attention to its relevance for PULSE 2.0 (see 4.2).

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3. Mediation in the healthcare context

A recent report by the International Organization for Migration (IOM 2022: 7) highlights that the right to health is a universal human right recognised by the Universal Declaration of Human rights and protected by international and regional treaties. The 1966 International Covenant on Economic, Social and Cultural Rights recognises "the right of everyone to enjoy the highest attainable standard of physical and mental health" (Art. 12). The detailed General Comments to the Covenant adopted by the United Nations Committee on Economic, Social and Cultural Rights (CESCR) establish that State parties, including all EU Member States, must ensure that the right to health is respected. The right to health applies to everyone "including non-nationals, such as refugees, asylum seekers, stateless persons, migrant workers and victims of international trafficking, regardless of legal status and documentation" *(ibid.*).

The same report also emphasizes how the "access to health and care should be granted also through digital tools and services to improve prevention, diagnosis, treatment, and monitoring" (*ibid.*). As a consequence, "unequal access to digital technologies and poor intercultural digital communication risk becoming barriers to health access" (*ibid.*).

Linking the right to health with the right to access and use technology is particularly significant in the healthcare sector. This link is closely tied to the characteristics of the target population, which is increasingly diverse in terms of linguistic and cultural backgrounds, specific needs, and in the ways these can be expressed and ultimately addressed.

Recent studies have shown that the healthcare sector faces significant challenges arising from rapidly evolving technologies and growing patient expectations, and that disagreements between patients or their families and medical professionals are frequent in daily practice (see, for instance, Dimitrov and Miteva-Katrandzhieva 2024). These difficulties become even more acute when the user is of foreign origin (Lebano *et al.* 2020), due to a range of factors, including limited linguistic–communicative competence in the language of the healthcare setting, which create considerable potential for misunderstanding. Machetti and Siebetcheu (2017) identify at least five distinct levels at which misunderstanding may arise: the pre-linguistic, linguistic, metalinguistic (or semiotic), cultural, and metacultural. Each of these is linked not only to socio-cultural barriers but also to socio-economic and legal–administrative obstacles. Many authors consider conflicts in healthcare to be inevitable, underscoring its growing significance (Jameson and Albada 2013). Without competent and timely management, however, disputes can have severe consequences for healthcare institutions, staff, and, above all, patients. If conflict stems from communication, and if communication is closely tied to mediation, then managing conflict and misunderstanding in healthcare can, at least in part, be achieved through mediation – and, by extension, by facilitating access to digital technologies. Unsurprisingly, the EU's Digital Strategy designates health as a priority sector for harnessing digital technologies to improve quality of life.

In healthcare, mediation can be understood as the interaction of multiple actors, each seen as a universe of microsystems that together form

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interconnected ecosystems. It takes shape in the dynamic relationships between doctors, nurses, and healthcare workers, as well as in the exchanges between medical staff and patients and their families, all of whom are integral to the care pathway. Within this pathway, trained mediation professionals with technical, linguistic, and cultural competences can provide valuable support. This work may include in-person or on-call intervention (scheduled or urgent); front office activities such as welcome desks, guidance, and patient support within the healthcare facility; back office tasks such as administrative services, translation of written documents in paper or digital form, management of correspondence, and coordination with patients and foreign healthcare institutions; and remote support through telephone or video interpreting.

However, the presence of healthcare professionals with adequate digital skills and with linguistic and cultural awareness in the care of patients could prove to be crucial. The PULSE 2.0 project precisely aims to strengthen this presence and does so in the ways and terms that will be analysed below.

4. Case study: the PULSE 2.0 project

4.1. Case study context

Building on the discussion above, the emerging needs of stakeholders in the healthcare sector include mediation to foster mutual understanding between professionals, patients, and families in increasingly plurilingual and pluricultural contexts, along with the integration of digital technologies to support both patients and professionals. Responding to these demands, the Erasmus + project PULSE 2.0 (2019–2022) "Assessment of language and communication skills for foreign nursing assistants and caregivers" sought to interpret mediation as a dynamic, situated, and multimodal competence, particularly relevant in complex professional contexts such as healthcare.

As the name suggests, PULSE 2.0 is the continuation and expansion of a previous Erasmus + initiative (2016–2018), PULSE "Language and Communication Skills for Foreign Nurses", which brought together partners from six European countries (France, Bulgaria, Italy, the Netherlands, Romania, and Spain) (https://pulse-project.eu/pulse/). The original project (PULSE) was specifically aimed at supporting nurses working, or intending to work, in foreign healthcare systems, by developing innovative methodologies tailored to the specific communicative demands of multicultural clinical environments.

This study builds on that experience by focusing on how PULSE 2.0 implemented mediation as a core communicative competence in healthcare practice. The following section provides an overview of PULSE 2.0, outlining its objectives, structure, and main outcomes.

4.2. The PULSE 2.0 project overview

PULSE 2.0 advanced the original PULSE approach both conceptually and practically, shifting the focus from nurses to nursing assistants, caregivers, and

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comparable professional figures, which vary across national systems. In Italy, for instance, these correspond to OSS (*Operatori Socio-Sanitari*). Compared to the original project, PULSE 2.0 adopted a more integrated model that strengthened language, communicative, and intercultural competences relevant to professional practice in medical and care-related settings. Its overarching objective was to improve employability and support labour mobility across Europe, while simultaneously enhancing the quality and responsiveness of healthcare services operating in increasingly diverse, multilingual, and multimodal contexts. Implemented by a consortium of partners from Sweden, the Netherlands, Italy, Romania, and Austria, PULSE 2.0 addressed contemporary challenges by designing, piloting, and validating workplace-oriented language learning and assessment tools targeted at lower-skilled healthcare professionals, and by focusing on three key languages – Swedish, Italian, and German – within the specific professional contexts in Sweden, Austria, and Italy. In parallel, it ensured autonomous access to digital learning resources and testing instruments, fostering flexible learning pathways and self-directed competence development. Furthermore, the project aimed to facilitate the modernisation of practices in language education within the vocational education and training (VET) sector, while also raising awareness of the importance of inclusion, and of cultural and linguistic diversity in current healthcare environments. Within this framework, PULSE 2.0 addressed multiple stakeholders: healthcare workers already in mobility or planning to move across borders, training providers offering vocational education tailored to the healthcare sector, and employers seeking to meet the challenges of an increasingly multilingual and multicultural workforce.

The University for Foreigners of Siena was the Italian partner in the consortium for both PULSE and PULSE 2.0. For the latter, it was in charge of developing the assessment tool, among other tasks.

4.2. The theoretical framework behind PULSE 2.0

To integrate mediation into the multimodal dynamics of contemporary healthcare communication, the project adopted the LOA framework mentioned earlier, combining technological tools with the interactive nature of professional communication. According to Turner and Purpura (2016), LOA involves multiple, highly interrelated dimensions of language use. In a more recent contribution, Purpura (2024) identifies eight distinct dimensions within the LOA framework. The first is the *contextual dimension*, which considers the broader sociocultural and institutional setting in which the LOA event is situated, including real-world communicative competencies and external standards. The *affective dimension* addresses learners' psychological, social, and behavioural dispositions that may influence engagement and performance. The *social–interactional* dimension focuses on the "social contract" (*ibid.*: 36) that governs interactional practices and communicative roles. The *instructional dimension* concerns the role of input, assistance, feedback, and explicit instruction embedded in the learning-assessment process. The *socio-cognitive dimension* is grounded in contemporary understandings of the brain's architecture and

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functioning, emphasizing distributed, situated, and embodied cognition. These five dimensions are understood as performance moderators, in that they shape and influence how learners engage with tasks and demonstrate their competencies. In contrast, two dimensions are identified as performance indicators. The *elicitation dimension* involves the design of assessment tasks, including blueprints, specifications, delivery, and administration procedures. The *proficiency dimension* refers to learners' performance relative to theoretical models of language competence, such as SFL-based proficiency frameworks, standards, and learning progressions.

Among the eight dimensions proposed by Purpura (2024), two are particularly relevant to this study. The first is the technological dimension, identified as a performance moderator and already noted as integral to learning and assessment processes in PULSE 2.0. The second is the social–interactional dimension, which is key to understanding how mediation operates in real-world communication. In fact, the social–interactional dimension plays a central role in how mediation is enacted and co-constructed (see also CoE 2020). As Purpura and Turner (2018) noted, this dimension accounts for key features of discourse organization (topic management, turn-taking, repair, preference structure, and feedback) that directly influence the flow and effectiveness of communication. These elements are not only functional but also carry deep social and identity-related implications.

In light of this, the project has developed two key digital tools:

1. An online interactive assessment tool, designed to measure language proficiency in occupational healthcare contexts across three languages (Swedish, Italian, and German) tailored to relevant professional levels and communicative tasks.
2. A digital learning platform, offering a full package of online preparation materials. These can be used in both structured vocational education and training (VET) settings and for self-guided learning, fostering autonomy and flexibility in skill development.

4.3. Tools developed within PULSE 2.0

More in detail, the PULSE 2.0 Assessment Tool has been designed to target the B1 level of the CEFR and is aligned with the communicative needs identified through a transnational research study conducted within the project (PULSE 2.0 Consortium 2022). Based on the findings of this research, the assessment tool focuses on communication in occupational healthcare settings, with particular attention to domains such as elder care, hospital care, and home care. As these environments are among the most common destinations for foreign OSS (for the Italian context) and caregivers, the test content was designed to reflect realistic workplace scenarios (see Pill 2013). The assessment tool is structured around five professional scenarios, each representing a typical workplace situation: Nurse's Instructions, Dressing Wounds, Inform a Colleague, Home Care Plan, and Cause of Pain. Each scenario includes four integrated assessment tasks, designed to assess a combination of receptive and productive skills; specifically, listening paired with writing, and reading paired with writing. Although speaking is of

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undeniable importance in healthcare communication, it was not included in the assessment tool for practical reasons (practical reasons include, first, the need to ensure full open access to the tool for the widest possible audience without requiring advanced digital infrastructures; and second, the project's limited technological resources at this stage, which relied only on a website). The tool is not intended as a large-scale test but as a flexible resource that can be used either independently, to assess partial competences, or under teacher guidance. In the latter case, teachers, who have full access to the same open and freely available project materials as learners, can integrate oral interaction into the assessment process.

Test-takers are invited to actively engage in each virtual scenario by impersonating one of the main characters involved in the interaction. An example of this is shown in Fig. 1.

Figure 1. Pulse 2.0 Assessment Tool – example of instruction[2]

This immersive, role-based format enhances the situated nature of the assessment and mirrors the kinds of communicative challenges caregivers face in their daily professional routines (see Douglas 2000; Basturkmen and Elder 2004). Throughout the process, test-takers are supported by a virtual instructor, who provides step-by-step audio and written instructions, ensuring clarity and guidance.

Therefore, the PULSE 2.0 Assessment Tool addresses core communicative modes, consistent with both CEFR and LOA principles: reception (listening and reading), production (writing), interaction and mediation, including online interaction. To support both assessment and learning, the project developed a syllabus based on CEFRCV descriptors, tailored to the needs of nursing assistants and caregivers. These descriptors align test tasks with learning objectives, reflecting the principles of LOA.

The PULSE 2.0 Learning Tool is structured in units and includes case-based exercises to develop listening, reading, grammar, and vocabulary skills in professional contexts. Each unit also integrates sociocultural content relevant to the host country, promoting intercultural awareness. Content is focused on real-life healthcare situations, such as providing personal care, understanding medical documentation, and using workplace-appropriate language, ensuring that learning is practical, contextualized, and directly linked to the communicative demands of the job. In Fig. 2, an example from Unit 2 of the PULSE 2.0 Learning Tool is shown, illustrating the introductory text of a unit. In

[2] Eng. "Mrs. Giorgi, a resident of the nursing home (RSA) where you work, has fallen. The nurse has just received the documents describing the patient's condition. Take a look at the documents as well." The translation from Italian into English is provided by the authors of this paper.

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this case, the text is followed by an explanation of modal verbs, accompanied by related exercises to reinforce understanding and practical application.

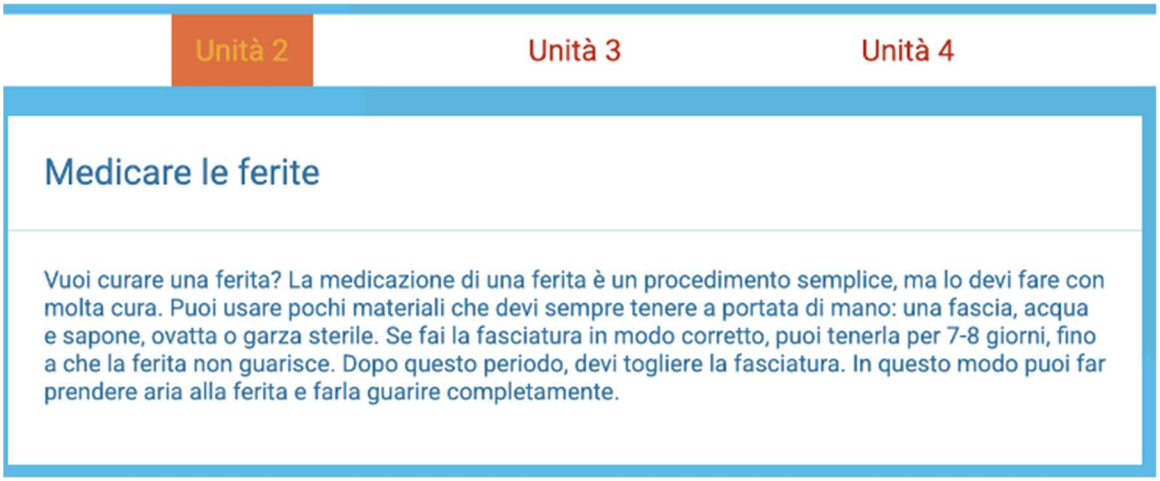

Figure 2. Pulse 2.0 Learning Tool – example of the introductory text of a unit[3]

To guarantee this real-life relevance, the consortium conducted surveys in all partner countries and complemented them with desk research, which included the review of relevant literature, the analysis of national regulations concerning these professional figures, and the identification of best practices (PULSE 2.0 Consortium 2022).

In sum, by embedding these tools within a LOA framework and linking them to real-world communicative practices, PULSE 2.0 presents mediation not as a marginal add-on, but as a core, assessable, and teachable competence. In doing so, it offers a robust and transferable model for professional language development in the healthcare sector. Both tools are digitally delivered, multi-device compatible, and intended for autonomous and guided use, promoting accessibility, flexibility, and lifelong learning. Test prototypes have been piloted and validated with stakeholders and have been released as Open Educational Resources (OERs), reinforcing the project's commitment to open access and sustainability.

5. Evaluation of the PULSE 2.0 tools in the Italian context

Over the two years of project implementation, PULSE 2.0 carried out an extensive and strategically structured dissemination effort across the five participating countries. In total, the partnership conducted 152 dissemination activities, reaching more than 100,000 individuals and informing 5,575 organizations about the project. Over 1,000 representatives of the core target

[3] Eng. "Do you want to treat a wound? Dressing a wound is a simple procedure, but you must do it very carefully. You can use a few materials that you should always keep within reach: a bandage, water and soap, cotton wool or sterile gauze. If you apply the bandage correctly, you can keep it on for 7–8 days, until the wound heals. After this period, you should remove the bandage to let the wound breathe and heal completely." The translation from Italian to English is provided by the authors of this paper.

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groups were engaged directly through meetings and presentations, while 302 stakeholders participated in multiplier events across partner countries. The project's online presence also proved effective, with over 14,000 page views and 2,466 unique visitors registered on the official website. Although these figures do not directly measure tool use, the dissemination effort was essential to ensuring that the resources reached their intended audiences and could be piloted effectively. In fact, the PULSE 2.0 tools were piloted and evaluated across the five partner countries through a structured system of questionnaires developed within the project. As part of the evaluation process, the PULSE 2.0 consortium developed and distributed a validation questionnaire to gather structured feedback on the syllabus from relevant stakeholders in Italy. The questionnaire aimed to evaluate the clarity, relevance, and completeness of the proposed syllabus, which was designed to guide both learning and assessment for foreign nursing assistants and caregivers. The validation questionnaire focused on five core dimensions, using both close and open-ended questions:

1. Usefulness – perceived utility of the syllabus for assessment and training
2. Relevance of scenarios – how well the proposed professional situations reflect real-life caregiving contexts
3. Completeness – whether the communicative content covers key tasks and needs
4. Improvement suggestions – proposals for enhancing the syllabus
5. Overall comments – general impressions and observations on the tools' structure and applicability

A total of 49 respondents filled in the Italian version of the PULSE 2.0 validation questionnaire. The vast majority of respondents (30 out of 49, i.e. 61%) rated the assessment syllabus as "absolutely useful" for evaluating the language competences of nursing assistants and caregivers, while an additional 19 participants (39%) considered it "more useful than not". Regarding the relevance of the professional scenarios included in the tools, all 49 respondents considered them appropriate, with no disagreement recorded. Similarly, in response to whether the communicative content covered essential workplace activities, no participant indicated any major omissions, and no substantial suggestions for improvement were recorded. The open-ended sections of the questionnaire were largely left blank or included comments that simply reiterated agreement with the proposed descriptors. For instance, respondent I9[4] noted: "I don't think anything essential is missing, because the most common cases have been explained thoroughly, even though the syllabus, as it should be, cannot cover every possible situation that foreign caregivers or care assistants might encounter". These findings – mirrored across other partner countries in the consortium – confirmed the syllabus's usefulness, relevance, and completeness, reinforcing the tools' transnational adaptability.

6. Conclusions

[4] "I9" is the anonymised identifier used to refer to one participant from the Italian sample.

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This study has explored the implementation of mediation as a core communicative competence in healthcare settings through the Erasmus+ project PULSE 2.0. By adopting a Learning-Oriented Assessment (LOA) approach, using CEFR descriptors, and integrating technology as part of the assessment construct, the project developed innovative tools to support language learning and assessment for foreign nursing assistants and caregivers.

The dissemination of the project has been marked by very positive outcomes, which call for further research both at the theoretical and applied levels. In both dimensions, the findings highlight not only the importance but also the fragility of mediation literacy within the healthcare context. Designing targeted training pathways, beginning with initial familiarisation with the principles and practices of mediation and progressing towards the development of knowledge and competences related to mediation activities and strategies, emerges as a priority that must now be translated into concrete action.

Alongside this priority, there is also a need to reflect on mediation in healthcare as a process integrated with a plurilingual and pluricultural vision of the context. The CEFRCV makes the interrelationship between mediation and the plurilingual dimension very clear in several instances, and the fact that mediation is informed by the plurilingual/pluricultural dimension is visible in many of the descriptors from the different mediation scales. As Piccardo (2022: 39–40) notes, considering "mediation at the core of plurilanguaging highlights the full potential of plurilingualism, since a plurilingual mindset facilitates the perception of affordances, rendering them more visible, a process that can lead to a positive spiral of openness to and exploitation of exploration and experimentation – balanced by reflection and systematization".

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