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Sentiment Analysis as a Quality Assurance Tool in Translator Training: A Pedagogical Case Study

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ABSTRACT

This paper presents a pedagogical case study on the use of sentiment analysis as a quality assurance tool in translator training. Conducted at the University of Alcalá (Spain), the study involved 37 undergraduate students who analysed the sentiment of English source texts and their Spanish translations using an AI model. Working with institutional, journalistic, and political texts, students applied a three-step methodology: initial sentiment analysis of source texts, translation using CAT tools (excluding MT), and final sentiment analysis of their translations. Neutrality coefficients ranging from -1 to +1 were used to quantify sentiment shifts. Results suggest that sentiment analysis can complement traditional quality assessment methods, particularly for politically sensitive texts. Students found the approach pedagogically valuable. Despite limitations related to sample size and reliance on a single AI tool, the study supports incorporating sentiment analysis into translator education and potentially into professional workflows for ensuring emotional and pragmatic consistency.

Keywords: *Sentiment analysis; Translation quality assessment; Translator training; Neutrality coefficient; Artificial intelligence in translation.*

I. INTRODUCTION

The integration of artificial intelligence into translation studies has opened up new avenues for both research and pedagogy. Among the most promising developments is the use of sentiment analysis, a technique originating in the field of Natural Language Processing (NLP), which enables the automatic evaluation of a text's emotional valence, typically classifying it as positive, negative, or neutral. While sentiment analysis is commonly applied in areas such as marketing or political discourse analysis, its potential to inform translation quality assessment remains underexplored, particularly in educational contexts.

This paper presents the results of a pedagogical experience conducted in a university course on Computer-Assisted Translation Tools at the University of Alcalá (Spain), in which undergraduate students explored the potential of AI-based sentiment analysis as a quality assurance resource in translator training. The study did not seek to determine whether translations consistently preserve the sentiment of the source texts, but rather to investigate how sentiment analysis might be used pedagogically to raise students' awareness of tonal and emotional fidelity. By focusing on the neutrality coefficient —a numerical scale ranging from -1 (strongly negative) to +1 (strongly positive), with 0 indicating perfect neutrality— students engaged with translation quality through a quantifiable and replicable lens.

The challenge of evaluating translation quality remains a central concern in both professional and academic contexts. Traditional methods often prioritise lexical accuracy or syntactic fluency, yet they tend to overlook pragmatic and affective dimensions such as tone, neutrality, or emotional consistency, elements that are particularly relevant in politically sensitive or institutional texts. Although various metrics exist to assess surface-level correspondence, few tools offer insights into how meaning and sentiment are transferred across languages.

Recent advances in NLP have made sentiment analysis more accessible, and although some studies have applied this technique to machine translation evaluation, its use in

human translator training remains limited. The present study seeks to address this gap by proposing a didactic framework in which students use sentiment analysis tools to assess the emotional consistency of their translations. In doing so, it contributes to the growing body of research advocating for the integration of computational tools into translator education, while also fostering a deeper awareness of how affective meaning may shift during the translation process.

II. LITERATURE REVIEW

II.1. Early Developments in Sentiment Analysis and Translation

The emergence of sentiment analysis as a subfield of Natural Language Processing (NLP) began in the early 2000s, with a particular focus on the computational detection of opinions and emotions in texts (Pang & Lee, 2008; Liu, 2012). Early sentiment classifiers relied heavily on lexicon-based approaches, which later evolved to incorporate machine learning and, more recently, neural network models.

While sentiment analysis was initially developed for monolingual texts, the intersection with translation studies surfaced when researchers began to investigate how affective meaning is preserved —or altered— through translation (Nida, 1964; House, 1997). Initial contributions in this space suggested that translation often entails shifts in sentiment, whether due to cultural constraints, lexical asymmetry, or the translator's own stance (Baker, 2006; Munday, 2012). These affective shifts were difficult to quantify until sentiment analysis tools became more accessible.

II.2. Quality Evaluation in Machine Translation and Human Translation

As machine translation (MT) systems evolved, so did efforts to evaluate their output. Metrics such as BLEU (Papineni et al., 2002), METEOR (Banerjee & Lavie, 2005), and TER (Snover et al., 2006) became standard tools. However, these metrics primarily assess surface-level features such as lexical overlap or edit distance, overlooking aspects such as semantic equivalence and pragmatic fidelity, including sentiment consistency.

Neural Machine Translation (NMT) marked a significant shift in the field, yielding more fluent and context-aware translations (Bahdanau et al., 2015). Nevertheless, studies showed that even NMT systems were susceptible to sentiment shifts, particularly when translating emotionally charged content (Castilho et al., 2017). These findings highlighted the need for evaluation tools that go beyond syntax and lexis to capture deeper layers of meaning.

II.3. Sentiment Preservation in Translation Studies

The last decade has seen increasing scholarly interest in sentiment preservation as an indicator of translation quality. In their systematic review, Han, Smeaton, and Jones (2021) underscore how traditional quality assessment overlooks emotional fidelity and call for more comprehensive approaches integrating sentiment-aware metrics. Similarly, Rivera-Trigueros (2022) identifies sentiment preservation as a key gap in MT evaluation procedures and proposes integrating sentiment analysis tools into the assessment pipeline.

Notably, Saadany et al. (2021) introduced the Sentiment-Aware Measure (SAM), a metric designed to compare sentiment polarity between source and target texts. Their findings confirmed that sentiment transfer is not always guaranteed, even when translations are grammatically and semantically accurate. This aligns with earlier theoretical claims by Munday (2012), who argued that affect is one of the most vulnerable dimensions in translation due to its reliance on cultural and emotional resonance.

II.4. Sentiment Analysis as a Pedagogical Tool in Translator Training

A more recent trend has been the incorporation of sentiment analysis tools into translation pedagogy. This approach offers future translators a quantitative method to assess emotional consistency between the source and target texts, complementing traditional qualitative feedback (Biel, 2011; Angelelli & Baer, 2016). By leveraging sentiment analysis, students can become more aware of implicit tone, connotative meaning, and neutrality —elements that are crucial in institutional and political texts where objectivity is paramount.

Moreover, the work by Saadany et al. (2021) demonstrates that sentiment-aware evaluation metrics can provide valuable insight not only in assessing machine translation output but also in developing pedagogical applications. Their Sentiment-Aware Measure (SAM) quantifies discrepancies in emotional polarity between source and translated texts, showing how computational tools can help visualise and interpret affective variation. This capacity to make emotional shifts explicit empowers students to make more informed decisions regarding lexical choices and translation strategies.

II.5. Current Gaps and the Rationale for the Present Study

Despite these advancements, there remains a paucity of empirical research on how sentiment analysis can be used in classroom settings to assess translation neutrality. Most existing work either focuses on machine translation (Saadany et al., 2021) or offers theoretical reflections on affect and tone in translation without hands-on application (Munday, 2012). The present study aims to bridge this gap by reporting on a classroom-based experience where students used AI-powered sentiment analysis tools to compare neutrality scores in original texts and their own translations rendered by them using CAT tools, but not MT.

By focusing on the coefficient of neutrality —understood as the degree to which a text refrains from emotional polarity— this research contributes to current debates on translation quality and introduces a replicable pedagogical model.

II.6. Approaches and Tools for Sentiment Analysis

Over the years, various methodologies have been developed to perform sentiment analysis, ranging from early lexicon-based models to advanced machine learning and deep learning systems. The lexicon-based approach, relying on pre-defined lists of positive and negative words, constituted the earliest method for detecting sentiment in texts (Taboada et al., 2011). Although relatively simple, this approach struggled with contextual nuances such as irony, sarcasm, or negation.

The advent of machine learning introduced supervised classifiers such as Naïve Bayes, Support Vector Machines (SVMs), and Decision Trees, which significantly improved sentiment detection accuracy by learning from annotated corpora (Pang, Lee, &

Vaithyanathan, 2002). Later, the rise of deep learning techniques, particularly Convolutional Neural Networks (CNNs) and Recurrent Neural Networks (RNNs), allowed for more sophisticated sentiment analysis models capable of capturing complex linguistic patterns (Kim, 2014).

More recently, Transformer-based models such as BERT (Devlin et al., 2019) and RoBERTa (Liu et al., 2019) have become the standard in sentiment analysis tasks. These models, pre-trained on massive corpora and fine-tuned for sentiment classification, offer state-of-the-art performance by leveraging contextual embeddings and attention mechanisms.

Accessible platforms such as Hugging Face have democratized the use of advanced sentiment analysis models, offering APIs and pre-trained transformers ready for application in multiple languages and domains (Hugging Face, n.d.). The availability of these resources enables not only researchers but also practitioners in education and industry to perform high-quality sentiment analysis with minimal technical barriers.

In particular, Hugging Face's "Sentiment Analysis" pipeline provides an off-the-shelf solution that classifies texts into positive, negative, or neutral categories based on fine-tuned transformer models. This ease of access has significantly contributed to the integration of sentiment analysis in diverse fields, including translation studies, journalism, and political communication (Hugging Face, n.d.).

These technological developments underpin the methodological choices in the present study, which leverages AI-powered sentiment analysis tools to explore shifts in neutrality across translated and original texts. Specifically, the students used OpenAI's ChatGPT, a transformer-based large language model built on the GPT architecture, to perform sentiment analysis in both English and Spanish. The model provided sentiment classifications (positive, neutral, negative) along with numerical neutrality scores on a scale from -1 to +1. Although ChatGPT is not a sentiment-dedicated model like those fine-tuned via Hugging Face's pipelines (e.g., Taboada et al., 2011; Liu, 2012), its performance was considered to be suitable for educational purposes due to its multilingual capabilities, ease of access, and ability to justify outputs qualitatively. The

choice of ChatGPT was motivated by pedagogical considerations, prioritising usability and student engagement over technical optimisation.

III. RESULTS AND DISCUSSION

III.1 Methodology

The present study was conducted within the framework of a practical classroom exercise in the subject "Computer-Assisted Translation Tools" at the University of Alcalá (Spain). The aim was to explore the potential of sentiment analysis as a complementary method for evaluating translation quality, specifically in relation to tonal fidelity and neutrality preservation.

Students worked with a curated selection of authentic English-language texts, encompassing three main categories: (1) institutional documents (e.g., government statements, official reports), (2) press releases from major international organisations, and (3) news articles from media outlets with distinct political leanings. These texts were chosen to represent a range of expected neutrality coefficients, from highly neutral to potentially polarised content.

The experimental procedure followed three successive stages:

Stage 1: Sentiment analysis of the original texts

Students used the artificial intelligence model ChatGPT (OpenAI), a transformer-based large language model, to perform sentiment analysis on the English source texts. For each text, they entered a prompt requesting both a qualitative sentiment classification (positive, neutral, or negative) and a numerical neutrality coefficient on a scale from -1 (extremely negative) to +1 (extremely positive), with 0 indicating perfect neutrality. This prompted the model to provide a combined output including both a polarity label and a brief rationale explaining the score. To ensure consistency, students were given a standardised template prompt to use across all texts. The outputs were then recorded in a comparative table and used as a baseline for subsequent analysis of their Spanish translations. ChatGPT was selected for its accessibility, multilingual capacity, and

suitability for classroom environments. Its ability to justify sentiment scores qualitatively encouraged students to engage in critical reflection on the pragmatic tone of both source and target texts. This approach is in line with recent calls to explore the integration of automatic quality assessment tools in translator training settings (Han, Smeaton, & Jones, 2021).

Stage 2: Translation into Spanish using CAT tools

Students then translated the original English texts into Spanish, utilising theComputer-Assisted Translation (CAT) tool Wordfast Anywhere. It is important to note that students were explicitly instructed not to employ Machine Translation systems, ensuring that the translation process was human-driven while still assisted by translation memory and terminology management features.

Stage 3: Sentiment analysis of the translated texts

Finally, the students applied the same AI-based sentiment analysis model to their Spanish translations. The neutrality coefficients and sentiment categories were recorded and compared to those obtained for the original texts.

The primary research question guiding the exercise was whether the sentiment, particularly in terms of neutrality, would be preserved during the translation process. This approach aligns with recent scholarship advocating for the integration of computational tools in translation studies to assess quality parameters beyond mere lexical fidelity (Läubli et al., 2020; Ribeiro, 2017).

To facilitate understanding, the workflow of the experiment is illustrated in Diagram 1 below:

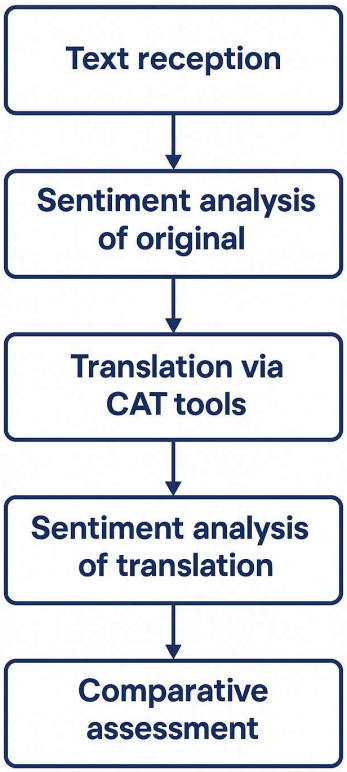

Figure 1. *Diagram showing the workflow during this task in the classroom.*

This methodology allowed for an objective, replicable, and relatively low-cost approach to assessing tonal shifts during translation, offering a promising avenue for further research and pedagogical innovation in translator training programmes (Han, Smeaton & Jones (2021).

III.2 Participant Profile

The classroom activity involved a cohort of 37 undergraduate students enrolled in the course on Computer-Assisted Translation Tools at the University of Alcalá (Spain). The participants were aged between 20 and 23 years, with a notable gender imbalance: 81% were women and 19% were men. Out of the 37 students, 28 completed and submitted the full set of tasks.

Although the examples presented here are illustrative of common tendencies, the discussion of sentiment alignment should be interpreted within the pedagogical framework of the study. Rather than aiming for a definitive assessment of translation

quality, the activity sought to raise students' awareness of emotional consistency and tone management in translated texts. Based on in-class observation and informal feedback, students reported finding the exercise novel, engaging and intellectually stimulating. Many noted that the neutrality scores prompted them to reflect on translation choices they might otherwise have considered unproblematic, particularly when dealing with politically sensitive language. While no formal post-task questionnaire was administered, the high level of classroom participation and spontaneous commentary suggest that the method helped to develop a critical approach to pragmatic equivalence. A more structured evaluation of student perception —e.g. via reflective reports or surveys— would be beneficial in future iterations of the activity.

III.3. Results

The sentiment analysis exercise produced interesting insights into the extent to which emotional neutrality was preserved in translation. The students worked on a series of 5 texts that they all had to translate and analyse, including institutional press releases, political news articles, and transcripts of press conferences. Each original English text was first analysed to obtain a neutrality score, and then the students translated the texts into Spanish using CAT tools (without the aid of machine translation), after which the sentiment analysis was reapplied to the translations.

The following section presents selected examples that reflect the tendencies observed during the classroom exercise. These examples are interpreted in light of the study's pedagogical objective: to examine how sentiment analysis can be used to raise students' awareness of tonal and emotional consistency in translation. Rather than testing a linguistic hypothesis in the strict sense, the aim is to assess whether AI-generated sentiment scores can serve as useful indicators for student self-evaluation and classroom reflection.

A selection of representative examples illustrates the patterns observed:

Institutional Press Releases

Source text in English: "The government remains committed to ensuring the safety and prosperity of all its citizens through comprehensive policy measures."

The neutrality score for the original text was 0.05, indicating near-complete neutrality.

The Spanish translation: "El gobierno sigue comprometido a garantizar la seguridad y la prosperidad de todos sus ciudadanos mediante medidas de política integral."

In this case, the neutrality score of the translated text was 0.03, indicating a minimal and acceptable shift. For the purposes of this classroom activity, variations within a ±0.10 range were considered acceptable, as they typically reflect only minor tonal differences unlikely to alter the perceived intent or sentiment of the source text. This operational threshold was not intended as a rigid standard, but rather as a pedagogical guideline to help students distinguish between significant and negligible shifts in emotional tone.

Political News Articles

Source text in English: "The administration's failure to address the crisis has left countless families without essential support."

This text had a negative sentiment score of -0.65.

Spanish translation: "La falta de acción del gobierno ante la crisis ha dejado a innumerables familias sin apoyo esencial."

The sentiment score adjusted to -0.45, signalling a slight mitigation of negativity.

Press Conference Transcripts

Source English text: "We are taking every possible step to stabilise the situation and provide immediate assistance."

The English source text received an original neutrality score of 0.10, indicating a slightly positive but largely neutral tone.

Spanish translation: "Estamos tomando todas las medidas posibles para estabilizar la situación y ofrecer asistencia inmediata."

The sentiment analysis achieved a neutrality score of 0.08, preserving the intended tone with only a negligible shift.

The overall results are summarised in the following tables:

Table 1. *Summary of Sentiment Shift by Text Type*

Text Type	Average Neutrality Shift	General Observations
Institutional Press Releases	±0.02	High fidelity to original neutrality.
Political News Articles	±0.15	Moderate shifts, often reducing sentiment extremity.
Press Conference Transcripts	±0.05	Minor shifts, with tone generally well preserved.

Table 2. *Sentiment Shift Outcomes Across Submissions*

Outcome	Number of Cases	Percentage
Faithful Preservation of Neutrality	17	61%
Minor but Acceptable Shift	8	29%
Significant Sentiment Alteration	3	10%

These results suggest that while a majority of students maintained the intended neutrality or sentiment of the original texts, the complexity and emotional charge of some source materials posed challenges. Translation of institutional texts demonstrated the highest levels of fidelity, while political news articles were more susceptible to sentiment shifts during translation.

Example of a Significant Sentiment Alteration

While the majority of student translations managed to preserve the overall sentiment of the original texts, a few instances displayed notable deviations, with shifts large enough to alter the perceived emotional tone of the message. One such example came from a politically charged opinion piece.

Source text in English: "While the reforms present opportunities, critics warn that the changes may disproportionately affect low-income families."

This sentence received a neutrality score of -0.10, indicating a very slightly negative tone due to the cautionary element but still largely balanced.

Spanish translation: "Aunque las reformas traen oportunidades, los críticos aseguran que estas decisiones perjudicarán seriamente a las familias pobres."

This version yielded a sentiment score of -0.48, reflecting a strongly negative tone. The phrase "perjudicarán seriamente a las familias pobres" introduces a much more dramatic and emotionally loaded construction than the original "may disproportionately affect", which is hedged and more tentative.

This shift significantly altered the overall tone of the message. It reflects a common translation pitfall: intensifying the emotional impact, either intentionally or inadvertently, which may compromise the fidelity of the translation in contexts where neutrality is critical (e.g., journalism, diplomacy, or institutional communication).

Table 3. *Example of Significant Sentiment Drift*

Original Text Sentiment	Translated Text Sentiment	Shift Value	Commentary
-0.10	0.48	-0.38	Over-intensification of the critical tone

This and other similar examples reinforce the potential of sentiment analysis as a training tool for identifying areas where students may unconsciously distort meaning, particularly in sensitive or politically nuanced texts.

IV. CONCLUSIONS

The pedagogical experience outlined in this study illustrates the innovative potential of integrating sentiment analysis into translator training. Students responded enthusiastically to the exercise, appreciating its practical relevance and the immediate feedback it provided on their translation choices.

The results suggest that sentiment analysis could serve as a valuable complement to traditional quality assurance practices within Language Service Providers (LSPs), offering

an objective means of assessing emotional consistency alongside linguistic accuracy. Consequently, this technique will be permanently incorporated into the Computer-Assisted Translation Tools curriculum at the University of Alcalá.

Notably, the exercise revealed that political texts are particularly susceptible to shifts in neutrality during translation, more so than institutional or press conference materials. This finding underlines the critical need for heightened sensitivity when translating ideologically charged content.

However, several limitations must be acknowledged. The study was conducted with a single cohort of undergraduate students, and the selection of texts, while varied, was not exhaustive. Additionally, sentiment analysis results depend on the capabilities and training of the AI model used, which may introduce variability. Future research should address these limitations by expanding the corpus, involving more diverse participant groups, and testing different sentiment analysis models.

Despite these constraints, the novelty of applying neutrality coefficients as a training tool marks a significant contribution to translator education. With further practice to refine both methodological rigour and student familiarity, this approach could be successfully transferred to professional translation workflows, enriching quality assurance protocols and fostering greater pragmatic and affective fidelity in cross-linguistic communication.

In response to the pedagogical research question guiding this study, the results indicate that sentiment analysis can serve as a practical and reflective tool for raising students' awareness of emotional fidelity in translation and for supporting quality assurance practices in translator education.

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Digital tools for a broad data-driven learning approach in mixed linguistic-proficiency ESP courses

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ABSTRACT

Addressing the limited exploration of Data-Driven Learning (DDL) with mixed linguistic proficiencies in English for Specific Purposes (ESP), the purpose of this study is to experiment with a broad DDL (BDDL) approach in two English for business and tourism courses. The information collected through classroom activities, pre-, mid-, and post-tests, alongside polls and interviews, largely points to positive outcomes with BDDL at all linguistic levels. Lower-linguistic proficiency participants showed a greater challenge with linguistic analysis, but, in contrast with other corpus linguistics-based approaches in these ESP settings, BDDL worked more effectively to accommodate task procedures for these learners.

Keywords: *BDDL; DDL; ESP; Linguistic proficiency; Academic texts.*

I. INTRODUCTION

Data-Driven Learning (DDL) emphasizes the personalization of linguistic analysis by actively involving learners in the discovery of linguistic patterns over digital and non-digital texts (Johns, 1991). For over three decades, DDL has been observed as especially beneficial in university contexts, promoting and heightening learners' autonomous work, problem-solving abilities, analytical skills, and language awareness (Boulton & Cobb, 2017).

However, the full integration of DDL requires its adoption by a broader educational community. Two variables noticeably under-researched in DDL are low linguistic proficiencies and languages for specific purposes (Boulton & Cobb, 2017; Boulton & Vyatkina, 2021; Boulton & Vyatkina, 2024; Boulton & Pérez-Paredes, 2025). In fact, university students outside language-related degrees and with less linguistic competence may feel more challenged and / or less involved with corpus analyses (Boulton, 2016). As a result, one possible approach to these varied contexts is the application of a BDDL (Broad DDL) (Pérez-Paredes, 2024) or "DDL-lite" perspective that may "bring DDL to the learners rather than requiring them to leap into corpus linguistics" (Boulton & Vyatkina, 2024, p. 1201). This BDDL perspective proposes not only simpler, user-friendly online tools but also linguistic analysis tailored to non-linguistics and / or non-humanities contexts. In this scope, linguistic explorations can be adapted according to English for Specific Purposes (ESP) students' particular needs. Additionally, because DDL seems to differ from other pedagogic approaches in terms of its reduced focus on communicative interactions between learners, among other aspects (Boulton, 2024), BDDL may offer a suitable option for emphasizing interactional / collaborative dynamics.

This article explores BDDL in two mixed linguistic-proficiency ESP courses, focusing on first-year students in the double degree of Business Management and Tourism at University of Extremadura, Spain. In these courses, BDDL has already been deployed over the past years in the form of simple-query online concordancers, text analytical

tools, online dictionaries, translators, and online videos. This study focuses on the first year of these studies because, at this stage, students are often required to engage with academic English texts in other subjects, and yet, most students lack the academic competence to comprehend the reading content effectively. Therefore, BDDL in these subjects has been specifically aimed at supporting mixed linguistic-level learners in working with academic texts, focusing on vocabulary and reading comprehension.

Learning progress, difficulties, and differences were analysed in these ESP courses by relying on mixed-method strategies, such as classroom observation, pre-, mid-, and post-intervention tests, post-task polls, and interviews. A main factor observed to influence learning developments was learners' linguistic proficiencies. One main occurrence was that lower-linguistic proficiency learners had more difficulties with linguistic analytical developments. However, compared to other DDL studies in similar ESP contexts (e.g., Curado Fuentes, 2015), BDDL showed a higher degree of success for empowering lower-linguistic level learners.

The following section presents a literature review that highlights the key theoretical and methodological foundations underpinning this study, followed by three research questions on which this study is based. The Methodology section then details the participants, course design, and evaluations conducted. The Results section describes the findings from both courses, while the Discussion highlights learning features, implications, and differences. Finally, the Conclusion offers a reflection on the main insights emerging from this case study.

II. LITERATURE REVIEW

This section examines the applicability of BDDL to language learning. Also, because our case study focuses on lexical knowledge and text comprehension, some research directions are specified about vocabulary and reading in relation to DDL.

BDDL or DDL-lite (Boulton & Vyatkina 2024; Pérez-Paredes, 2024) includes, among other aspects, the use of familiar / user-friendly tools on the internet as a form of DDL-

like exploration for language learning. This scope connects with the use of NLP (Natural Language Processing) tools on the web, such as simple concordancers, translators, dictionaries, collocation finders, and so on (Ordoñana-Guillamón et al., 2024; Pérez-Paredes et al., 2018). Potential benefits of extending this broad conception of DDL across educational backgrounds include the promotion of linguistic awareness through autonomous interaction with various types of NLP resources (Ordoñana-Guillamón et al., 2024, p. 87). However, few studies have followed on this exploration of BDDL for diverse language learning goals and scenarios.

In BDDL, students exploit authentic linguistic input with a focus on the "L" of DDL ("Learning") (Pérez-Paredes, 2024, p. 218), and not on the "D" ("Data", e.g., corpus analyses). These tools can be aimed at enhancing specific linguistic learning, which constitutes an important aspect of digital developments in ESP (Bárcena et al., 2015; Xie, 2024). It is also relevant that these tools are directed at cultivating critical academic skills such as analytical and independent learning. These affordances can contribute to learners' empowerment by allowing them to work at their own pace and to take control of their own learning experience, providing them with linguistic affordances that cater to their academic needs (Criollo et al., 2024). In this scope, creating dynamic digital environments that promote specific linguistic developments is important (Arce & Valdivia, 2020).

BDDL can incorporate the four stages of DDL (Carter & McCarthy, 1995; Flowerdew, 2009): 1) Illustration, i.e., explaining with linguistic examples; 2) Interaction, i.e., engaging with linguistic data and discussion; 3) Intervention, i.e., clarifying procedures and specifying directions; and 4) Induction, i.e., inferring patterns of linguistic use. An important aspect of BDDL is that these tools be "simple" and easily accessible (Ronan, 2023, p. 34), since more sophisticated corpus resources tend to intimidate less linguistically proficient students (Boulton, 2012; Timmis, 2015). Tools like concordance software packages and large corpora can also work well in ESP and English for Academic Purposes (EAP) settings, but more so with linguistically advanced students (Boulton, 2016; Charles, 2014).

BDDL can also encompass Generative Artificial Intelligence (GenAI) tools like ChatGPT, which students are increasingly using for linguistic queries (Boulton & Pérez-Paredes, 2025). English-as-a-foreign-language studies on learners' attitudes towards using ChatGPT reveal a spectrum of responses, ranging from enthusiasm to more reserved acceptance (Luo & Zuo, 2024). In ESP and EAP, these tools hold significant potential for fostering critical thinking, collaboration, and other academic skills (Karakose & Tülübas, 2023). They present both challenges and opportunities for the use of BDDL, since GenAI can offer instant linguistic input for contrastive analysis (Crosthwaite & Baisa, 2023). Thus, a crucial pedagogical approach can be the guiding of learners in using these tools to develop critical academic skills for language acquisition (Liu et al., 2024), for autonomous academic tasks like digital reading (Pan et al., 2024), and for vocabulary enhancement (Law, 2024), among other possibilities.

Lexical competence is actually an important aspect that BDDL can address, as vocabulary often constitutes a major difficulty in ESP due to specific word meanings (e.g., business vocabulary: Xie, 2024), whereas intermediate-level English learners' vocabulary is found to significantly increase with DDL tasks (Lee et al., 2019). DDL-related tactics can be adopted by focusing on pivotal academic lexical items (Argyroulis, 2022; Chambers, 2022; Hadley & Hadley, 2021; Lee et al., 2019). A BDDL approach can support this focus by relying on simple queries for linguistic pattern investigation, which allows students to detect key meanings within specific contexts (Curado Fuentes, 2024a; Pérez-Paredes et al., 2018; Phillip, 2010; Xu et al., 2019). Strategies such as noticing vocabulary by identifying "immediate collocates (and translation of the whole), [as well as] the value of example sentences, recognizing a word's syntactic role, using context to disambiguate, and so on" (Phillip, 2010, p. 12) are valuable. While broad vocabulary commands are beneficial, depth of lexical knowledge in specialized domains is crucial for reading comprehension (Song & Reynolds, 2022). This depth includes familiarity with word families, which often span multiple word classes, such as the verb *find* and the noun *findings* in specific contexts (Laufer & Cobb, 2019).

Because lexical complexity and specialization are often observed as a major factor of learners' difficulties with academic texts (Laufer & Ravenhorst-Kalovski, 2010), one noteworthy approach to cope with these problems is the encouragement of group-based strategies for the enhancement of familiarity with academic discourse (Flowerdew & Peacock, 2001; Basturkmen, 2010). Motivation is fostered when subject content-related texts are exploited by groups, since a sense of usefulness is perceived by ESP students when notions and ideas are discussed and shared (Nishizawa et al., 2018). Furthermore, meta-analyses of DDL developments reveal that peer collaboration works positively towards the integration of lower linguistic-proficiency learners using these tools (Lusta et al., 2023). In ESP, authentic linguistic tasks and group-based approaches should be designed around "problem-solving" (Belcher, 2009, p. 9) to meet academic learning needs (Nel, 2008), whereas collaboration can become a key strategy for problem-solving using digital tools (Tate & Warschauer, 2022).

Another issue is that, compared with academic writing, reading comprehension has been seldom addressed in DDL (Boulton & Cobb, 2017; Curado Fuentes, 2023; Hadley, 2025), and yet, DDL can be effectively explored for enhancing academic reading (Hadley & Hadley, 2021; Hadley, 2025; Lee et al., 2019). Text comprehension can be approached by focusing on specific corpus-driven vocabulary (Laufer & Ravenhorst-Kalovski, 2010; Paribakht & Webb, 2016), since, in DDL, decoding skills are enabled by noticing linguistic patterns within "repeated strings of text" (Cobb, 2018, p. 201). Additionally, the use of online tools in DDL can favour the design of effective mechanics for students' selection, compilation, and management of readings within their fields, fostering a sense of ownership over the texts (Charles, 2012). This ad-hoc corpus practice can enable learners to better understand the connection between specific lexical associations and their subject content, particularly when prototypical expressions that align with authentic reading examples are identified (Flowerdew, 2015). This employment of authentic textbook material related to their studies situates learners in the context of their academic genre demands (Ismayilli Karakoç et al., 2022).

Different activities can be proposed for novice university students to explore online by reflecting on key word use over specific texts. This approach can be combined with beyond-the-text activities, such as discussions about concepts being addressed, so that lexical retention and conceptual understanding are targeted (Curado Fuentes, 2024b; Tavares Pinto, 2024). Collaborative and repetitive tasks involving key vocabulary have been shown to result in more sustained linguistic knowledge (Itawa et al., 2024).

III. RESEARCH QUESTIONS

Three research questions guide the design of this case study:

1) What is the effect of BDDL on ESP courses with mixed linguistic proficiencies?
2) How can BDDL be integrated for lexical and text comprehension exploitation along these ESP courses?
3) Does BDDL constitute a positive approach in this type of ESP contexts?

IV. METHODOLOGY

Two groups of ESP learners using BDDL were examined by relying on a sequential mixed-methods design, based on Teddlie and Tashakkori (2009) and Grove and Cipher (2024), keeping track of learning traits and developments through class activities, pre-, mid-, and post-tests, in-class polls, and end-of-semester interviews.

IV.1. Participants

The students were enrolled in Specific English I, a one-semester compulsory subject offered during the first year of the double degree of Business Management and Tourism at University of Extremadura. The overall number of participants was 26: 14 in the Spring 2023 semester (average age = 18.1 years; 8 female, 6 male), and 12 in 2024 (average age = 18.2 years; 5 female, 7 male). Most learners possessed intermediate linguistic levels in English, but others had higher or lower levels. An online English

proficiency test (cambridgeenglish.org/test-your-english/general-english/), taken in class at the beginning of the semesters, determined that in 2023, six students were at B1 (intermediate level), three at A2 (low-intermediate), two at B2 (upper-intermediate), two at C1 (advanced), and one at A1 (low/basic). In 2024, six students were at B1, two at B2, two at A2, and two at C1.

Students' academic backgrounds and preliminary views on English learning were also examined at the beginning of each semester. A simple questionnaire with multiple-choice items was answered online. Overall, the responses revealed a preference for oral skills (speaking and listening), with more students prioritizing these skills in 2023 (85.3 percent) and fewer in 2024 (67.7 percent), when more learners (33.3 percent) chose writing as their priority. Additionally, most students in 2023 reported that their secondary school English subjects had emphasized the study of grammar, whereas the proportion decreased (41.6 percent) in 2024, with half of the class referring to the main use of listening/speaking approaches in previous years. In contrast, group work was their chief preference for classroom dynamics (78.5 percent in 2023 and 83.3 in 2024). In 2024, due to the expansion of GenAI in academic contexts, some questions were added about the use of GenAI tools. The result was that almost everyone (91.5 percent) admitted to using either ChatGPT or Gemini for academic work, and 58.3 percent used GenAI for English practice, mainly, for translation (five students) and lexical / grammatical consultation (three participants).

IV.2. Course design

The main organizational difference between the two courses was the duration and frequency of the BDDL developments. In 2023, BDDL was confined to a four-week period (16 class hours). In contrast, in 2024, BDDL was practiced regularly every two to three days throughout the semester, totalling approximately 20 hours. Both courses utilized similar tools, including Versatext, Just the Word, Corpus Mate, SKELL, NetSpeak, YouGlish, Reverso, WordReference, and the Collins dictionary. In 2024, ChatGPT and

Gemini were added.[1] Other online resources like Kahoot, Acadly, and Quizlet were employed to explore and review topic-specific vocabulary and short text readings.[2]

Table 1 provides a sequenced outline of activities and their integration into the courses, along with the instruments used for the measurement and evaluation of learning developments. Additionally, some changes made in 2024 are indicated. Most BDDL activities were conducted before, during, or after exploring topics by selecting academic texts from freely accessible repositories (e.g., open textbooks for Social Sciences at https://open.umn.edu/opentextbooks/subjects/social-sciences).

Table 1. *BDDL in the two courses*

BDDL in both courses	Instruments	Only in 2024
Introduction: keywords and texts (Acadly discussions)	Pre-test (Google form) on vocabulary and text comprehension	No pre-test was taken before the BDDL sessions
Questions answered in pairs / groups using cloud keywords (Versatext)	Poll utility (in Acadly) to collect students' impressions with the tools and activities after sessions	A greater number of polls was conducted
Texts provided by the instructor; questions answered in pairs / groups (Versatext, Reverso, online dictionaries)	Mid-test (Google form) on vocabulary and text comprehension	This was the first test taken by the 2024 group
Activities with texts selected by students in groups (Versatext)	Acadly discussions: Students' impressions with overall tools and activities	Students worked on texts in mixed-linguistic proficiency groups

1 All the tools were used freely online: https://versatext.versatile.pub, http://www.just-the-word.com, https://corpusmate.com, https://skell.sketchengine.eu/#home?lang=en, https://netspeak.org, https://youglish.com, https://www.reverso.net, https://www.wordreference.com, https://www.collinsdictionary.com/dictionary/english, https://chatgpt.com, https://gemini.google.com.

2 Acadly, Kahoot, and Quizlet were utilized in their fully licensed versions, funded by the University of Extremadura. Acadly (https://www.acadly.com) served as a platform for course management and online tracking of students' activities, including quizzes and polls. Kahoot (https://kahoot.com) facilitated interactive games designed to challenge learners with essential concepts and vocabulary, while Quizlet (https://quizlet.com) was employed to engage students with key linguistic content from the course. These three tools provide a gamified approach to learning, consistently receiving high ratings in end-of-course surveys over the years.

BDDL in both courses	Instruments	Only in 2024
Activities with diverse tools (Corpus Mate, Just the Word, SKELL, NetSpeak, YouGlish)	Post-test (Google form) on vocabulary and text comprehension	GenAI tools were also used
	Students' oral presentations and impressions about the tasks	Individual interviews were conducted with four students

The activities under "BDDL in both courses" (Table 1) were the following:

1) As introductory exercises, students were asked to identify keywords in digital texts without using any tools. The concept of keywords was explained as topic-based (Scott 2010), and students worked in groups to identify them and explain why they were keywords, associating them to main text themes.
2) Learners were guided along the analysis of cloud keywords extracted from digital texts. This activity involved students' use of the Word Cloud and Concordance utilities in Versatext with the same previous texts from the introductory sessions to compare concordances and sentence examples.
3) Different academic texts were provided by the instructor, with subsequent activities based on the instructor's previous analyses. These tasks explored dynamics such as decoding specific keywords in context, inferring concrete meaning from linguistic use over concordances, identifying part-of-speech words in different expressions, and analysing meta-textual references (see examples in Curado Fuentes, 2024a). Online dictionaries and translators were also used to answer specific questions on linguistic meaning.

Students relied on keywords for linguistic comprehension in both courses. Most initial questions asked by learners involved the specification of keywords to be used. For example, the text comprehension question "What is the highest cost listed in the estimated budget for the project infrastructure?" led them to scrutinize different key nouns in the Word Cloud (e.g., "budget") to find the actual answer, scanning concordances. They also proceeded similarly with keywords for reversed translation activities (e.g., finding and decoding the expression *factores clave para captar clientes* using the keyword "target," which they had to analyse as a verb, not a noun).

4) Students were free to choose and analyse their own texts in subsequent activities, following the instructor's guidelines. Most texts and activities were shared on Padlet (https://padlet.com), an easy-to-use board allowing students to smoothly navigate between resources and to copy and paste content as needed. In 2024, each group included at least one higher-linguistic proficiency student.

In general, both courses identified specific vocabulary and analysed lexical occurrences from their generated keyword clouds. Most texts used by learners were about sociology and tourism management. In these texts, students noticed words collocating with keywords, and they examined them as words that co-occurred with these keywords over concordances. Students also used the Profiler utility in Versatext to explain whether these keywords were general, academic, or text-specific. In most cases, they chose keywords classified as academic (e.g., "sample" and "factors" in a text on sociology for tourism). In various cases, learners had to cope with part-of-speech disambiguation, as in, for example, the keyword "advertising," often seen as an adjective, but also working as a noun (e.g., "form of advertising" and "role of advertising").

5) Different online tools were exploited for analytical comparison. For example, with SKELL, students worked with keyword sketches, such as verbs associated with a key noun from previous texts (e.g., "innovation"), or words occurring as subjects of previously seen verbs (e.g., "manage"). In Corpus Mate, concordances were chiefly explored to compare lexical meaning and use across different academic texts (e.g., a previous keyword, "corporate," in Law, Economics, and History). This contrastive analysis was aimed at enhancing lexical knowledge and expanding textual comprehension with keywords and concordances.

In 2024, learners took on GenAI tools for this complementation of BDDL tasks. Unlike concordancers, these tools were already familiar to students. The activities with GenAI were intended as reviewing activities. For example, learners had to ask about their keyword-based findings (Table 2), with steps 1 and 2 instructing learners to compare and discuss key linguistic content, and with step 3 requesting for the application of linguistic knowledge to writing (see an example of an A2 student's answers in Table 2).

Table 2. *Example of GenAI activity*

Questions	Answers (A2 student)
Ask ChatGPT to provide five keywords based on your text. Compare these with your own keywords from the previous activity.	*Sociological, analysis, culture, innovation, creativity* *Two are the same and three different: Issues, market, tourism*
Ask ChatGPT to use the keywords in different contexts related to business. Compare these sentences with your own from the previous activity. How are they different?	*A company that understands the sociological impact of environmentalism may promote eco-friendly products* *The sociological trends of tourism are in my analysis and not here*
Write three full sentences of your own with any keywords from your list. Use at least three keywords and three words that combine with them.	*I think that innovation is key for the future of tourism* *The market-driven approach is better* *When companies innovate their products are improve*

Along the courses, some discussions with students unfolded online (using Acadly) and orally in class. Students' impressions with various class tasks were shared. Finally, oral presentations, assigned in groups, were aimed at evaluating learners' use of linguistic and content information derived from BDDL activities.

IV.3. Evaluation instruments

As shown in the "Instruments" column (Table 1), a pre-test was administered at the start of the 2023 module, but it was omitted in 2024. Instead, this pre-test was taken as a mid-term test a few weeks into the semester of 2024 (see "Only in 2024" in Table 1). This change was made to compare learners' test performance after already using BDDL, feasible in 2024 due to the longer duration of the BDDL activities during this semester.

These tests consisted of 15 questions: 10 multiple-choice items focusing on academic vocabulary, and five reading comprehension questions. The vocabulary part included tasks such as identifying synonyms and collocations with keywords, English/Spanish equivalents, and concepts with key terms. The reading comprehension section required short written answers based on textbook extracts (see test examples in

Curado Fuentes, 2024a). Students were told that these tests would not influence their final grades in the course so that they could perform unrestrained by this pressure and to the best of their knowledge. The online completion of the tests (pre-, mid-, post-) led to 42 scores (3 tests x 14 students) in 2023, and 24 (2 x 12) in 2024. All test scores showed normal distributions according to the Shapiro-Wilk test (see Table 3 below).

Additionally, to gather learners' impressions, the poll utility included in Acadly (see "Instruments" in Table 1) was used at the end of some class sessions. These polls were aimed at rating learners' levels of agreement with different statements about the BDDL tools and activities on a 5-point Likert scale. In 2023, students responded to three 10-item polls, whereas in 2024, a total of six 10-item polls were completed. For the final survey analysis, the different poll items were summarized into a set of 13 items. For example, various poll items rating participants' perceptions about the usefulness of different activities for vocabulary learning were summarized as a final item named "usefulness of BDDL for vocabulary" (see Table 6 in Results). Each student's set of scores was averaged for the final survey analysis.

Three key ideas were targeted in these polls: 1) Perceived usefulness of the activities for linguistic learning (usefulness), 2) difficulty with tools (usage), and 3) potential use of these mechanics in the future (usability), based on Hua el al. (2024). Students' scores were analysed using Excel and online tools (Wessa 2024). Shapiro-Wilk tests were also conducted to evaluate whether these scores were normally distributed, and the results were negative. Therefore, all the survey responses were treated as non-normally distributed (Table 3).

Table 3. *Shapiro-Wilk test results on the score distributions*

Instruments	2023	2024
Pre-tests	$W(14) = .97$, $p = .933$	
Mid-tests	$W(14) = .91$, $p = .184$	$W(12) = .94$, $p = .531$
Post-tests	$W(14) = .91$, $p = .138$	$W(12) = .94$, $p = .540$
Polls	$W(14) = .83$, $p = .011$	$W(12) = .9$, $p < .001$

Additionally, four students were interviewed by the instructor in 2024 (see "Only in 2024" in Table 1). These semi-structured interviews relied on a consistent set of questions for each interviewee, allowing for more detailed explorations based on their responses. These four students were chosen because they represented the four main linguistic proficiencies: C1, B2, B1, and A2. The goal was to compare their insights with previous polls and classroom feedback, aiming at capturing students' personal opinions, expressed in Spanish to allow for greater depth of expression. The interviews lasted between five and 10 minutes per participant. Their responses were recorded and transcribed using the TurboScribe tool (https://turboscribe.ai/es). The author of this study read the transcriptions several times to identify key ideas and themes, combining a deductive analysis with an inductive approach. This method is effective with qualitative data of a manageable size (Azungah, 2018).

V. RESULTS

V.1. Classroom observations and discussions

Students generally preferred the use of smartphones over laptops for online interactivity. However, for text selection and analysis, they relied on laptops more, sharing devices in groups, especially in 2024.

Overall, students in both courses felt eager to select their own topics in groups, and they stated that this mechanics allowed for greater freedom in the analytical tasks. This linguistic probing generally contributed towards enhancing various instances of metalinguistic awareness, since they shared questions and answers, which they posted on Padlet (Figure 1) for all to see.

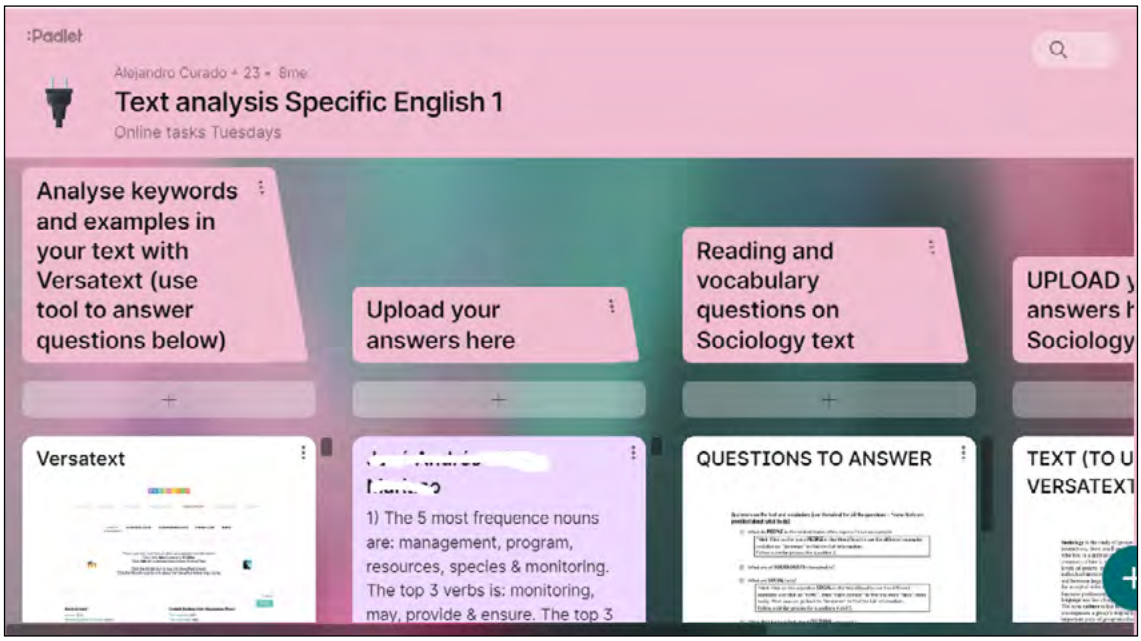

Figure 1. *Screenshot of text analytical activities with their own texts*

The more linguistically proficient learners within each group often guided the exploration of texts, suggesting key terms to explore. However, participatory contributions were progressively made by lower linguistic-level learners. Online and oral discussions ensued from this sharing of activities. In general, higher-linguistic proficiency students stated more meta-linguistic ideas, especially positive reviews of the activities for lexical gain. Lower-level learners stated more concerns with linguistic complexity in the texts, especially over concordances.

In the GenAI activities, linguistically proficient students also provided more sophisticated answers, interacting with the tool by deploying more prompts and linguistic nuances. For example, they understood and compared different phrasal and lexical options rendered by the tool, choosing fitting options. In turn, lower-level students interacted less with the tools, producing simpler answers. The positive side was that these linguistic findings were compared by all learners with their own previous linguistic discoveries. As a result, answers were critically examined, not just copy-pasted.

Students also did well on the oral presentation assignments, based on the content explored with BDDL. This task was done as project work, for which they organized a topic (e.g., innovation in tourism) by introducing the topic, outlining main parts or sections

according to keywords, explaining main aspects, and concluding with an emphasized or strong viewpoint. The connection with content analysed in previous BDDL activities was generally realized by learners, as they used different keywords and expressions in their deliveries, thus reinforcing metacognition and linguistic awareness.

V.2. Test results

Paired-sample t-tests were conducted to compare linguistic knowledge and text comprehension performance before, during, and after the interventions: pre-, mid-, and post-test scores for 2023, and mid-term tests and post-test scores for 2024. The results revealed significant improvements in all cases, with p-values below 0.05 for all comparisons. In 2023, the post-test scores were compared with mid-test scores, and mid-test scores with pre-test scores (Table 4).

Table 4. *Significance values for test scores within groups*

Year	Mid-test at $p<.05$	Post-test at $p<.05$
2023	.00002569	.03295
2024		.000003983

All the test scores were also compared with students' linguistic proficiencies to examine whether individual scores correlated with their language competences. Table 5 demonstrates a strong positive correlation in all cases, with values exceeding the critical values of Pearson's R at 0.45 (N = 14-2) in 2023 and 0.49 (N = 12-2) in 2024. These findings suggest a proportional relationship between general English proficiency and test performance, indicating a clear tendency for changes in linguistic proficiency to correspond with changes in test performance in the same direction. In both years, however, this strong prediction decreases in the post-tests. The reason is that lower-proficiency learners' scores progressively rose, even more so in 2024.

Table 5: *Correlation values of test scores with linguistic proficiencies*

Year	Pearson correlation coefficient value
2023 pre-test	0.856919
2023 mid-test	0.815243
2023 post-test	0.730646
2024 mid-term test	0.782701
2024 post-test	0.668856

V.3. Poll results

Students' perceptions were measured by averaged poll scores. These scores were tested for internal consistency and reliability within each of the three categories (see Table 6), and the result was that Cronbach's Alpha values exceeded 0.8 in all categories, except for the second one (usage), which reported a value of 0.705. As a result, this final 13-item set was considered valid for analysis.

Due to the small number of students in each course, Table 6 gathers mean scores from both years combined (i.e., 26 students). These scores were calculated and classified according to three variables: Learners' linguistic proficiency (with letter C referring to C1 and B2-level students, B to B1, and A to A2 and A1), learning approach preferences (O = oral, W = written), and classroom dynamics (I = individual, G = group). This classification was based on learners' scores in the general English level tests and on their introductory questionnaire preferences at the beginning of the semesters (see Participants in Methodology).

Table 6. *Mean scores for categories of poll items according to group variables*

CATEGORY	SURVEY ITEMS	LINGUISTIC PROFICIENCY	LEARNING APPROACH	CLASS DYNAMICS
Usefulness (4 items)	BDDL was useful for…: Vocabulary learning Reading skills Grammar Academic English	C = 3.48 B = 3.06 A = 1.99	O = 3.43 W = 2.59	I = 3.11 G = 2.95
Usage (4 items)	BDDL was easy to use in terms of…: Concordances Keywords Text management Tool interactivity / navigation	C = 3.85 B = 3.26 A = 2.76	O = 3.49 W = 2.79	I = 3.55 G = 3.41
Usability (5 items)	In the future, BDDL can be used for…: Self-learning Other English subjects Other university subjects and projects Academic reading Academic writing	C = 3.66 B = 3.05 A = 2.79	O = 3.21 W = 2.81	I = 3.31 G = 3.35

Higher values corresponded to higher-proficiency (C) learners and to students who prefer oral tasks (O). Lower-level (A) students' scores were lower by comparison with C and B students, especially in terms of their perceived usefulness of BDDL for linguistic learning (underlined in Table 6); however, these A students' scores increased regarding usage and usability, especially in 2024. In particular, the scores for tool navigability and applicability to other English subjects rose more in 2024, with their consideration of GenAI usage as either easy or very easy notably contributing to this increase. Overall, the items receiving higher scores in both years were vocabulary knowledge (for usefulness), keywords (usage), and other English subjects (usability).

To identify whether these mean scores were significantly different from each other, Kruskall-Wallis H-tests were run for the three-group measurement (i.e., linguistic

proficiency), and Mann-Whitney U-tests for the two-group reports (i.e., learning approach and class dynamics). P values (at $p < .05$) were used to ascertain any meaningful differences (indicated with asterisks in Table 7).

Table 7. *P-values from non-parametric tests according to group variables. *Significant differences*

CATEGORY	LINGUISTIC PROFICIENCY	LEARNING APPROACH	CLASS DYNAMICS
Usefulness	.00044*	.00697*	.08372
Usage	.00193*	.00775*	.09563
Usability	.00199*	.05678	.09849

Based on these statistical findings, the only variable without any significant score differences was class dynamics, suggesting that learners' preferences for either group-based or individual work did not influence their appreciation of BDDL. In contrast, for the other two variables, significant relationships were found. So, post-hoc Dunn's tests were run using a Bonferroni corrected alpha value of 0.017 to specify the groups of students' scores which significantly differed. Table 8 shows the groups with significant score variations in each category.

Table 8. *Student groups' significantly different scores in each category*

CATEGORY	LINGUISTIC PROFICIENCY	LEARNING APPROACH
Usefulness	A	W
Usage	C, B, A	W
Usability	C, B, A	--

Therefore, in terms of statistical significance, it is confirmed that lower linguistic-proficiency students perceived less usefulness in BDDL for language learning. On the other hand, advanced learners appraised BDDL as easier and more likely to be used in the future than intermediate and low-intermediate students, whereas intermediate students assigned proportionally higher values than low-intermediate participants.

In turn, students favouring written approaches considered BDDL less relevant for linguistic learning and less easy to use, whereas these students' perceptions did not significantly differ from oral-skills-focused participants' regarding their appraisal of BDDL for future use.

V.4. Interviews

The four interviewees in 2024 were asked similar questions, with variations tailored to explore opinions and perceptions according to this outline:

a: General question:

What do you think about these BDDL activities and tools?

b: Question about linguistic knowledge:

What linguistic aspects do you think you improved?

What do you think about the use of these utilities for language learning?

What were some positive and negative things?

c: Procedural/navigational question:

How did you start working with the tools?

How did you find out the answers?

What were your main difficulties?

Which utilities became more convenient for exploring texts and vocabulary?

Their opinions and ideas were grouped according to themes. Some examples were the following (with my own translation of their comments):

1) Learning approach:
    - *a: I liked using all the tools for clarifying linguistic doubts with them (C1 student)*
    - *b: I liked the use of the tools in groups because we could post the information together and learn from others (A2 student)*
2) Linguistic competence:

c: The advantage was that we could go over the expressions in groups, and this helped me to understand the expressions (…) which were sometimes complicated (A2)

d: Versatext was really good for vocabulary, (…) and then, we could choose different examples to translate the ones needed (…) Google translator helped us a lot too (B1)

3) Problem-solving:

e: We sometimes made mistakes because the examples (in the concordancer) were not clear for some answers. (…) We found more examples and finally managed to answer and translate the meaning correctly (B1)

f: I had problems because I didn't understand (the activity) (…) and all of my peers knew more vocabulary and grammar than me. (…) Yet, with the help of my classmates I could find out how to do it (A2)

4) GenAI:

g: I have really liked ChatGPT, (…) it helped us a lot for the answers with vocabulary (B1)

h: We used ChatGPT too, and I liked it for this objective (…) [but] I don't trust ChatGPT very much (…) because it is repetitive (B2)

5) Academic English:

i: These resources have provided me with important insight into the key vocabulary for my own studies because I often find them (the terms) in English readings (for other subjects) (C1)

j: The texts are important for our English in business (…) This type of activity is useful and I liked the Versatext activities (…) I enjoyed using it on my own and yes, I think it would be useful for English (B2)

The students generally expressed positive views regarding BDDL, highlighting Versatext and GenAI for productive task development and linguistic intake. The advanced learners commented on the actual potential of these resources and strategies for future study

in ESP / EAP. In contrast, the low-intermediate student reflected more on the difficulty of facing complex language tasks, and yet, she realized the productive use of working in groups to solve problems and of the activities for linguistic knowledge enhancement. The importance of these activities for lexical competence was mentioned more by the intermediate student, who also appreciated combining online translators and ChatGPT.

VI. DISCUSSION

Based on learners' ideas and performance, some key aspects can be discussed about the application of BDDL in mixed linguistic-proficiency scenarios of ESP.

Students with higher linguistic proficiencies perform better in tasks and tests. Linguistic competence correlates with linguistic performance. Advanced learners explicitly relate BDDL affordances to the enhancement of linguistic learning and academic English, appreciating BDDL advantages more, just like experts may value innovative developments in a field more positively than non-experts. However, intermediate-level learners also realize the usefulness of BDDL for language learning, and they perceive the advantageous utility and usability of the tools more distinctively than lower-level learners. In turn, the significant score improvements from one test to the next are achieved by all learners, which demonstrates that all types of learners increasingly improve their lexical knowledge and text decoding skills. In the case of low-competence participants, their scores progressively improve even more in 2024, suggesting that a longer exposure to BDDL increasingly benefits linguistic knowledge at low-intermediate linguistic levels.

Combining various tools positively influences learning performance and attitudes. Learners' successful management of utilities generally leads to task acceptance and positive reviews. Students' cognitive and linguistic skills also develop constructively by using GenAI as a complementary tool for linguistic probing. Their realization that these tools add to linguistic knowledge works in favour of integrating GenAI within BDDL.

BDDL fosters metacognitive and metalinguistic awareness among learners. Linguistic reflections occur along the activities, with advanced learners often leading comments and discussions. In turn, intermediate students contribute thoughts on their recognition of linguistic benefits, whereas lower-linguistic level participants express more modest appreciations. Two primary reasons seem to arise: lexical difficulty and academic English analysis. Even though linguistic / text analysis with the tools tends to become easy and profitable, lower-linguistic level learners find more difficulty in terms of linguistic decoding for meaning discovery. However, they showcase improved analytical skills in combining simple query tools (e.g., concordances and GenAI) with group work and peer collaboration, as observed in class and pointed out in discussions and interviews. High degrees of interaction and consultation with classmates tend to transfer into positive emotional effects for learners regardless of class dynamics preferences.

The use of concordances is also more effective with BDDL. Some studies have examined that more complaints and difficulties are related to concordances in low-intermediate ESP contexts (e.g., Curado Fuentes, 2015). However, in this case study, concordance developments are integrated better within task mechanics, as these utilities consistently receive higher scores in the surveys (compared to other years). Simpler query interfaces and text-based tools seem to work as a main influence on such positive reactions.

Finally, some noteworthy variations seem to arise in terms of learning preferences. However, if based solely on polls, with such a small sample of students, these observations should be made cautiously. Perhaps, more distinctively, less favourable aspects, such as lower scores given by students who prefer writing skills, should be noted, indicating that this type of BDDL activities are not appropriate for academic writing. Additionally, most advanced and upper-intermediate linguistic-proficiency learners chose oral skills as their preference, which coincides with higher scores assigned to the benefits of BDDL. These students thus seem more likely to integrate BDDL into future academic work.

VII. CONCLUSIONS

This case study has provided some insights into how learners can adapt to BDDL for linguistic developments in ESP.

Answering the first research question of this case study, it is confirmed that BDDL can be used productively in mixed linguistic-proficiency ESP contexts. Students' performances and impressions demonstrate this observation. Even if lower-linguistically proficient students face greater challenges with linguistic probing, the combination of simple query tools and dynamic group work tends to motivate them, mitigating misgivings about this type of approach. This finding aligns with previous results on the importance of collaborative work for low-linguistic level learners using DDL (e.g., Lusta et al., 2023).

In relation to the second research question, integrating BDDL in ESP courses may be done in different ways, but one key element seems to be the implementation of simple text query applications so that BDDL can engage lower-linguistic level learners more suitably, combining other tools to enrich linguistic learning. A key point is task repetition and long exposure to BDDL with different tools. Clear directions and scaffolding along the way are important to ease learners' cognitive efforts throughout the activities, in agreement with some DDL studies (e.g., Timmis, 2015). In sum, different types of activities may be designed, but a key aspect is that learners experience the advantages afforded by the flexibility, ease of use, and group-aided developments of BDDL.

Finally, to answer the third research question, this case study confirms that BDDL constitutes a positive approach in ESP settings. BDDL is realized as a useful strategy to introduce learners into vocabulary and texts within their fields, since learners recognise and appreciate its usefulness for their academic context. This realization creates an opportune space for their practice with higher-order skills, such as field-specific content comprehension, analytical skills, and problem-solving. This type of focus is considered important at this university stage. However, this case study presents notable limitations regarding student sample size and longitudinal observations (i.e.,

tracking the same students over the years); therefore, expanding the study in these directions can significantly strengthen the findings and observations about the impact of BDDL on ESP.

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Exploring authorial voice in English language medical journal abstracts in the age of AI

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ABSTRACT

Authorial voice in medical journal abstracts has been widely studied; however, there is a clear research gap concerning how Hungarian authors place themselves in their English-language abstracts. This study examines the differences in the authorial voice used by Hungarian authors publishing in a local journal and international authors publishing in widely read journals. One hundred abstracts on Covid19 from three journals were extracted and searched for personal pronouns, possessive determiners, noun phrases indicating implicit authorial presence and passive voice. The results suggest a similar frequency of the personal pronoun *we* across the corpora, but a more frequent use of the possessive determiner *our* by Hungarian authors, whereas first-person singular pronouns are almost non-existent. While noun phrase usage shows the most variability in the Hungarian abstracts, the passive voice ratio is between those found in the two international corpora. Pedagogical implications are drawn, especially concerning the observation of published abstracts as models for L2 academic writing versus the growing tendency to use artificial intelligence to generate abstracts.

Keywords: *Journal abstracts; Authorial voice; Medical journals; L2 writers; AI-assisted writing*

I. INTRODUCTION

The term *authorial voice* describes the distinct tone and style used by researchers to communicate their findings in academic writing. This voice shows a degree of objectivity, accuracy, and clarity, while closely observing field-specific norms (Mhilli, 2023; Santos & Da Silva, 2016). The authorial voice in health science articles usually takes on a formal, impersonal tone, using specific terms and the passive voice to describe research methods, findings, and conclusions in the limited space provided (Millar, Budgell & Fuller, 2013; Rundblad, 2007). These abstracts typically have a conventional structure that includes an Introduction, Aims, Methods, Results, and Conclusions. Keeping this structure in mind, authors need to find a balance between readability and complex content. Human-authored abstracts frequently highlight important points and have language choices that show authors' knowledge and familiarity with the subject, express their viewpoints, and stress the importance of their findings. This may be difficult for writers, especially those who publish in a foreign language (L2). They usually observe expert texts to learn the norms of their fields or the specific requirements of journals in which they wish to publish. They may also translate an L1 version or turn to proofreading by a proficient (native) speaker or colleague. More recently, authors have received help from AI writing assistance in general or tools that offer abstract generation in particular. Although AI-generated abstracts may be grammatically and structurally sound and capture the general content of the manuscript, they do not have the depth of comprehension of the authors. For AI-based tools, it may also be difficult to mimic and reproduce the differences in tone and emphasis used by the authors.

This article aims to add to the expanding body of research on the linguistic realization of medical abstracts by comparing abstracts written by Hungarian authors as part of their Hungarian articles with those published in leading medical journals by international authors with various language backgrounds. The analysis focuses on key aspects of authorial voice, including first-person pronouns, passive voice, and noun phrases

referring to the author and the article. This study also discusses the growing reality of authors turning to artificial intelligence for translating, generating, or proofreading their texts, including the abstracts. From an academic writing pedagogy perspective, it is discussed how AI assistance can be exploited, what types of results can be obtained, and why caution should be taken against excessive reliance on these tools and blind copy-pasting.

II. LITERATURE REVIEW

II.1. Academic journal abstracts

As English has become an academic lingua franca, English-language abstracts play a key role in disseminating researchers' work. Authors with different first languages (L1s) must learn the rhetorical and linguistic conventions of abstract writing (Hyland, 2000a; Tverdokhlebova & Makovskaya, 2022). All articles published in journals include an abstract, typically between 150 and 250 words, summarizing the aims, methods and main findings of the accompanying article. Even non-English manuscripts have English-language abstracts or summaries that can reach a wide international audience. Due to their important roles and functions in research communication, abstracts are a genre of their own rights. In health care research, a recently emerged subgenre is a video abstract that has additional elements to express an authorial voice and help reach its audience (Edo-Marzá & Beltrán-Palanques, 2023). In the growing flood of scientific information, readers can rely on abstracts, in addition to titles, to filter out content that seems relevant and help them decide what is worth reading (Jiang and Hyland, 2017). In a recent study by Shiely et al. (2024), more than 98% of science and health care researchers reported that they read the abstract first to get an overview of the content and to see whether to read on or not. However, AI-assisted writing offers ready-made solutions for sources to be placed in abstracts without careful selection or close reading by authors. This may speed up the background reading and the writing process but jeopardizes the real academic dialogue between scholars and raises ethical concerns.

Medical abstracts are more important than research publications in many other fields because they often have a direct impact on clinical decisions. Their significance arises from the time constraints that health care professionals often face; therefore, they may rely on these concise summaries to stay informed about the latest developments in their field and make decisions concerning patient care (Nascimento et al., 2021). Within the health care and linguistic literature, various studies have explored its structure, content, quality, and impact on clinical decision-making. Studies have shown that the quality and content can vary significantly. For example, O'Donohoe et al. (2019), analyzed systematic review abstracts in neurosurgical journals and found that the overall reporting quality was suboptimal for over half of the abstracts. This is alarming because medical abstracts can potentially impact clinical decision-making. Quality and clear content are even more important when abstracts are scanned and evaluated using AI for both research and clinical work. Among others, Bragazzi and Garbarino (2024) suggested that the integration of AI in clinical decision-making could potentially expand the use of medical abstracts, provided that AI-generated insights are verified and explained to both clinicians and patients.

From a linguistic perspective, abstracts have been widely studied for their rhetorical structure, lexical and syntactic complexity, metadiscourse functions and verb use, highlighting cross-linguistic, disciplinary and diachronic differences (Hyland, 2008; Hyland et al., 2022). Structural and linguistic choices may have a strong impact on the way abstracts are selected and perceived, and can inform readers not only about the content, but also the quality of articles. Jon et al. (2021) further emphasized that abstracts with higher readability scores (calculated based on thirty-nine lexical and syntactic complexity indices) received better online attention; therefore, they gave the articles a significantly higher scientific impact.

II.2. Authorial voice

Authoral voice represents one of the most intriguing aspects of academic writing that combines authors' intentions, writing conventions, and linguistic choices. Tardy and Matsuda (2009, p. 34) defined authorial voice as "the amalgamative effect of the use

of discursive and non-discursive features that language users choose deliberately or otherwise from socially available yet ever-changing repertoires". Drawing on Hyland's (2008) interactional model, researchers typically interpret voice as the interplay between two interconnected, yet often indistinct, components: the stance one adopts and the strategies used for engagement. Stance is largely conveyed through hedges, boosters, self-references (Hyland, 2000a, 2000b, Liu et al., 2024), and the choice of rhetorical move structures within specific genres (Pho, 2008; Swales, 1990). On the other hand, engagement can be shown through questions, listener mentions, directives, level of formality, or references to shared knowledge (Hyland, 2004, 2005). Hedges and boosters stand out as particularly significant among the linguistic tools available to authors to convey their opinions. These are defined as "communicative strategies for increasing or reducing the force of statements" (Hyland, 2004, p. 87). These metadiscoursive elements play a crucial role in conveying meaning and promoting interpersonal connections between writers and their audiences (Hyland & Tse, 2004; Hyland, 2005). Hedges (e.g., may, could) can be used to indicate uncertainty or show respect to the research community, whereas boosters (e.g., must, significantly) can signal a strong commitment to the information being presented (Hyland, 2004).

In academic writing, authors have the choice to present themselves explicitly or hide their presence; in other words, they emphasize or hide their responsibility for their own propositions, and convey epistemic judgements, opinions, and degrees of commitment (Bondi, 2014). Explicit presence can be expressed through first-person singular and plural pronouns, possessive determiners of nouns, first-person verbal suffixes and self-citation (Fife, 2021; Hyland & Jiang, 2017). By contrast, implicit presence is formed with self-reference words (the author, the researcher), reader-inclusive *we*, impersonal means (such as nominalizations, anticipatory it), inanimate subjects (e.g., this study) and passive voice (Hyland, 2002; 2004; Hyland & Tse, 2004; Bondi, 2014).

The excessive use of passive voice in medical writing has been thoroughly studied and compared to other fields, such as the humanities. Research conclusions are mixed, particularly when examining diachronic studies that track changes in writing strategies.

Those comprising periods until the 1980s or the 1990s have usually concluded an increase in the use of passives (Banks, 2008). Others, examining more recent periods, have found a move away from the overuse of passive forms, explaining it with the need for authority, clarity, and conciseness (Banks, 2017; Leong, 2020; Seoane, 2006; 2013). While investigating a large diachronic corpus of four disciplines, Hyland and Jiang (2017) found notable differences across disciplines and in specific linguistic features. Among the impersonal constructions, the use of first-person pronouns *I* and *we* has increased in three of the four disciplines (except for applied linguistics, which already showed a higher frequency).

Roundblad (2007) investigated impersonalization strategies in the Methods sections of nine medical articles, looking at both passive voice and metonymy. She argued that metonymy is used either for generalization (any researcher could have done the study) or socialization(e.g., other researchers or the hospital). The study found that using metonymy to refer to the authors as the study, trial, or aim occurred less often than references to tables or results. Roundblad in another study (2008) also noted that the use of metonymy and passive voice depends on whether the authors are referring to themselves or someone else involved in the research. Swales (2015) calls this metonymy an attended noun phrase (NP) that refers to either the article itself (study/article/paper/research) or the methodology (method, technique, procedure). They may appear with the determiner *the* to fully disguise the author, or be preceded by the possessive determiners *my* and *our* or the demonstrative pronoun *this*. The latter two options may also function as strong attitudinal signals and cohesive devices that facilitate the flow of reading (Swales, 2015; Hyland & Jiang, 2017).

II.3. Abstract writing pedagogy and writing support: Human vs. computer-assisted abstract writing

Academic writing has long been viewed as impersonal, objective and purely empirical, one that should refrain from informal language, including the use of first-person pronouns, especially in medical texts (Seoane & Hundt, 2018). Some scholars have noted that writing manuals and courses do not adequately observe disciplinary

differences or empirical research results (Isik-Tas, 2010; Hyland & Jiang, 2017). Over a decade ago Millar et al. (2013) noted that some leading medical journals advised their authors to use the active voice and first-person personal pronouns instead of the passive voice. The same guidance is echoed in the House Style Guide (HSG) for the British Medical Journal (2025) that advises: "Write in the active and use the first person where necessary", which is part of the general request to "write in a clear, direct, and active style." However, Millar et al. (2013) argued that there are misconceptions about the perceived verbosity and readability difficulty of the passive voice. The use of passive constructions may not only be a stylistic choice, but also a better option to keep the agent and the verb closer; therefore, information processing becomes easier.

Despite the importance of abstracts in authors' academic achievement, usually little attention is paid to developing writing skills in this area (Campbell, 2019; Tverdokhlebova & Makovskaya, 2022; Veszelszki, 2018). This aspect of academic writing is typically learned explicitly. Researchers form an idea for themselves of what an abstract looks like and what structural and linguistic expectations it should meet based on the abstracts they read. In the health sciences, a growing number of journals require structured abstracts that provide a framework and orient the authors very closely regarding the main sections and length requirements. O'Donohoe et al. (2019) highlighted the importance of standardized guidelines and the influence of journal prestige on abstract quality. However, some other medical journals and many other research fields do not use structured abstracts, and it is up to the authors to decide what to include, although the aims, methods, and results seem to be mandatory in abstracts (Pho, 2008).

Even if the authors received training in English writing pedagogy at the university or early in their careers, they are unlikely to have received adequate information about abstract writing. Doctoral students or researchers typically encounter this genre when applying for conferences or submitting papers, but it is mostly length and editing expectations that they receive, with few content-related or rhetorical suggestions. English-language manuals on the teaching of scientific writing or course materials of

university writing centers specializing in writing pedagogy and language support say little about abstracts; they usually specify only a few aspects such as length, clarity, and well-formedness.

In recent years, an increasing number of authors have turned to computer-assisted translation or language checking when writing their manuscripts. AI-supported academic writing has revolutionized the ways in which authors approach publishing. For example, they may help by generating drafts, rewording complex arguments, summarizing larger sections, suggesting citations, improving clarity, coherence, and style, and checking a manuscript for grammar and plagiarism. Free translation software and large language model-based chatbots such as ChatGPT, are increasingly available and effective, and their use is widespread. In the last few years, there has been a rapid substitution of human resources for machine assistance, even though this too requires authorial editing and decision making. Supporters of AI-assisted writing argue that, while AI cannot substitute human thinking, it may work as a strong complement, allowing writers to concentrate more on their research content and analysis rather than the writing itself.

Recent studies have explored the use of ChatGPT to produce various academic genres, including case reports (Buholayka et al., 2023) and research article drafts (Macdonald et al., 2023). They also addressed the quality and recognizability of machine-generated and human-written abstracts. For example, Gao et al. (2023) found that computer-generated abstracts are fuzzier, appear formulaic, and fail to meet journal format expectations. The authors reported that AI detectors were able to identify these abstracts well, and readers involved in the study were able to filter out an average of 68% of them. In contrast, the linguist participants of Casal and Kessler (2023) correctly judged the authorship of only 39% of abstracts. Similarly, 40% of participants in a health science study conducted by Nabata et al. (2025) were able to correctly identify the authorship of the abstracts, with 63% expressing a preference for generated abstracts. Likewise, Pressmann et al. (2025) reported that their participants favored ChatGPT-generated plastic surgery abstracts, which they described as well-written, clear, and concise.

Alongside accuracy, ethical concerns are often voiced in connection with writing assistance, especially generative artificial intelligence (GAI). Some of the journal editors in Casal and Kessler's (2023) study had no ethical objections to the use of artificial intelligence, whereas other studies have indicated a growing concern regarding GAI in research publications (Butson et al., 2024; Lund et al., 2023; Tai et al., 2023).

II.4. Summary and research aims

Authorial voice is a key area in abstract writing. While there are a wealth of studies on abstract writing in different disciplines and concerning authors from various backgrounds, a clear research gap exists concerning how Hungarian authors place themselves in their English-language abstracts. Similar studies on Hungarian linguists' research article abstracts (both in Hungarian and English) show more frequent self-mentioning and lexical variation concerning inanimate subject (*paper*, *study*, *article*) choices (Doró, 2023; 2024). There is also debate on how general writing manuals, disciplinary traditions, and journal guidelines (or a lack of these) should be observed by authors and how much help they can and should be obtained from AI. Based on the literature reviewed above, this study seeks to answer the following research questions:

1. What differences can be observed in the authorial voice used in English-language abstracts written by Hungarian authors publishing in a local medical journal and international authors publishing in widely read journals?
2. More specifically, how are the following three linguistic markers used in the three corpora: first-person pronouns, inanimate noun phrase subjects referring to the article, and passive voice?
3. What pedagogical implications can be drawn from the results and how can AI writing assistance be incorporated into researchers' abstract production and academic writing instruction?

III. METHODS

III.1. Corpus

Three corpora of medical journal abstracts published on the topic of Covid19 in prestigious, peer reviewed, and open-access journals were compiled using the WoS database. The first 100 abstracts for each journal were subtracted from the WoS database, which matched the following selection criteria: open access, Covid19, empirical research. Only empirical research papers were chosen because they have a more typical abstract structure and content across journals than short notices or review articles.

A leading Hungarian medical journal, Orvosi Hetilap, and two leading international journals, all publishing studies in general medicine were selected for comparison. The anchor journal, Orvosi Hetilap (OH), is the oldest Hungarian press product and is part of the Hungarian Cultural Heritage, and the only scientific journal published weekly. The majority of the articles were in Hungarian with abstracts provided in both Hungarian and English. Currently, it has a Q4 ranking.

For the comparative analysis, two online Q1 journals were selected. The British Medical Journal Open (BMJ Open) has a policy of publishing research as soon as an article is ready. The Journal of Clinical Medicine (JCM) is published semi-monthly online. All three journals are open access, included in PubMed and Web of Science and have a mixed abstract format. Table 1 indicates that OH and JCM are closer in terms of overall corpus length, but there is large individual variation within a single journal. For example, BMJ Open abstracts range from 31 to 493 words.

Table 1. *Characteristics of the three corpora*

Journal	Number of abstracts	Tokens	Abstract format
Orvosi Hetilap (OH)	100	20.965	mixed
British Medical Journal Online (BMJ Open)	100	26.482	mixed
Journal of Clinical Medicine (JCM)	100	20.874	mixed

III.2. Data analysis

The analyses were conducted using the Sketch Engine tool. The corpora were first searched for the frequency of first-person singular and plural pronouns *I* and *we* and possessive determiners *my* and *our*. The occurrences of *we* were then manually checked by the author twice to separate reader-exclusive *we* from reader-inclusive *we*. Reader-exclusive *we* and *our* may refer to multiple authors as subjects of sentences, while reader-inclusive *we* and *our* may refer to a larger social context of researcher and medical personnel, the hospital in general, and issues involving a larger society. An analysis of the inanimate NPs and grammatical passive voice was also carried out using Sketch Engine.

Finally, as part of the discussion on pedagogical implications, three experimental sessions of abstract generation were conducted using two AI tools. The non-subscription, free version of ChatGPT 3.5 and subscription-based Paperpal were used to test the responses they generated to the request to write abstracts for the uploaded academic texts. ChatGPT was chosen for its availability and popularity, and Paperpal was chosen as an example of an AI tool specifically designed for academic writing support. As a chatbot, ChatGPT must be carefully prompted to obtain the desired response and may require additional rounds for refinement. Paperpal has the option of generating an abstract and title based on the text typed in. It also has the option of interacting with a full article uploaded in a PDF format, and a summary is written automatically, but an abstract (with optional specifications regarding length and format) can also be requested in a dialogue box. The first session included abstract generation based on the full-text submission of one of the articles of the OH corpus using both tools. The article was written in English with abstracts in two languages. This allowed for a direct comparison between human-written Hungarian and English abstracts and generated abstracts. Both AI tools were given the following prompt: “Write an English structured abstract for the uploaded article with the following sections: introduction, objective, methods, statistical analysis, results, conclusion.” In the second session, another published medical article, this time without its structured abstract, was uploaded to

both tools, again in a PDF file, as ChatGPT does not allow for a full manuscript to be placed in the chat box. For the third session, the direct abstract generator tool of Paperpal was tested based on the Introduction, Methods and Conclusion chapters, as the full article would have been difficult to transfer because of its length and the use of tables and charts.

IV. RESULTS AND DISCUSSION

IV.1. Pronoun and possessive determiner use

The first set of analyses concerned the use of reader-exclusive and reader-inclusive pronoun and determiner use. Table 2 indicates that the frequency of *we* as a reader-exclusive subject shows similar tendencies across the three corpora, with 42 to 48 occurrences per ten thousand words. Hungarian authors most often used this option.

Table 2. *First-person plural pronoun and determiner use in the three corpora*

	OH	BMJ Open	JCM
***we* as subject (reader exclusive)**	100 (47.62*)	112 (42.26*)	93 (44.5*)
reader inclusive *we*	3	1	0
***our* (reader exclusive)**	58 (27.62*)	31 (11.7*)	34 (16.27*)
***our* (reader inclusive)**	7	3	0

*normalized per 10,000 words

The pronoun *we* seems to be a common option for describing what the authors did to complete the research; therefore, it typically appears in the Aims and Methods sections (see Excerpts 1 and 2 below).

(1) *We investigated clinical data, laboratory findings and determined the major risk factors.* (OH)

(2) *We performed a retrospective study that included all SARS-CoV-2-positive patients with DM who were admitted to two Italian hospitals.* (JCM)

The instances of reader-inclusive we were very uncommon in the three corpora with only four clear cases, three in the OH, and one in the BMJ corpus. They typically occur together with the modal verb can, need, or must, as shown below.

(3) *We also need to find new ways, methods, and platforms to deal with this pandemic.* (OH)

(4) *We must not forget the limitations of this method…* (OH)

As for the possessive our, even clearer dominance is seen in the Hungarian corpus. Hungarian scholars emphasized themselves as active agents more than twice as often as colleagues publishing in BMJ Open. This possessive determiner emphasizes a direct connection with the data, participants, methods, results, and the larger clinical settings.

(5) *Our experience indicates that convalescent plasma therapy is well tolerated and could potentially improve clinical outcomes.* (OH)

(6) *Our data did not support the association between COVID-19 infection and the subsequent development of active TB.* (BMJ Open)

(7) *Our results reveal that most patients with post-COVID-19 syndrome suffer from multiorgan disorders.* (JCM)

In contrast, the reader-inclusive *our* indicated general observations, such as the one in Excerpt 8, conclusions drawn from the data for a larger population (Excerpt 9), or reference to issues surrounding the whole society, as in Excerpt 10. These were more than twice as common in the BMJ Open corpus as in the OH corpus and were absent from the JMC abstracts.

(8) *The pandemic might be close to over, but it is not out of our lives yet …* (BMJ Open)

(9) *May affect our ability to respond …* (BMJ Open)

(10) *These colleagues, our national heroes we can say, are facing after working in COVID-19 health care units.* (OH)

The first-person singular pronoun I and determiner my were found only once, appearing together in the same sentence in one of the Hungarian abstracts:

(11) *In my paper, I summarize the acute and chronic effects of viral infection …* (OH)

It is also possible to find a few examples in which reader-inclusive and reader-exclusive forms are mixed, as in Excerpt 12.

(12) *With our results we would like to raise awareness of the challenges and severe psychological consequences that these colleagues, our national heroes we can say, are facing after working in COVID-19 health care units*. (OH)

IV.2. Inanimate noun phrases referring to the given studies

The four most common noun phrases used to refer to the given studies were *study, article, paper* and *research*. As Table 3 indicates, s*tudy* is the leading NP with over two and three times as many occurrences in the two international corpora than in the Hungarian one. The noun *article* is used ten times in the OH corpus and only once in BMJ Open. It is important to note that not all of these are metonymies hiding authors. As shown in Excerpts 13 to 16, they may refer to the study as a location or time period. If used as a prepositional phrase (e.g., *in this study, in our paper*), a main clause with an active verb or a passive construction can follow.

(13) *A cross-sectional survey was used in this study*. (BMJ Open)

(14) *In the study period, 1343 appendectomies were performed*. (OH)

(15) *In this retrospective study, we included 79 patients admitted to …* (OH)

(16) *In this first article, we describe …* (BMJ Open)

The noun *paper* was four times more frequent in the Hungarian corpus than in the other two, with a similar leading position for *article*. The word *research* was chosen only three times in the OH and JCM corpora and six times in BMJ Open. Frequent sentence starters for refining aims are as follows: *the aim of this paper is*, *this paper presents*, *the aim of the study was*.

Table 3. *First-person plural pronoun and determiner use in the three corpora*

	OH	BMJ Open	JCM
study	61 (29*)	203 (89*)	136 (109*)
article	10	1	2
paper	8	2	2
research	3	6	3

*normalized per 10.000 words

Upon examining the extent to which the four noun phrases serve as metonymy for an active human agent, we found that the numbers decrease, yet the overall patterns remain inconsistent. One important difference is seen in *research* that is exclusively used to state future research directions in the BMJ Open corpus (as in Excerpt 17) compared with Excerpts 18 and 19 in the other two corpora.

(17) *Further research is needed to confirm …* (BMJ Open)

(18) *The goal of our research is to analyze the direct and indirect effects of the pandemic*. (OH)

(19) *The research aimed to compare…* (JCM)

IV.3. The passive voice

On an average, three to four passive constructs were used per abstract in all three corpora. When the raw figures shown in Table 4 were normalized per 10,000 words, the numbers showed very similar tendencies to the JCM leading the line. The OH values are between those of the other two corpora.

Table 4. *Frequency of the passive voice*

	OH	BMJ Open	JCM
passive voice	344 (163.8*)	405 (152.8*)	372 (178*)

*normalized per 10,000 words

Passive voice usually appears in the Methods and Results sections, as shown in Excerpts 20 to 23.

(20) *A descriptive study was started on August 2021 at a tertiary care hospital* (BMJ Open)

(21) *The presence of the virus was not detected* (OH)

(22) *It was found that prior COVID-19 infection and vaccination do not confer immunity from infection.* (BMJ Open)

(23) *A nation-wide, cross-sectional online questionnaire was sent to* … (OH)

The first three of these examples could be turned into active sentences, and an explicit authorial voice, with the pronoun *we*: *we started, we could not detect, we found*. Excerpt (23) is a case in which the passive is more natural, as the agents are less important than the results of the action.

IV.4. AI-generated abstracts

As explained in the Methods section, a full published article was first uploaded to both Paperpal and ChatGPT and a structured abstract divided into the sections of the article was asked for. In response, Paperpal provided a paraphrased version of the original abstract, keeping all five passive structures, four of the five occurrences of we alongside the one instance of *our*. The only notable difference in terms of academic voice was a shift from *In the present work, we sought to explore* to *This study aimed to uncover*. Meanwhile, ChatGPT failed to perform this task. It generated an abstract with the required format, but on an unrelated topic. When asked to correct itself, it generated a shorter, unstructured abstract-like text on a third, unrelated topic.

For the second experiment, a published paper without its abstract was uploaded, and a structured abstract of 250 words was asked for, without specifying what "structured" meant. Paperpal missed the task at first, as it did not seem to grasp the term *structured abstract* and instead provided a summary of bullet points. This time, ChatGPT was able to generate an abstract, related to the uploaded text. Both generated abstracts

had a more absent authorial voice, no use of personal pronouns or the demonstrative pronoun *this* with the noun *study*.

The third experiment, which only had key sections of an article copied into the text boxes of the tools (Introduction, Methods, and Conclusions), was more successful for Paperpal than for ChatGPT in terms of content. Because AI does not have the intentions of a human author, authorial invisibility was expected. Similarly to the first two rounds of abstract generation, noun phrases such as *the study* and *the research*, together with *the authors* were used as subjects. The demonstrative *this* was used only once in both abstracts.

V. DISCUSSION AND PEDAGOGICAL IMPLICATIONS

The analysis of the selected voice markers in medical journal abstracts revealed interesting patterns. First-person pronoun use was significantly more frequent in Hungarian-authored abstracts than in those published by authors from a variety of backgrounds. This difference is especially evident for *our*, as if Hungarian authors wish to stress the ownership of their studies. However, this could be a language transfer, as plural verbal suffixes and possessive pronouns are markers of neutrality in Hungarian academic speech and writing, even when regularly used by single authors, because passive constructions are rare. The first-person singular pronoun use also supports this language transfer phenomenon from Hungarian (*In my paper, I summarize*). What can be felt as a neutral academic voice in Hungarian, however, when directly transferred to English, can easily sound like an exaggerated voice marker. A similar phenomenon has been observed in relation to linguistic abstracts (Doró, 2024). In this study, small changes from *in our study, we examine* to *in this study, we examine* may shift the degree of explicitness and create a more natural academic tone. In the case of reader-inclusive *we* and *our*, zero occurrences were observed in one of the international corpora and only four altogether in the other. The two phrases *we may conclude* and *we can say* in the Hungarian abstracts may, again, represent the language

transfer phenomenon that appears informal in English and might be better conveyed through passive constructions or omitted entirely. This is supported by the fact that the Hungarian corpus was subtracted from Hungarian articles that contained both Hungarian and English abstracts. In this case, it is assumed that a Hungarian abstract was written first and then a human or machine translation was made with possible human post-editing. By closely examining the original L1 abstracts and their English counterparts, researchers can identify patterns of translation strategies and linguistic, cultural, and disciplinary adaptations. Earlier research has supported the role of the lingua-cultural transfer of authorial presence, pointing to the tendency of L1 authors to blend their L1 and L2 English academic conventions (Dontcheva-Navratilova, 2023; Doró, 2024; Pahor et al., 2023; Vassileva, 1998), transfer their pragmatic competence (Chen, 2020) or cultural norms (Chen & Yang, 2024).

In terms of function, Hyland (2002) suggested a typology of four discourse functions for self-mentions in research articles that can be directly mapped onto abstracts: explaining an aim/purpose, discussing a procedure, elaborating an argument, and summarizing results/claims. Hyland explained that the first two show a lower degree of authorial exposure, while the latter two express stronger and more explicit authorial presence. The examples listed in the results section of the present study, however, indicate that the aims and procedures could be as strongly explicit as the discussion of the results. Robust argumentations or claims are rare in abstracts owing to space limitations, but all four functions in Hyland's typology appear in the three corpora. First-person pronouns are seen as the most powerful option for an explicit representation of the author's voice, stance and attitude (Biber et al., 1999; Li, 2021).

As Hungarian is an active-voice-dominant language, it was anticipated that the passive voice would appear less frequently in the Hungarian corpus than in the other two. Instead, impersonal constructions or adjectival forms (such as *látható*, *hallható*, "can be seen, heard") are used to express passive-like meanings. An alternative is to use agentless constructions or the active agents *we* when English uses a passive form. However, this was only partially confirmed in our data, as the usage of the passive was

similar to that of the international corpora, whereas active agents were more evident in the OH corpus.

The dominance of the noun *study* to replace explicit authorial presence was seen in all three corpora, with the Hungarian corpus showing a greater variety of alternative noun phrases compared to the others. Again, this can be interpreted as a literal translation from Hungarian nouns frequently employed to describe a study, reflecting the L2 author's voice. However, in academic writing training, it is important to call (future) authors' attention to similar small differences to make them aware that academic writing is not simply a matter of grammatical and lexical choices but that small changes may alter readers' perception of authorial voice and intentions. Research has shown that L2 authors, especially students, may consider voice markers as grammatical or lexical choices and concentrate on a few of these that have been stressed during writing instruction. One prominent example is the avoidance of the first-person singular and the use of passive voice and impersonal constructs (Fife, 2018; Rundblad, 2018; Vassileva, 1998).

During academic writing instruction, especially when field-specific, it is worth building a small corpus of the targeted genres, in this case abstracts, to show field-specific conventions alongside variations. It is even more beneficial if students observe the target texts and build their own mini-corpora to observe conventions and variability. This practice can be more educational and direct than working with writing course book material. This is something that authors, especially those publishing in an L2, implicitly do when drafting academic texts, especially targeted sections such as abstracts. Small differences between conference abstracts and journal abstracts also need to be observed, as the latter are shorter and contain more condensed information. As journal guidelines can vary greatly in their explicitness or formal requirements, students and novice scholars need to learn to carefully check these.

The three small experiments with AI writing assistance indicated various degrees of success when general prompts were provided. Some aspects of the texts resembled summaries, either in the form of running texts or bullet points, but did not fully capture

academic abstracts pertaining to the given manuscripts. ChatGPT also produced hallucinated results by offering unrelated abstracts. These observations are in line with what Kong and Liu (2024) noted, namely that ChatGPT struggles to replicate certain aspects of human writing in academic texts. ChatGPT-generated abstracts in their study also often failed to effectively describe background information, identify knowledge gaps, or describe the aims of the study. These aspects require human reasoning and background knowledge that AI does not have. Moreover, AI tends to overemphasize summaries of content and recommendations for future research, which are aspects that can be easily extracted from academic texts.

With the rapid advancement of AI tools, their use needs to be experimented with and discussed in academic writing classes, as well as in other English Medium Instruction (EMI) courses. Testing AI writing assistants, grammar checkers and citation tools may enhance students' academic writing, general language proficiency and research skills. In doing so, ethical considerations should be discussed to promote their critical thinking and academic integrity and to make them more aware of both the strengths and limitations of such tools. It should also be noted that large language-model-based applications generate different texts any time they are given the exact same prompt; therefore, for classroom use, it is advisable to save a few anchor examples to be analyzed with students before they generate their own versions. A comparison of these is also a valuable task.

While integrating AI tools into the curriculum, we need to keep in mind that students' level of AI literacy and their attitude towards and use of AI tools for study and research purposes may vary greatly. Wang et al. (2024) found that in a group of Chinese medical undergraduate students 26% admitted using ChatGPT. These students completed their assignments quicker, received better assessment and showed higher confidence, satisfaction, and positive attitude towards the future use of ChatGPT for writing tasks. Writing strategies connected to GAI-powered writing tools are also important. For example, doctoral students in Nguyen et al.'s (2024) study had better writing when actively interacting with tools compared to those who only performed linear writing

and used GAI as a source of information. In a recent Hungarian survey, Fajt and Schiller (2025) documented university students' general positive attitude towards ChatGPT use but also a concern about its potential misuse. Other studies have highlighted users' computer literacy level, comfort levels with technology in general, and perceived ease of use (Arthur et al., 2024; Gilmore et al., 2025) and academic pressure (Abbas at al., 2024; Kofinas et al., 2025) that influence their readiness to interact with AI as a learning or research tool.

VI. CONCLUSIONS

This study offers an explanatory analysis of authorial voice markers used by Hungarian researchers who published their medical research in L1 containing abstracts in English. The findings indicate that Hungarian authors follow the conventions of English academic writing specific to their field, despite the potential influence of their first language. Additionally, even the two international corpora demonstrate differences in the markers of authorial voice. It has also been discussed how similar results can be applied in teaching academic writing and how AI writing tools handle straightforward abstract writing prompts.

It is undeniable that chatbots such as ChatGPT have great potential to assist L2 writers in overcoming language difficulties. By relying on their help, researchers can communicate their findings more quickly and effectively in English. In addition, they can use chatbots' personalized feedback to improve their writing style and gain new ideas about content. Nevertheless, it is important to note that the accuracy of AI's suggestions is limited; it invents a text based on other texts fed into it, and can hallucinate and generate incorrect or stylistically inappropriate texts. Therefore, it is always advisable to make human decisions when using ChatGPT for writing assistance.

Based on the experiments carried out and the cited publications, it can be concluded that abstracts generated from English articles, although they may sometimes pass the human reader filter, cannot fully replace authorial judgements in producing an

informative abstract specific to the research and the journal in question. The AI-assisted content should always be carefully evaluated, reviewed and edited. Understanding ongoing intellectual property debates surrounding the use of GAI is also critical for students and researchers alike.

This study was limited in several respects. First, one specific L1 and three journals were targeted; therefore, the results cannot be generalized to other academic contexts and languages. International authors cover a wide range of language backgrounds, many of whom are also non-native speakers of English. Nevertheless, small-scale experiments such as this one can aid local researchers in understanding L1-specific tendencies and make them more aware of the importance of seemingly marginal linguistic decisions. Another limitation is that we did not have information on the abstract writing strategies of the authors, and the final texts may be beyond the authors' decision only. Major publishing companies offer language editing services or ask for a native speaker or a native-like proficient English user to confirm that proofreading has been done prior to submission or after the reviewers have requested so. Alternatively, the authors may use translation tools to write their English texts based on their L1 manuscripts. Similar proofreading services or translations significantly affect authorial voice. Third, only selected aspects of authorial voice markers were analyzed. Future research could expand to metadiscourse markers such as boosters and hedges, which are widely studied in other contexts. A closer look at the structural differences between human-authored and AI-generated abstracts could also help us to understand the extent to which GAI can be used for writing assistance.

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Language Skills and Communication Strategies of Hungarian Health Visitors Working with Multicultural Families – Implications for ESP Material Design

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ABSTRACT

In response to Hungary's growing multicultural population, health visitors face increasing language and cultural challenges. This practitioner research builds on a previous empirical study of communication experiences in Hungarian health visitor services, examining how health visitors interact with multicultural families and manage language barriers. Conducted by language educators, translators, and a health visitor, the study involved an online questionnaire survey (April–October 2022) targeting practicing health visitors (n = 48) and multinational families (n = 51). The findings revealed both strengths and limitations in everyday communication practices and informed the development of English for Specific

Purposes (ESP) materials tailored to this professional context. Drawing on survey results and expert consultation, the article outlines a practice-oriented framework for ESP coursebook design, including key thematic areas and pilot exercises that simulate multilingual healthcare interactions. The study enhances Hungarian health visitors' training by aligning language teaching with real-world communication needs.

Keywords: *Healthcare communication; Health visitors; English for Specific Purposes; Language proficiency; Multicultural healthcare; Material design*

I. INTRODUCTION

Language barriers in healthcare are widely recognized as a significant risk factor for adverse events. Misunderstandings, mistranslations, or incomplete communication can not only compromise the quality of care but also undermine patients' trust in the healthcare system. For this reason, it is essential to train healthcare professionals to navigate situations where patients do not speak the local language and communication must occur either in a shared second language or with the help of a language mediator.

This practitioner research builds on a previous empirical study titled *Communication Challenges in the Provision of Health Visitor Services to Foreign Families Living in Hungary* (Horváth & Kozár, in press), which explored the real-life communication strategies used by Hungarian health visitors in multilingual settings. That study identified key challenges related to informal interpreting, varying English proficiency, and the lack of multilingual materials.

The present article examines the pedagogical implications of those findings. It investigates how Hungarian health visitors communicate with multicultural families in their care, focusing on how their language skills shape the strategies they employ. It also explores the typical communicative settings that health visitors encounter. The overarching aim is to inform the development of English for Specific Purposes (ESP) materials that align with health visitors' professional and linguistic needs, supporting more inclusive, effective care in multilingual environments.

II. BACKGROUND

II.1. Demographics, Language Policy, and Language Access in Hungarian Healthcare

Hungary is considered a medium-sized country, with a population of approximately 9.5 million inhabitants (Hungarian Central Statistical Office [KSH], 2024b). According to data from the KSH, in 2024, foreign citizens constituted 2.6% of the resident population (KSH, 2024a). This represents a notable increase compared to previous years: in 2014, foreign citizens accounted for 1.4% of the population, while in 2003, the last year before Hungary's accession to the European Union, they comprised only 1.1%. The steady rise in Hungary's foreign population is driven by economic integration, historical migration waves linked to regional conflicts, and ongoing labor shortages. According to 2023 KSH data, for example, the number of foreign employees has risen sharply since 2021, driven by the growing influx of third-country nationals (KSH, 2023b).

As the population becomes both nationally and linguistically diverse, the patient population in the Hungarian healthcare system follows suit. This diversity can create challenges in ensuring clear communication, providing quality care, and guaranteeing equal access to health services. It also underscores the critical role of language and cultural mediators, as well as the availability of multilingual information materials, raising important questions regarding language assistance and linguistic accessibility.

The Hungarian healthcare system has been examined from the perspectives of multiculturalism and linguistic accessibility (Gellér, 2012; Horváth, 2023a; Horváth, 2023b; Csenki-Bózsó et al., 2025; Horváth & Gabányi, 2025; Horváth & Kozár, in press). Research shows that while patients of diverse nationalities appear in the system, no standardized language assistance exists nationally or institutionally. A survey of 110 healthcare professionals (Horváth, 2023a) revealed that 43% regularly attempted to communicate with non-Hungarian patients in a foreign language themselves. Respondents could select multiple strategies: 23–26% reported separately using ad hoc interpreters, translation tools, or non-verbal methods. Professional interpreters

were rarely involved. Regarding multilingual documentation, 59% stated that foreign-language consent forms were unavailable or unknown, while 24% had some in English.

One underlying reason for the absence of structured language support lies in the current legal framework, which does not impose clear obligations on healthcare providers regarding interpretation and translation services. In Hungary, no regulation mandates the appointment of an interpreter for patients or the translation of healthcare documents for non-Hungarian speakers. Although Ministry Decree 24/1986 (26.VI.) and Article 12(1)–(3) of Act CCXL of 2013 grant the right to free interpretation and translation, this applies solely to criminal proceedings. According to Section 13 (8) of Act CLIV of 1997 on Health Care, patients have the right to be informed in a manner they understand and to receive interpretation if necessary and possible.

II.2. Health Visitors in Hungary: Professional Role and Language Training

As linguistic and cultural diversity increases within the Hungarian healthcare system, frontline providers, such as health visitors (*védőnők*) play an increasingly significant role. They are essential in promoting public health, particularly in maternal, child, and adolescent healthcare.

The Hungarian health visitor network, established in 1915, is unique in Europe (Szöllősi et al., 2020). While similar roles exist internationally, the scope and complexity of the Hungarian health visitors' work are notably broader. Comparable professionals elsewhere include the *Plunket nurse* in New Zealand or the *public health nurse* (*terveydenhoitaja*) in Finland (Alstveit et al., 2022; Institute of Health Visiting, n.d.; Seure, n.d.).

Health visitors are highly trained professionals specializing in women's health, pregnancy, maternal and child care, and adolescent health protection. In Hungary, five universities offer Bachelor of Science (B.Sc.) degrees in health visiting, with four also providing Master of Science (M.Sc.) programs. Despite this solid training infrastructure, the profession faces challenges, notably an ageing workforce, limited recruitment of young professionals, and high attrition rates (KSH, 2023a). These issues are further

compounded by regional disparities, as economically disadvantaged areas suffer from a shortage largely due to the centralization in Budapest and other major cities.

Regarding employment, as of 2023, 76% of health visitors work full-time in primary care as district health visitors, 20% in school health services, and 1.5% in family planning institutes (KSH, 2023a). They may also serve in hospitals, family support services, and specialized institutions, such as the Mother's Milk Bank. Although they work independently, they maintain close cooperation with general practitioners, pediatricians, gynecologists, and social workers to provide comprehensive preventive care.

The legal framework ensures universal access to health visiting services. Patients are assigned a district health visitor based on their registered residence and typically consult only that professional, usually affiliated with a nearby hospital. Open access is guaranteed by law, with no fees or participation costs. Amendments to the Healthcare Act of 1997 (Act CLIV), effective from 1 January 2017, stipulate that Hungarian citizens and foreign nationals with a registered Hungarian address or valid Social Security number (TAJ) cannot refuse health visiting services.

District health visitors' responsibilities are broad and regulated under the Decree on District Health Visitor Services (49/2004). Their duties include pre-conception counseling, prenatal and postnatal care, breastfeeding support, monitoring of childhood psychomotor development, contraception advice, vaccination oversight, and health education initiatives. Home visits are a core element of their work, fostering trust and providing critical insights into family circumstances, thereby enabling health visitors to offer tailored, context-sensitive care.

Effective communication is fundamental for health visitor services to accurately convey health information that supports families during pregnancy, early childhood, and adolescence. Clear communication builds trust, encourages sharing sensitive information, and enables tailored healthcare interventions, particularly during home visits, a key component of the Hungarian health visiting system. However, the increasing linguistic diversity among families introduces challenges. When one or both

parents are non-Hungarian speakers, language barriers may cause misunderstandings, loss of vital health information, and reduced care quality. A UK survey similarly found language barriers hindered health visitors in informing families about immunization, and that translated materials were often ineffective due to literacy issues (Redsell et al., 2010). These findings underline the need for health visitors to possess not only strong general communication skills but also adequate proficiency in English or other foreign languages to effectively interact with linguistically diverse families.

Recognizing the importance of foreign language competence, Semmelweis University, a prestigious medical university in Hungary, incorporates ESP courses into the B.Sc. health visitor program. These courses are compulsory for students without a B2-level language certificate upon admission. Students holding a B2 certificate are exempt from the first two years of language classes but must complete the third year in English for Healthcare Purposes (EHP). The EHP curriculum consists of separate courses, each primarily skill-based and focused on developing specific abilities, such as listening and reading comprehension, written communication, healthcare-related dialogues, and professional interactions between healthcare providers and patients. Each semester includes 36 hours of instruction (18×90 minutes), reduced from the previous 48 hours (Marthy, 2024). However, these courses award no academic credits; students receive only a signature upon successful completion, which may reduce their motivation, as the course does not influence their grade point average and may therefore be perceived as less important.

While EHP courses at Semmelweis incorporate general healthcare English and some profession-specific content, no dedicated materials exist exclusively for health visitor students. Furthermore, health visitors are often grouped with public health supervisor students, resulting in more generalized course content.

Language requirements for graduation have also changed significantly recently. Before 2020, Hungarian higher education law mandated passing a state-accredited B2-level foreign language exam to graduate. This regulation often delayed students who had fulfilled all other academic obligations but not the language exam. During the COVID-19

pandemic, temporary amnesty allowed graduation without the exam, recognizing the closure of language schools and exam centers. This temporary measure became permanent with the amendment of the Higher Education Act (Act LIX of 2022), which abolished the mandatory language exam and granted universities greater autonomy to set their own graduation standards.

Consequently, many students today graduate without certified language competence. Combined with limited profession-specific content in EHP courses, this raises concerns about health visitors' preparedness to communicate effectively with non-Hungarian families in professional healthcare settings.

II.3. The Role of LSP in Fostering Inclusive and Effective Healthcare Communication

With the growing number of multicultural patients, the role of LSP has gained more importance in healthcare education. The skills and knowledge acquired through LSP courses are essential for delivering inclusive, patient-centered, and effective care, and for creating a safe environment in international and multilingual healthcare settings (Houston & Cowley, 2003; Kardong-Edgren, 2012; Eklics & Fekete, 2020).

To facilitate communication between speakers of different languages, a lingua franca is often necessary. For small languages, such as Hungarian, healthcare students must acquire a widely spoken lingua franca, typically English, to work with international patients. ESP courses teach necessary medical terminology and foster skills, such as lay-language awareness, intralingual translation, and the use of plain English.

Besides language, students also need broader communicative competencies to navigate multicultural interactions (Dou, 2024). These include health literacy and effective cross-cultural and intercultural communication strategies. Németh et al. (2022) emphasize integrating intercultural skills into medical training, as cultural awareness enhances understanding of patients' perceptions of illness and treatment. Intercultural competence courses improve healthcare professionals' knowledge, attitudes, and skills, as well as patient satisfaction (Marek et al., 2019). However, many healthcare training programs still inadequately prepare students to deliver

compassionate, culturally competent care (Papadopoulos et al., 2016). Language for medical and healthcare courses plays a crucial role here, as higher foreign language proficiency enhances intercultural competence (Marek et al., 2019). LSP communication courses should include practical scenarios, such as taking medical histories, explaining conditions, planning treatment, building rapport, delivering bad news, and interacting with diverse patient groups, including harder-to-reach populations.

To develop these skills, LSP pedagogy emphasizes real-life communication and professional practice. It "targets the language, skills, and genres relevant to these goals and focuses on the language-based activities in which the learners will engage in their field of work or study" (Basturkmen, 2025, p. 1). Methods, such as task-based learning, Content and Language Integrated Learning (CLIL), simulated patient scenarios, and peer-simulation align well with these aims.

LSP content has proven effective in increasing student motivation. Research shows students engage more with tasks that prepare them to "communicate effectively in language but also demonstrate a high level of adaptability and sensitivity in culturally diverse backgrounds" (Dou, 2024, p. 171; Basturkmen, 2025). As healthcare environments constantly evolve, LSP/ESP content requires regular updates to incorporate new findings in specialized English (Basturkmen, 2025).

Despite the increasing relevance of profession-specific ESP content, there remains a noticeable gap in the literature on ESL curriculum development and pedagogical strategies for health visitors. Since the Hungarian health visitor system is unique, the lack of specialized resources is particularly significant. Most publications and ESP coursebooks group health visiting under nursing and midwifery, addressing those fields' needs rather than health visitor training.

Despite training health visitors at several Hungarian universities, no dedicated ESP coursebook supports their language development, reflecting a gap in the literature. This does not necessarily imply a complete absence of such materials. This likely means that in-house materials are predominantly used.

III. PHASES OF RESEARCH

This article builds on a previous study (Horváth & Kozár, in press), which explored how Hungarian health visitors communicate with multicultural families. The original article presents the full methodology and detailed findings. In this article, we concentrate on the language-related findings from both questionnaires, which formed the basis for new ESP teaching materials.

The research journey began within the framework of a medical translator and interpreter training course, where two of the three authors (a translator educator and ESP teacher, and a practicing health visitor) began exploring how Hungarian health visitors communicate with multicultural families in their care. We wanted to know what languages they use, who acts as an interpreter when needed, and whether any official documents from the health visitor service are available in languages other than Hungarian.

To investigate this, we conducted an online questionnaire-based survey between April and October 2022. One questionnaire targeted practicing health visitors (n = 48), and the other was aimed at multinational families with at least one non-Hungarian parent (n = 51); these figures reflect the final number of eligible responses after screening. The questionnaires were initially drafted by the health visitor co-author and revised by the translator educator for clarity and relevance. Though not formally piloted, they were refined collaboratively. The surveys were created in Google Forms and shared via professional networks, community contacts, and social media. Participants were informed in writing that responses were anonymous and would be analyzed in aggregate only. The full set of questionnaire items is presented in Horváth & Kozár (in press); only items directly relevant to language skills and communication strategies are discussed here.

Responses were reviewed manually. Quantitative data were summarized using basic descriptive statistics, and open-ended responses were grouped thematically to identify

recurring patterns in communication strategies described by both health visitors and families.

One major insight was related to the use of foreign languages. While a minority of health visitors reported using English or German to communicate—mostly those with higher-level skills or a healthcare English certificate (typically B2 level)—the majority relied on informal solutions. Most commonly, communication was mediated through the Hungarian partner or husband, or through other ad hoc interpreters.

As translation and interpretation professionals, we were particularly struck by the widespread use of ad hoc interpreters in healthcare communication. In many cases, the health visitor communicated through a third person, but this person was rarely a trained interpreter. Instead, it was often a family member, friend, neighbor, or even an older child. This raised significant concerns, as the literature on healthcare interpreting frequently discusses the risks associated with ad hoc interpretation, particularly in sensitive health contexts and when children are involved.

Furthermore, the use of ad hoc interpreters represents a specific type of communication situation in which the healthcare professional must interact with the patient through an intermediary. To improve communication and care, healthcare professionals should receive targeted training for these scenarios, such as cooperating effectively with interpreters and confirming mothers' understanding.

Another noteworthy finding was how health visitors handled written materials that were only available in Hungarian. Some tried to summarize the content verbally in English; others took the time to translate key documents at home. A few reported reading aloud the Hungarian texts in English during home visits – a practice known as sight translation, which clearly illustrates the improvisational nature of communication in these contexts.

These findings led us and our ESP teacher colleague and co-author to reflect on the limitations of the ESP teaching materials we had previously used for training health visitors. It became clear that these materials inadequately prepare learners for the

real-life communicative challenges in multicultural settings. This realization prompted us to begin developing new ESP resources that would better reflect actual practice and communicative needs. Our language choice was English, as previous research (Horváth, 2023a; 2023b; Csenki-Bózsó et al., 2025; Horváth & Kozár, in press) has shown that the vast majority of foreign patients living in Hungary prefer to discuss health-related issues in English, even though it is not their first language.

As language educators and translator trainers, we had a good sense of the types of skills and exercises needed to help students navigate real-life interactions in multilingual healthcare settings. However, we lacked detailed knowledge of key healthcare topics that should form the basis of role-plays and materials. To address this, we initiated an interdisciplinary consultation with a health visitor educator from a prestigious Hungarian medical university. The expert participated in a semi-structured interview and provided informed consent for the use of their anonymized input. Their suggestions helped identify relevant healthcare topics and practical scenarios for inclusion in ESP materials.

This shift from empirical insight to pedagogical application reflects the central aim of practitioner research: using real-world observations to inform and improve educational practice. To ensure authenticity and effectiveness, our ESP materials incorporate genres and documents commonly used by health visitors in their everyday work. Involving a practicing health visitor in the development process was essential not only for validation but to ensure the materials truly aligned with professional realities.

IV. OUTCOMES

This section presents the key findings from the empirical phase of our research (Horváth & Kozár, in press). The data collected through two online questionnaires provided dual-perspective insights into the language skills and communication strategies of Hungarian health visitors working with multicultural families. In addition to these questionnaire findings, this chapter also includes the results of the interview with the health visitor

educator, who provided valuable recommendations for key topics to include in the ESP coursebook.

The findings from both the questionnaires and the interview informed our pedagogical decisions, guiding the design of new ESP materials. At the end of this chapter, we will present examples of the exercises developed to address the real-life needs of health visitors, aiming to improve their language proficiency and prepare them for effective communication in multilingual settings, ultimately enhancing their ability to provide quality care.

IV.1. Language Proficiency Among Health Visitors: Key Findings from the Questionnaire

This section examines the language proficiency of health visitors and the communication experiences of multicultural families, based on the analysis of two complementary questionnaires.

IV.1.1. Analysis of Questionnaire 1

The first questionnaire was completed by 48 health visitors, after excluding a few incomplete responses. Of these, 58% work in the capital, while 42% are based in rural areas. The largest age groups represented are 20–29 years (31%) and 40–49 years (25%), followed by 30–39 years (19%), 50–59 years (14%), and those aged 60 and above (10%). In terms of language skills, 75% of respondents (n=36) reported speaking one or two foreign languages to some extent, while 25% stated they can speak only their mother tongue. The most commonly spoken foreign languages were English and German. Figure 1 presents data on the respondents' age distribution and self-reported foreign language proficiency. The vertical axis indicates the age groups, while the horizontal axis shows the percentage of respondents in each group. The colored bars represent the level of foreign language skills reported by participants.

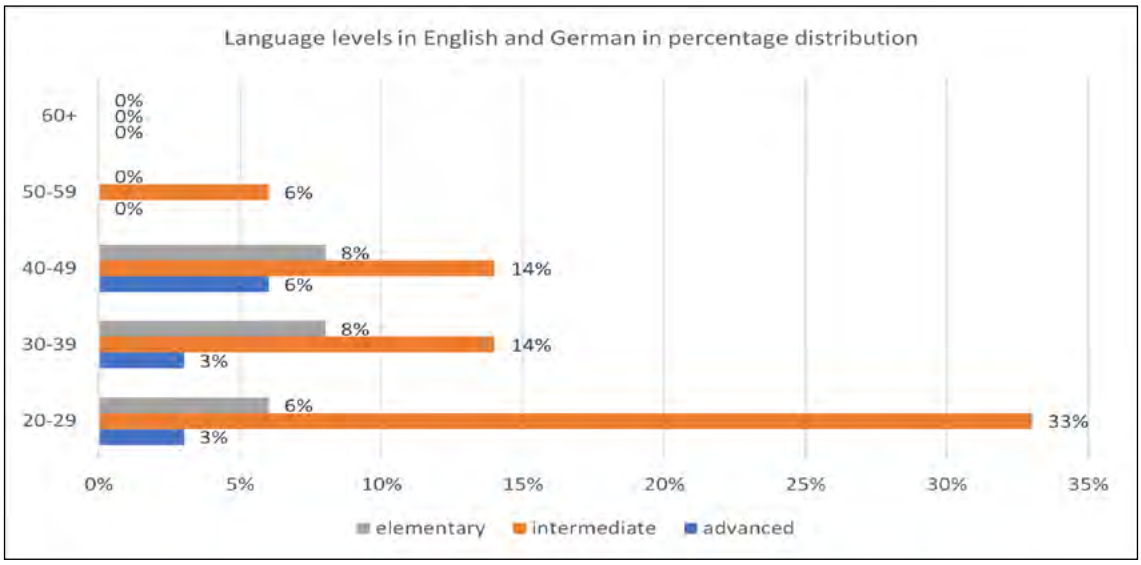


Figure 1. *Foreign language skills by age groups*

Figure 1 illustrates that, across all age groups except those aged 60 and above, intermediate foreign language proficiency is the most common level. However, even among the 20–29 age group, it accounts for only 33% of respondents. The 40–49 age group exhibited the largest proportion of respondents with advanced English proficiency, although this was limited to 6%.

Figure 1 also shows that foreign language proficiency is most prevalent among health visitors aged 20–29: 33% of this age group reported intermediate proficiency in English or German, 5.5% elementary proficiency, and 3% advanced proficiency. Among the 30–39 and 40–49 age groups, 14% reported intermediate proficiency, while 8% reported elementary proficiency in either language. In contrast, only 5.5% of respondents aged 50–59 reported intermediate proficiency in a foreign language, and none of the respondents aged 60 or older reported speaking any foreign language.

Among health visitors who speak a foreign language, 36% reported speaking an additional foreign language, primarily English or German, with varying levels of proficiency. Figure 2 provides a detailed overview, including (1) the percentage of health visitors speaking English or German at each proficiency level; (2) the proportion of these individuals who also speak a second foreign language; and (3) the percentage of those holding a certificate in a foreign language specific to healthcare purposes.

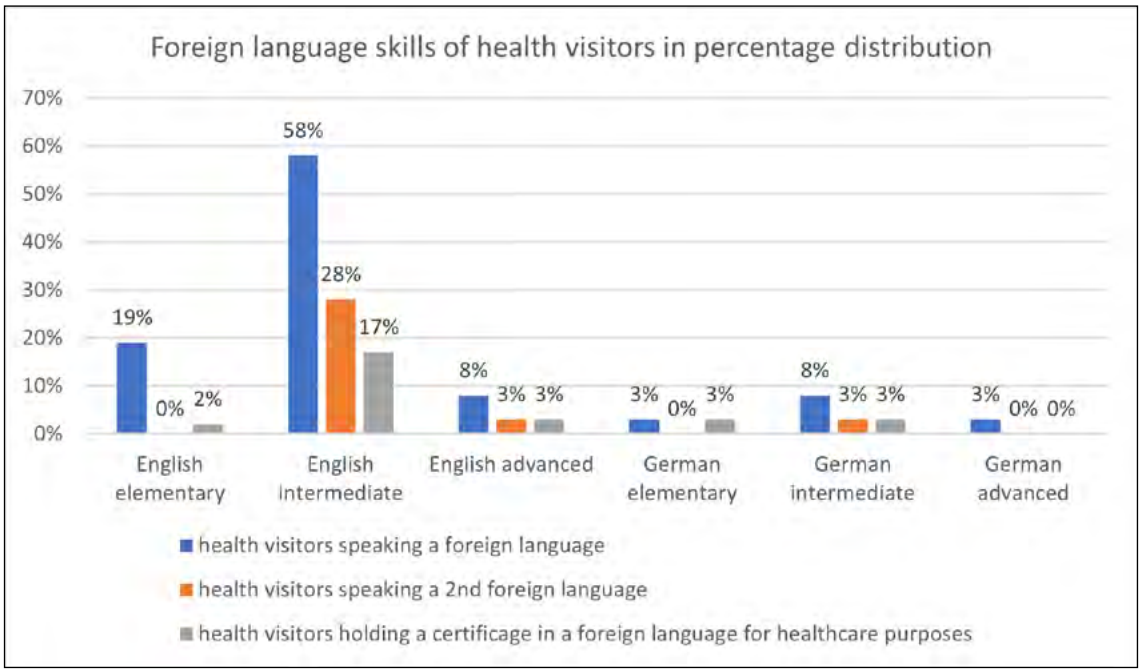


Figure 2. *Proficiency levels, multilingualism, and certification in healthcare English and German among health visitors*

Figure 2 shows that English is the predominant foreign language, represented by blue bars, and spoken by 65% of respondents. German, represented by a smaller proportion, is spoken as a first foreign language by 10% of respondents. Among those who reported foreign language skills, 78% achieved intermediate or advanced proficiency overall, with 67% demonstrating this level in English and 11% in German.

The subgroup with the strongest foreign language skills comprises health visitors with intermediate English proficiency, 28% of whom speak a second foreign language, while 17% hold a certificate in English for healthcare purposes. Among those reporting a second language, represented by orange bars, German was the most common, typically at basic or intermediate proficiency. Additionally, three respondents identified Russian (n=2) or Italian (n=1) as their second foreign language. Among respondents with foreign language skills, 31% reported holding a certification in English or German for healthcare purposes, represented by grey bars in Figure 2.

For other groups, foreign language skills and certifications were less prevalent. Health visitors with elementary foreign language proficiency showed no use of additional foreign languages and rarely held certifications. Among those with advanced foreign

language proficiency, both the use of second foreign languages and the possession of certification were highly limited.

IV.1.2. Analysis of Questionnaire 2

The second questionnaire addressed multinational families living in Hungary. The questionnaire was filled out by 51 participants. Most respondents resided in Budapest (78%), with the remainder living in rural areas. Among the families completing the questionnaire, 35% had both parents of foreign origin, while in 65%, one parent was foreign, and the other was Hungarian. In these mixed families, the majority (73%) were cases where the mother was the foreign parent.

Given that participation in the health visitor service is mandatory, we sought to determine how many foreign families requested an English-speaking health visitor, and 11% of respondents indicated that they had done so. Additionally, one family reported requesting an English-speaking health visitor but was unable to access this service in their area, another family stated they were unaware that such a request was possible, and the rest did not submit any requests.

In response to the question regarding the language of communication with their health visitor, the vast majority of respondents (78%) indicated that they communicated in Hungarian, while 35% reported using English. Additionally, two families communicated with their health visitor in Italian, and one family used German. Respondents were also asked to assess their health visitor's English proficiency when communication occurred in English; the results are summarized in Figure 3.

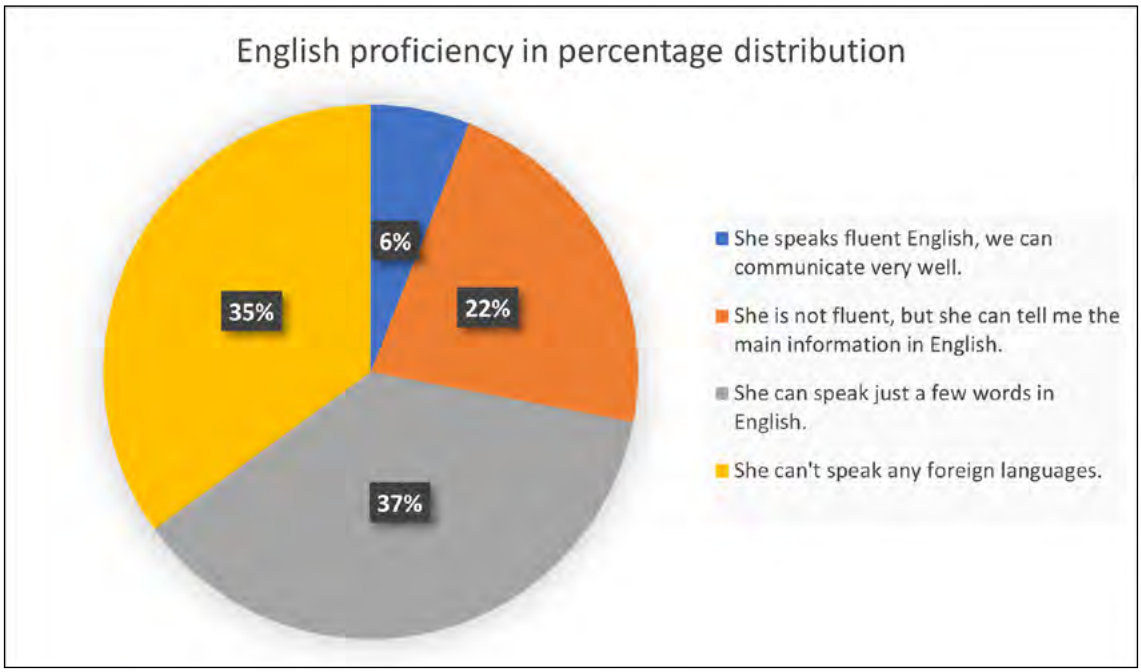


Figure 3. *Perceived English Proficiency of Health Visitors Based on Family Feedback*

Figure 3 illustrates that only 6% of families reported having a health visitor who, in their opinion, was fluent in English and easy to communicate with. Unfortunately, the majority of families were under the care of health visitors who either knew only a few words of English or did not speak any foreign languages at all, with these two categories represented in approximately equal proportions. This reinforces the self-reported limitations in foreign language proficiency expressed by the health visitors themselves.

IV.2. Communication Strategies in Multicultural Contexts: Questionnaire-Based Insights

This section examines how the 48 health visitors surveyed communicate with foreign families, focusing on the languages used and strategies employed to overcome language barriers in both oral and written communication.

IV.2.1. Oral communication strategies

Health visitors were asked to select from multiple predefined options to describe how they communicate with foreign or multicultural families. The results are summarized in Figure 4.

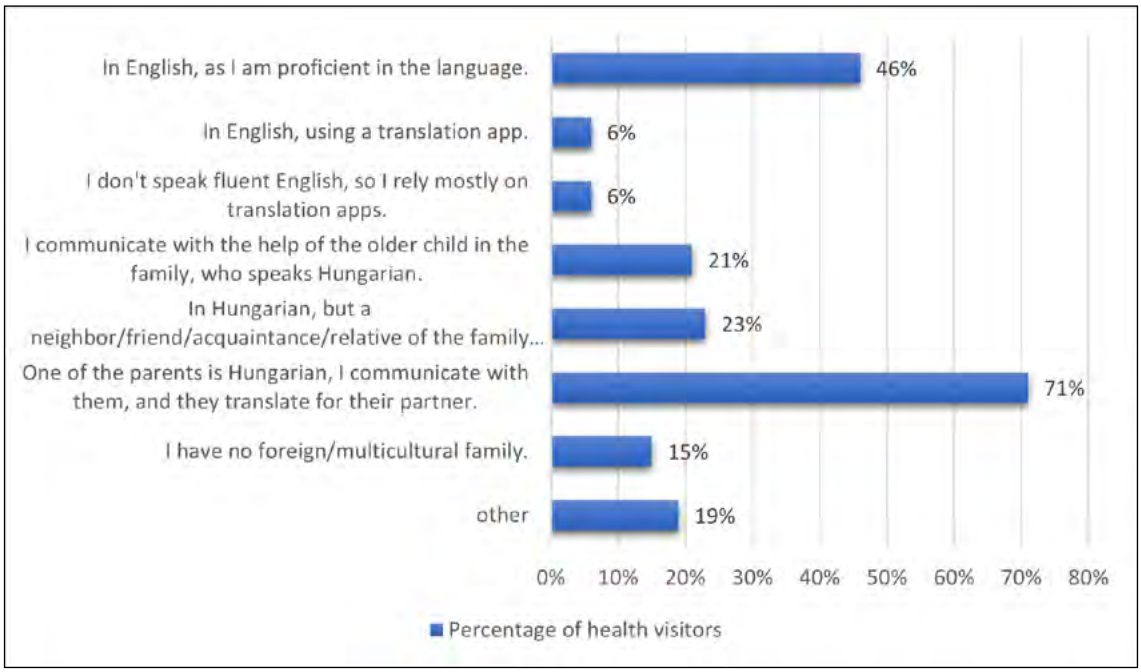


Figure 4. *Modes of Oral Communication Between Hungarian Health Visitors and Multicultural Families*

Figure 4 illustrates that in 71% of the communication situations reported by health visitors, they encountered multicultural families where one parent was Hungarian, and the other was of foreign origin. Typically, the health visitor communicates with the Hungarian-speaking parent, who then interprets for their partner. The second most frequently employed strategy (46%) involves direct communication in English between the health visitor and the family.

The third and fourth most common strategies, together accounting for 44%, involve translating Hungarian (spoken by the health visitor) into the family's language, typically by a family member or close acquaintance such as a neighbor, friend, relative, or, in some cases, the family's elder child. Like the first strategy, these also involve mediation by the Hungarian-speaking partner. Overall, the most typical communication scenario involves speaking Hungarian while an ad hoc interpreter mediates their message. Notably, the use of translation apps is not a widely employed strategy among health visitors.

In the 'Other' response category, six respondents indicated that the family did not speak English, and communication was either facilitated entirely through a translation

program or mediated by a family member acting as an interpreter, translating between the health visitor and the family's native language. Additionally, two health visitors reported that they were assisted by a colleague in interpreting, while the family of another health visitor had learned the language, allowing communication in Hungarian.

Figure 4 presents the communication strategies employed by health visitors, raising the question of which respondents communicate exclusively in English (without the aid of an interpreter or translation device) and which communicate exclusively in Hungarian, as well as their language background. Results show 19% of respondents communicate with foreign families using their own English skills, without relying on non-professional interpreters or translation devices. This subgroup predominantly consists of health visitors with at least an intermediate level of English proficiency, half of whom hold a certificate in English for healthcare purposes.

The responses also reveal that 29% of health visitors communicate exclusively in Hungarian with their foreign families. Half of these respondents are over 50 years old, which may explain the absence of foreign language proficiency among them. Among the participants, two health visitors reported that German is their strongest foreign language, but unfortunately, they are unable to apply this skill in their work. One health professional who speaks both English and German at an intermediate level typically has a family where one parent is Hungarian and the other speaks Hungarian, making it the preferred language for communication. Additionally, one health visitor speaks English at an approximately intermediate level; however, due to the Russian-speaking parent's partial proficiency in Hungarian, communication occurs in Hungarian. Other health visitors speak either basic English or only Hungarian; therefore, they communicate with the families in their care only in Hungarian.

Looking at the communication strategies presented in Figure 4, it is also worth examining whether the certification in a foreign language for healthcare purposes sufficiently encourages health visitors to communicate in English or German with the families in their care. The responses indicate that all those with intermediate English proficiency and an additional professional language certification communicate with

families in English, as they self-report strong language skills. Unfortunately, health visitors with an intermediate-level certificate in German for healthcare purposes are unable to use this knowledge in their work. Those who speak only German, without English proficiency, communicate with their families exclusively in Hungarian. Health visitors who speak English at an intermediate or near-intermediate level can overcome language barriers, sometimes with the help of non-professional interpreters. However, possessing a professional language certificate alone does not enable communication in a foreign language for those with only an elementary level of English. In such cases, they rely on Hungarian and require assistance from non-professional interpreters.

Finally, it is also interesting to examine the language practices of health visitors whose primary foreign language is German. Except for one nurse, who has an Austrian family and communicates in German, the remaining German-speaking health visitors are unable to use their German language skills with families, regardless of their proficiency level. Instead, they typically communicate in Hungarian and rely on non-professional interpreters. Among those who speak both German and English, none use German with their families, opting instead for Hungarian or English. Two health visitors, both in the 20–29 age group with intermediate proficiency in both English and German, reported having German-speaking families but do not communicate with them in German. One of these health visitors communicates in Hungarian with her family, where one parent is Hungarian and the entire family speaks some Hungarian, while the other health visitor uses English or relies on the Hungarian parent to translate.

IV.2.2. Delivering written information

Following the discussion of oral communication, we now turn to the strategies employed by health visitors when sharing written documents with multicultural families, particularly when these documents are only available in Hungarian and not in a foreign language. Respondents could select multiple strategies for keeping families informed. The answers from the 48 health visitors are summarized in Figure 5.

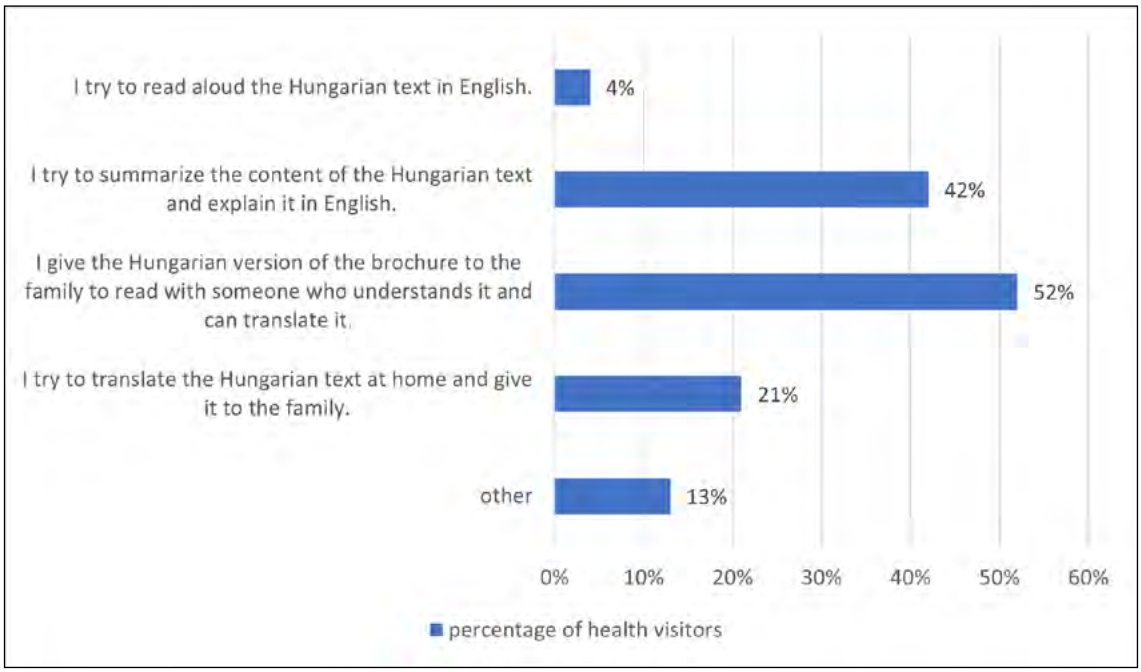


Figure 5. *Modes of Addressing Language Barriers in Providing Written Documents to Multicultural Families*

Figure 5 shows that the most commonly used method (52%) for communicating written information is to leave the document in Hungarian with the family, with the hope or request that someone will read it. A significant proportion of respondents indicated that they attempt to translate documents written in Hungarian through various methods. These include reading the texts aloud in English (sight translation), summarizing them in the target language, or translating them into the target language on paper at home. Other responses revealed that the use of downloaded translation software on mobile phones was relatively uncommon, with only two respondents reporting this method. This approach appears to be much less favored for on-the-spot, written translations compared to oral communication.

IV.3. Identifying Key Healthcare Topics for ESP Design: Expert Input

In designing the ESP coursebook, we followed the widely accepted principle that materials development should be grounded in Needs Analysis (NA) (Hyland, 2006; Basturkmen, 2025). Our practitioner research combined two key sub-methods: *Target Situation Analysis*, to identify the language-based tasks and communicative genres

learners need in the professional setting, and *Present Situation Analysis*, to assess the gap between learners' current abilities and the required skills.

To inform both aspects, we conducted a semi-structured consultation with a health visitor educator from a leading Hungarian medical university. The expert provided a comprehensive list of nine key content areas and suggested practical communicative scenarios for inclusion in the materials. They also outlined the essential background knowledge that ESP instructors would need to effectively support learners with the professional content embedded in these scenarios. This expert input was crucial in ensuring that the ESP materials were firmly rooted in real-life professional contexts and accurately reflected the linguistic and content demands of the health visitors' work.

The educator identified the following nine key health topics as the core content areas to be included in the ESP coursebook:

1. Maternity Care and the Child Health System in Hungary
2. The Role of Lifestyle Factors During Pregnancy
3. Preparation for Childbirth
4. The Basics of Neonatal Care
5. Breastfeeding Support
6. Complementary Feeding
7. Vaccines
8. Preparation for Daycare, Kindergarten, and School
9. Contraception and Sexually Transmitted Diseases (STDs)

These topics not only represent the core areas of health visitor responsibilities but have also served as the basis for designing context-specific communication tasks and role-play scenarios in the ESP materials. Some of the recommended scenarios themselves are applied in the pilot ESP materials presented in the next chapter.

IV.4. Designing an ESP Coursebook for Health Visitors: A Collaborative and Practice-Oriented Approach

Based on our findings and expert input, we began designing ESP tasks that simulate realistic communicative scenarios for health visitors. Collaboration between language instructors and health visiting professionals was central to coursebook design. As discussed previously, the key topics for the coursebook were recommended by a health visitor educator, while the development of the actual exercises was carried out with the assistance of a practicing health visitor. Her contributions included suggestions for additional real-world scenarios, beyond those originally provided by the educator, as well as authentic texts and practical challenges drawn from her own experience.

It was also advantageous that two members of our research team (the authors) are qualified translators and interpreters. Their expertise proved valuable in designing exercises aimed at developing students' sight-translation and written translation skills, as well as in creating simulated patient scenarios involving third-party interpretation.

The coursebook is planned to consist of nine main units, corresponding to the recommended thematic areas. Each unit begins with a compilation of topic-specific vocabulary. The vocabulary was selected to enable students to engage with each topic, participate in related discussions, and complete communicative tasks more confidently and effectively. Vocabulary-building activities include picture–word matching, collocation tasks, gap-filling exercises, word-generation prompts, crosswords, and brainstorming exercises to activate previously acquired vocabulary.

Next, students activate the newly acquired vocabulary through texts and video materials accompanied by comprehension activities related to the topic. These tasks are designed to stimulate discussion, encourage students to share personal experiences and interests, and introduce potential challenges. The following section focuses on communication strategies and language patterns that learners can use to express politeness, empathy, reassurance, or persuasion—functions that are essential for health visitors in building rapport and managing sensitive issues or difficult situations.

Subsequently, students apply the linguistic and communicative elements in realistic professional–patient scenarios. These scenarios are informed by input from the health visitor educator and further adapted by the practicing health visitor for relevance. Each scenario includes a patient profile, which may be ready-made or left blank. In the latter case, students create the patient's role themselves, drawing on prior knowledge and vocabulary.

To simulate real-world practice, students are provided with background materials that reflect authentic healthcare documentation. These resources are primarily in Hungarian, as this is the language of official handouts used by health visitors. Students translate, summarize, or sight-translate these materials. Additionally, they must engage with an ad hoc interpreter, played by a peer assuming the role of a family member, such as an elder child, relative, or neighbor, to reflect real communication dynamics.

Students carry out role-plays in peer-simulation pair-work activities. Each unit includes two realistic scenarios to ensure that every student has the opportunity to assume both the role of the patient and that of the healthcare professional. This task supports the development of empathy and fosters effective communication from both perspectives.

The final task in each unit is a translation exercise, primarily involving translation from Hungarian into English. The selected texts are those that health visitors identify as vital for patient safety and patients' rights, materials frequently used in practice and essential for enabling families to make informed decisions regarding maternal and child health. These exercises are designed to raise students' awareness of how to produce texts in the target language that are both equivalent and audience-appropriate. Attention is also given to the ethical use of machine translation tools and the potential risks they pose in healthcare.

Each unit concludes with guided reflection questions related to the role-play scenarios, alongside opportunities for structured peer feedback. To support vocabulary retention, web-based vocabulary games are offered either at the end of the class or at the beginning of the subsequent session, reinforcing the most essential terms introduced.

IV.5. From Data to Classroom: Sample Tasks for ESP Materials

The following exercises are informed by the communication strategies identified in our empirical research (Horváth & Kozár, in press). They are designed to reflect real-life scenarios and are suitable for students with B1–B2 English proficiency. For illustrative purposes, one pilot exercise is presented here, while two additional exercises are included in the *Appendix*.

Pilot Exercise 1

Task Overview and Pedagogical Framework:

- Title of the class:

  Hungarian Vaccination System

- Context:

  Real-life simulation: health visitor explains vaccination to a foreign parent in English (no interpreter)

- Students' Background Knowledge:

  Vaccine-related vocabulary and abbreviations (e.g., DTPa, Hib, IPV)
  Hungarian immunization system basics
  Patient interaction strategies: initiating, explaining, encouraging questions

- Didactic aim:

  Explaining Hungary's immunization schedule to foreign families
  Comparing international systems
  Building trust, cultural sensitivity

- Language development aim:

  Use of vaccination-related vocabulary in context
  Practice: structured explanation, comparison, reassurance

- Working methods:

  Pair role-play, discussion, vocabulary task, reference materials, reflection

- Tools:

  Patient profile, vaccination info handout (see Figure 6.), vocabulary list

Task:

In a role-play, introduce the Hungarian vaccination system to a British expectant mother. Use the following guiding questions:

- What age-specific mandatory and optional vaccines are there?
- When and how can you access vaccines?
- What are the main differences between the British and Hungarian immunization schedules? For more information, you can use the following webpage: https://www.nhs.uk/vaccinations/nhs-vaccinations-and-when-to-have-them/

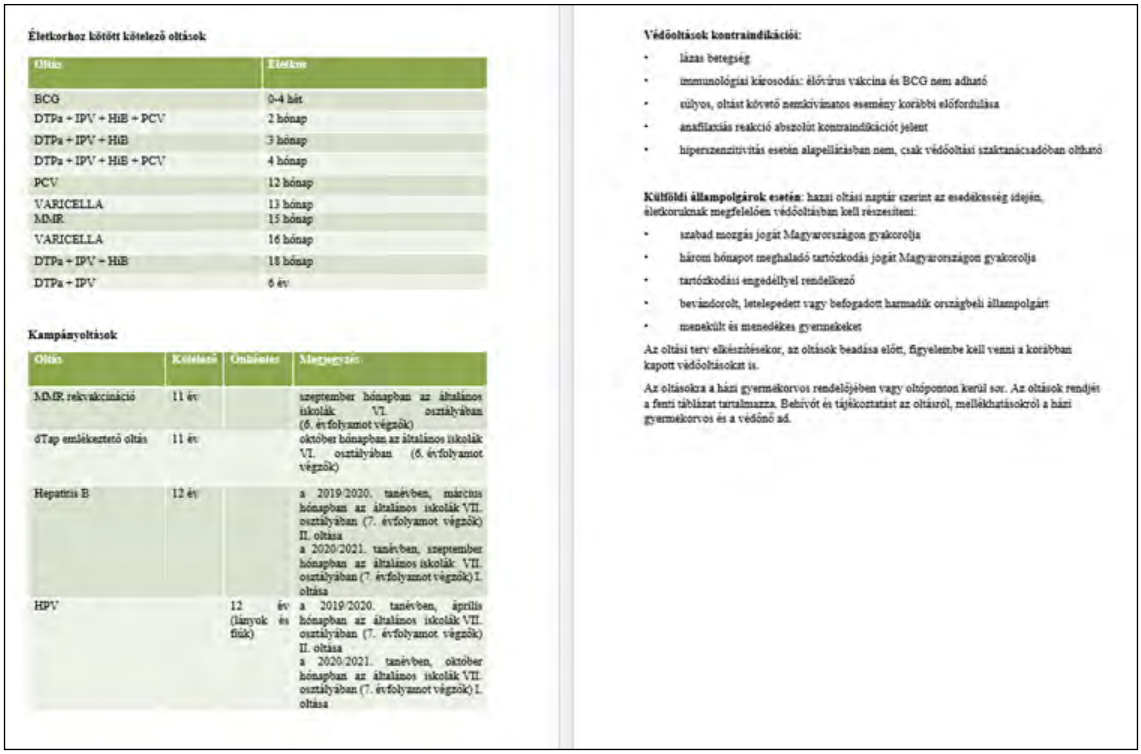
Patient's profile (to be completed by students or provided by teacher):

Name:

Age:

Social status:

Medical/family history (if relevant):



Életkorhoz kötött kötelező oltások

Oltás	Életkor
BCG	0-4 hét
DTPa + IPV + HiB + PCV	2 hónap
DTPa + IPV + HiB	3 hónap
DTPa + IPV + HiB + PCV	4 hónap
PCV	12 hónap
VARICELLA	13 hónap
MMR	15 hónap
VARICELLA	16 hónap
DTPa + IPV + HiB	18 hónap
DTPa + IPV	6 év

Kampányoltások

Oltás	Kötelező	Ajánlott	Megjegyzés
MMR rekvakcináció	11 év		szeptember hónapban az általános iskolák VI. osztályában (6. évfolyamot végzők)
dTap emlékeztető oltás	11 év		október hónapban az általános iskolák VI. osztályában (6. évfolyamot végzők)
Hepatitis B	12 év		a 2019/2020. tanévben, március hónapban az általános iskolák VII. osztályában (7. évfolyamot végzők) II. oltása a 2020/2021. tanévben, szeptember hónapban az általános iskolák VII. osztályában (7. évfolyamot végzők) I. oltása
HPV		12 év (lányok és fiúk)	a 2019/2020. tanévben, április hónapban az általános iskolák VII. osztályában (7. évfolyamot végzők) II. oltása a 2020/2021. tanévben, október hónapban az általános iskolák VII. osztályában (7. évfolyamot végzők) I. oltása

Védőoltások kontraindikációi:

- lázas betegség
- immunológiai károsodás: élővírus vakcina és BCG nem adható
- súlyos, oltást követő nemkívánatos esemény korábbi előfordulása
- anafilaxiás reakció abszolút kontraindikációt jelent
- hiperszenzitivitás esetén alapellátásban nem, csak védőoltási szaktanácsadóban oltható

Külföldi állampolgárok esetén: hazai oltási naptár szerint az esedékesség idején, életkoruknak megfelelően védőoltásban kell részesíteni:

- szabad mozgás jogát Magyarországon gyakorolja
- három hónapot meghaladó tartózkodás jogát Magyarországon gyakorolja
- tartózkodási engedéllyel rendelkező
- bevándorolt, letelepedett vagy befogadott harmadik országbeli állampolgárt
- menekült és menedékes gyermekeket

Az oltási terv elkészítésekor, az oltások beadása előtt, figyelembe kell venni a korábban kapott védőoltásokat is.

Az oltásokra a házi gyermekorvos rendelőjében vagy oltóponton kerül sor. Az oltások rendjét a fenti táblázat tartalmazza. Behívót és tájékoztatást az oltásról, mellékhatásokról a házi gyermekorvos és a védőnő ad.

Figure 6. *Background information on the Hungarian vaccination system*

VI. IMPLICATIONS AND REFLECTIONS

This practitioner research confirms that to prepare students for the realities of multilingual healthcare, ESP materials must reflect real-life communication scenarios. Mapping these situations through empirical data not only increases student engagement but also helps prevent misunderstandings that can lower care quality. It contributes to more equitable healthcare by supporting health visitors to provide accessible, patient-centered communication, strengthening relationships with foreign families.

The development of the coursebook presented here was shaped by a collaboration between language educators, translators, a practicing health visitor, and a health visitor educator. This interdisciplinary approach ensured that the material is both relevant and aligned with actual communicative needs. As Hungary becomes increasingly multicultural, there is a strong need for such profession-specific materials, especially for the healthcare field, where participation is mandatory and communication is crucial.

The research also revealed a notable lack of officially translated materials in the health visitor system. As a result, the responsibility for sharing important information often falls on the health visitor, making training in communication strategies and sight translation essential. While some professionals use English or other languages informally, many rely on ad hoc solutions such as interpreting by family members, which can compromise care quality.

At present, many health visitors do not possess strong foreign language skills, and the removal of Hungary's mandatory language certificate for graduation may further weaken motivation. This highlights the importance of designing ESP materials that are not only practical and profession-specific but also motivating for learners. Our aim was to develop resources that empower students to become effective, empathetic communicators in multilingual contexts. This model may inform ESP design in other healthcare contexts. ESP literature emphasizes grounding materials in real professional practice. Given the scarcity of resources for health visitors, this coursebook helps address an important gap.

CREDIT TAXONOMY

- Ágnes Horváth: Conceptualization, Methodology, Project Administration, Writing – Original Draft, Supervision, Visualization, Investigation (initial research, translation-related content and sight-translation task development)
- Tímea Takács: Writing – Original Draft (LSP/ESP section), Writing – Review & Editing, Resources, Investigation (ESP material development)
- Vivien Andrea Kozár: Writing – Original Draft (Health visitor section), Writing – Review & Editing, Investigation (initial research and ESP material development)

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APPENDIX

Additional Pilot Exercises for ESP Coursebook

This appendix presents two additional pilot exercises developed during the research, designed for B1–B2 health visitor students and based on multilingual communication scenarios identified in the study.

Pilot Exercise 2

Task Overview and Pedagogical Framework:

- Title of the class:

  Breastfeeding Support

- Context:

  Real-life simulation: health visitor communicates via ad hoc interpreter in English; checks understanding

- Students' Background Knowledge:

  Vocabulary: breastfeeding, positions, hunger cues
  Skills: questioning, checking understanding, reassuring, teach-back

- Didactic aim:

  Support non-English-speaking mother via interpreter
  Cultural sensitivity, plain English, trust-building

- Language development aim:

  Use of breastfeeding vocabulary and supportive language
  Practice: giving advice through interpreter, non-verbal cues

- Working methods:

  Role-play (health visitor + interpreter), guided discussion, demonstration of breastfeeding techniques, reflection on cultural sensitivity, use of visual aids.

- Tools:

  Patient profile, vocabulary list, breastfeeding visuals (see Figure 7.)

Task:

As a district health visitor, you are the first to visit a Serbian mother at home after delivery. She doesn't speak any foreign language, so her sister, who speaks good English, interprets for her. Your role is to assess the mother's breastfeeding technique, provide guidance on proper positioning, and offer support while ensuring clear communication through the interpreter.

Mother's Profile (to be completed by students or provided by teacher):

Name:

Age:

Social status:

Anamnesis (medical history):

Personality traits and attitude toward healthcare providers:

Possible worries and questions:

Suggested Steps:

1. Greet both women kindly and clearly explain your role through the interpreter.
2. Observe the mother while breastfeeding, if possible.
3. Ask relevant questions via the interpreter, such as:
    - "How many times a day does the baby feed?"
    - "Does the baby feed on both breasts?"
    - "How long does a feeding session last?"
    - "Have you experienced any pain or discomfort while feeding?"
4. Introduce breastfeeding positions gently:
    - "There are different ways to hold the baby. One is the cradle hold, where the baby lies across your lap. Another is the football hold, where the baby is under your arm."

- "Changing positions can help with comfort, milk flow, and avoiding blocked ducts."

5. Use **visual aids** or demonstrate techniques as appropriate.
6. Encourage the mother to ask questions, and use the **teach-back technique** to confirm understanding.

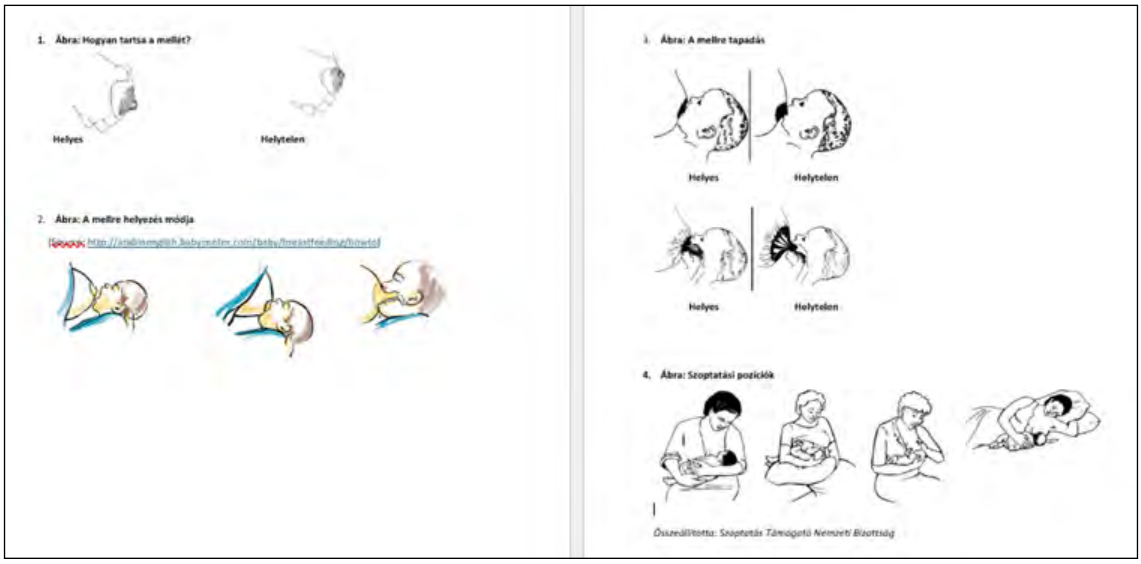


Figure 7. *Visual aid for breastfeeding and breastfeeding positions*

Pilot Exercise 3

Task Overview and Pedagogical Framework:

- Title of the class:

  Recommended non-invasive examinations for infants

- Context:

  Simulated home visit: health visitor translates brochure aloud for non-Hungarian-speaking family

- Students' Background Knowledge:

  Vocabulary: infant care, screenings

  Skills: chunk-by-chunk translation, paraphrasing, patient-friendly reformulation

- Didactic aim:

  Delivering clear info when materials only available in Hungarian

  Supportive, accessible health communication

- Language development aim:

  Fluency in sight translation and paraphrasing

  Adapting written content to spoken, patient-centered English

- Working methods:

  Individual sight-translation (paragraph-by-paragraph); active listening and peer feedback

- Tools:

  Hungarian-language patient information brochure on screenings (see Figure 8.)

Task:

Imagine you are a district health visitor visiting a family in their home. You want to provide them with important information about recommended non-invasive examinations for infants. However, the patient information brochure you have is in Hungarian, and no English version is available.

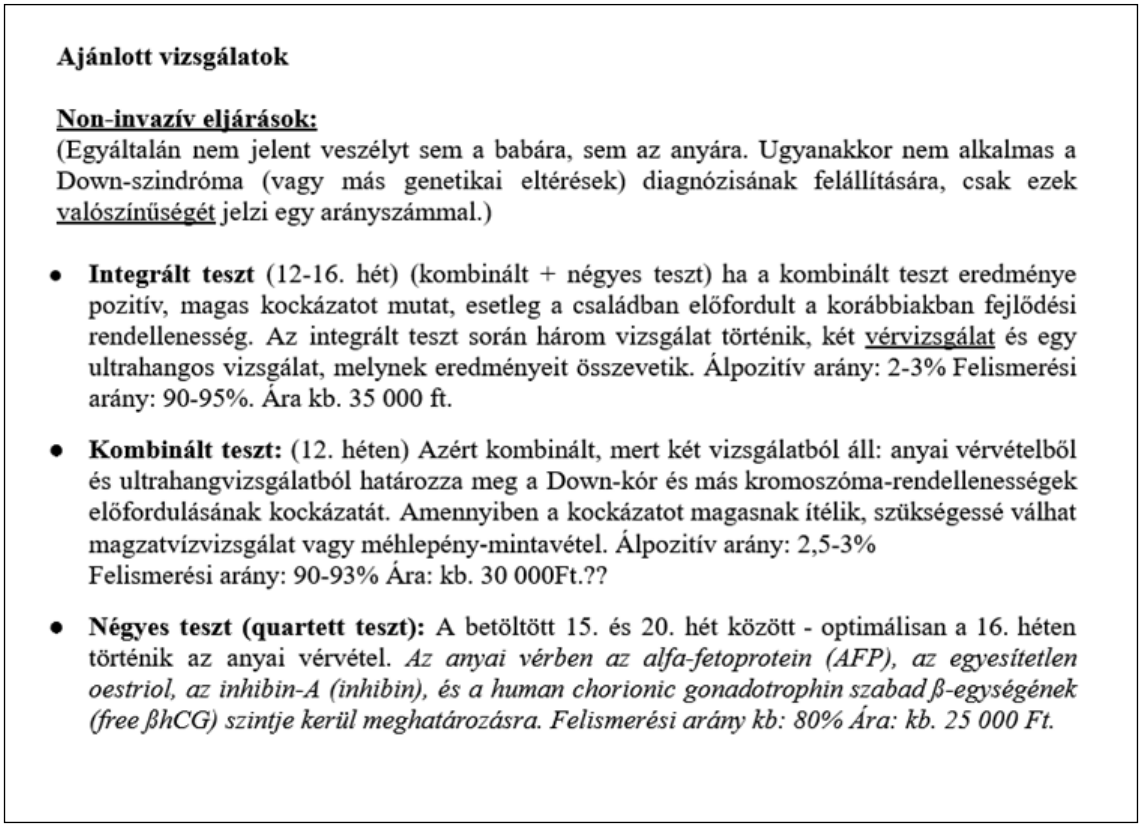
Your task is to solve this situation as best you can: take the Hungarian brochure and read it aloud to the patient in English, translating as you go. You are not expected to give a perfect or word-for-word translation. Instead, focus on delivering the key information in clear, natural, and patient-friendly English, so that the parent or caregiver can fully understand what is being recommended for their baby. Try not to ramble. If you don't know or can't remember a word, try to paraphrase it to convey the meaning without losing clarity.

Each student will read aloud one paragraph in the target language. While listening to your classmates, please pay close attention—we'll give brief peer feedback after each turn based on the following questions:

- Clarity: Was the message clear and easy to understand for the mother or family?

- Tone: Did the translator speak in a patient-centered, reassuring, and empathetic way?
- Paraphrasing: If a word was unclear or unknown, did the speaker successfully paraphrase it to keep the meaning intact?

Conciseness: Did the speaker avoid rambling and focus on the key points without overloading the patient with too much information?



Ajánlott vizsgálatok

Non-invazív eljárások:
(Egyáltalán nem jelent veszélyt sem a babára, sem az anyára. Ugyanakkor nem alkalmas a Down-szindróma (vagy más genetikai eltérések) diagnózisának felállítására, csak ezek valószínűségét jelzi egy arányszámmal.)

- **Integrált teszt** (12-16. hét) (kombinált + négyes teszt) ha a kombinált teszt eredménye pozitív, magas kockázatot mutat, esetleg a családban előfordult a korábbiakban fejlődési rendellenesség. Az integrált teszt során három vizsgálat történik, két vérvizsgálat és egy ultrahangos vizsgálat, melynek eredményeit összevetik. Álpozitív arány: 2-3% Felismerési arány: 90-95%. Ára kb. 35 000 ft.
- **Kombinált teszt:** (12. héten) Azért kombinált, mert két vizsgálatból áll: anyai vérvételből és ultrahangvizsgálatból határozza meg a Down-kór és más kromoszóma-rendellenességek előfordulásának kockázatát. Amennyiben a kockázatot magasnak ítélik, szükségessé válhat magzatvízvizsgálat vagy méhlepény-mintavétel. Álpozitív arány: 2,5-3%
  Felismerési arány: 90-93% Ára: kb. 30 000Ft.??
- **Négyes teszt (quartett teszt):** A betöltött 15. és 20. hét között - optimálisan a 16. héten történik az anyai vérvétel. *Az anyai vérben az alfa-fetoprotein (AFP), az egyesítetlen oestriol, az inhibin-A (inhibin), és a human chorionic gonadotrophin szabad ß-egységének (free ßhCG) szintje kerül meghatározásra. Felismerési arány kb: 80% Ára: kb. 25 000 Ft.*

Figure 8. *Excerpt from a Hungarian Brochure on Recommended Non-Invasive Examinations for Infants*

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Legal Communication in International Settings: Interlingual Cultural Issues in Croatian Legal Communication across Professional Contexts

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ABSTRACT

This study explores the challenges Croatian legal professionals face in international legal communication, focusing on the use of foreign legal languages, particularly English. As globalization increases cross-border legal interactions, lawyers, judges, notaries, and corporate counsel are required to communicate across legal systems and cultures. Through interviews with 16 professionals, the research identifies key difficulties, including conceptual and terminological mismatches, system-bound legal terms, and divergent legal procedures. While most participants actively engage in multilingual legal work, many lack formal training in legal language and rely on personal strategies such as online research, peer consultation, and bilingual documentation. The study highlights a strong need for specialized training in foreign legal languages, comparative law, and drafting, especially in areas like contract and company law. It concludes that enhancing intercultural and linguistic competence is essential for improving communication accuracy and legal certainty in international contexts.

Keywords: *International legal communication; Legal languages; Intercultural competence; Legal terminology; Comparative law.*

I. INTERNATIONAL LEGAL COMMUNICATION

In recent decades, driven by the forces of globalization and Europeanisation, international business activities have expanded significantly, mobility has increased, and both European and global labour markets have undergone substantial transformations. As a result, the legal profession faces growing demand for legal services related to cross-border disputes and transactions involving individuals and companies with operations in multiple countries. Legal professionals are increasingly engaged in multilingual and cross-cultural communication, working with both lay clients and legal specialists from diverse linguistic and national backgrounds.

In such international contexts, legal practitioners encounter a wide range of communicative challenges and must overcome additional barriers to achieve the primary objective of legal discourse: clarity and precision (Tiersma, 2000, p. 71). A particular difficulty in cross-cultural legal interaction arises from the absence of a shared language. Typically, legal professionals and their clients or colleagues do not communicate in their native tongues, and law, unlike some other fields of languages for specific purposes (LSPs), has not developed a standardized international terminology—except in the context of European Union law, which is gradually forming such a lexicon (de Groot, 2006, p. 423). Consequently, international legal communication is usually conducted either in the national languages of the parties involved or in a third language serving as a lingua franca. Languages for legal purposes (LLPs), including English—the most commonly chosen language for international legal communication—are deeply embedded in their respective national legal cultures. Legal terms are often tied not just to language but to distinct legal systems (Mattila, 2006, p. 105; Šarčević, 2000. p. 231–232). As such, this type of communication, like legal translation, involves navigating both linguistic and legal system differences. It entails not only transferring meaning between languages but also bridging cultural and systemic gaps (Pommer, 2008, p. 17). The lack of direct one-to-one equivalents and inherent issues of (un)translatability are common. Beyond proficiency in foreign

LLPs and an understanding of the usual features of legal language—such as polysemy (Mattila, 2013: 142), complex syntactic structures (Mattila, 2013: 121–123), archaic expressions, and the stylistic characteristics of legal discourse—participants in cross-cultural legal communication must also be attuned to culturally specific obstacles, that is, knowledge asymmetries between legal systems (Engberg, 2020, p. 263) and possess comparative knowledge about significant differences between them (Engberg, 2020, p. 264). Developing effective strategies to navigate these challenges is essential. Legal professionals must be familiar with both the legal and linguistic systems involved and must be capable of conveying legal concepts from one language and system to another, which frequently necessitates either explicit or implicit translation and interpretation (Kocbek, 2006, p. 231).

In Croatia—a country increasingly integrated into the global market and becoming a desirable destination for foreign nationals—a solid command of foreign legal languages, along with an awareness of the unique features and challenges of international legal communication, is essential for legal professionals. However, formal legal education often fails to provide these competencies, leaving legal practitioners to acquire them independently. As a result, they frequently encounter challenges in their daily practice when working with individuals from different linguistic and legal backgrounds.

This study examines the phenomenon of international legal communication from the perspective of Croatian legal professionals. Specifically, it investigates the contexts in which intercultural legal interaction occurs, the foreign LLPs Croatian practitioners employ, and the purposes for which they use them. Given the culturally embedded nature of legal systems and their influence on legal languages, special attention is paid to the communication challenges encountered by various categories of legal professionals when interacting with both specialists and non-specialists from different legal and cultural backgrounds. The study also assesses the extent to which legal practitioners are aware of the risks of miscommunication and misinterpretation arising from these challenges, as well as the strategies—if any—they employ to address them. Finally, the study aims to identify the areas in which the Croatian legal profession requires further education and support to overcome intercultural barriers more effectively.

II. CULTURE-SPECIFIC INFLUENCES AND EQUIVALENCE

International legal communication is inherently multilingual and multicultural, with the core objective of conveying legal meaning across both linguistic and cultural boundaries—from one language and legal system to another. As Baumann and Kalverkämper (1992, as cited in Baumann, 2003. p. 123) note, "communication in any subject-field is subject to culture-specific influences." However, the cultural entwinement of language and content is especially pronounced in the field of law. Unlike the natural sciences, where the subject matter typically exists universally across societies, legal concepts, institutions, relationships, and procedures are specific to individual national legal systems and are shaped by their unique historical, cultural, social, political, and economic contexts. Every legal system possesses its own legal realia and conceptual framework (Vanderlinden, 1995. p. 328–337). Accordingly, each system develops its own legal language, which is closely tied to and inseparable from the legal tradition in which it evolves. These differences among legal cultures significantly impact legal communication and manifest at various levels: the level of content, conceptual, terminological, and textual levels (Husinec, 2010).

In legal communication, the legal systems involved are considered as the decisive elements of culture affecting communication. Different legal systems structure knowledge differently (Vanderlinden, 1995. P. 328–337; cf. Šarčević, 2000, p. 232), and consequently, legal content is often organized in diverse ways. For example, in English law, driving offences are categorized as criminal offences (specifically, summary-only offences) (Sočanac et al., 2019, p. 130), whereas Croatian law classifies them as misdemeanours governed by the Misdemeanour Act rather than the Criminal Code. Beyond structural differences, conceptual and terminological incongruities are common. For instance, the English legal term legal capacity encompasses two distinct concepts in Croatian law—pravna sposobnost and poslovna sposobnost. Similarly, the French legal concept décision corresponds to three different terms in Dutch law: Beschikking, Besluit, and Beslissing (Bauer-Bernet, 1982, p. 192). Another example of

such incongruity involves the term marriage. In English law, marriage includes both opposite-sex and same-sex unions (Marriage (Same Sex Couples) Act 2013), whereas the Croatian Constitution defines brak exclusively as a union between a man and a woman (Constitution of the Republic of Croatia, Article 5).

In addition to partial overlaps, certain legal terms exist exclusively in one jurisdiction, representing so-called "conceptual gaps." For example, company secretary, a high-ranking corporate officer in English company law, has no equivalent in Croatian law (Husinec & Horvatić Bilić, 2021, p. 268). Likewise, terms such as equity and trust are system-bound and unique to the common law tradition (Šarčević, 2000: 233). Legal genres, characterized by high degrees of standardization, are also influenced by legal tradition. These texts reflect culture-specific writing conventions. For example, Croatian contracts often begin with the phrase ugovorne strane suglasno utvrđuju ("the parties to the contract consensually confirm"), a formulation not typically found in German contracts (Horvatić Bilić & Husinec, 2023, p. 125). Moreover, legal languages are not always confined to a single jurisdiction. For example, English is used in several legal systems, British, American, Canadian, and Australian, each of which has developed distinct terminology and stylistic conventions. A term like domicile may have varying meanings in England and the United States (Nadelmann & von Mehren, 1966, p. 195; Vanderlinden, 1985, p. 321).

When legal professionals communicate about specific legal transactions, such as international contracts, the governing law must serve as the framework for communication (Kocbek, 2008, p. 55). However, when expressing the concepts and institutions of one legal system in the language of another, for example, explaining Croatian law in English, it is essential to identify and account for both the similarities and differences between the conceptual and terminological equivalents in Croatian and English (or U.S.) law. The more culturally distant two legal systems are, the greater the likelihood of intercultural disparities. Expressing or translating legal terms is generally less problematic when the legal systems in question share a common origin. According to Sandrini (1999, p. 17), the translatability of legal texts is directly linked

to the relatedness of the legal systems involved. Advising a German client conducting business in France, in either German or French, is typically less challenging than advising a British client setting up a subsidiary in Croatia. The former scenario involves two civil law systems rooted in Roman law and based on codified legislation, while the latter involves a civil law–common law interface with more profound systemic differences. Such discrepancies frequently result in a lack of conceptual and terminological equivalence (Kocbek, 2006, p. 242, Janulevičienė & Rackevičienė (2012, p. 164)).

Since no two legal systems share identical historical or socio-economic development, nor do they structure legal knowledge in exactly the same way, absolute translatability is rare, even between systems of the same origin (Kocbek, 2006, p. 236). While some linguistic equivalents exist, terms that are formally identical and carry the same legal meaning, they are relatively uncommon. Conversely, certain terms can be deceptive. While they may seem equivalent on the surface, their meanings are influenced by the specific legal and cultural frameworks from which they emerge (Ivanova et al, 2024, p. 203). Most frequently, legal communication relies on functional equivalents. These are terms or concepts that, while not identical, perform the same legal function in different systems. The identification of functional equivalence requires a comparative legal analysis of the terms, concepts, institutions, and features in question, a process that demands familiarity with comparative law (de Groot, 1998, p. 21). Šarčević (2000. p. 235) emphasizes that, since most legal systems address similar fundamental issues, legal comparison is only meaningful when the concepts being compared serve the same function. Drawing on the work of the Internationales Institut für Rechts- und Verwaltungssprache (Lane, 1982, p. 231; cf. Šarčević, 2000, p. 237) and Dahlberg (1981, p. 19; cf. Felber, 1993, p. 41) Šarčević distinguishes between near, partial, and non-equivalence, advocating a conceptual analysis to identify the essential features (those necessary to the concept) and additional, non-essential ones of each legal concept. The first step in establishing equivalence is to analyse the concept in the source language by identifying its essential and accidental features, and then to compare it with the corresponding concept in the target language. If the essential features align and only

some accidental features differ, the concepts are considered near-equivalents. If only some essential and accidental features align, the concepts are partial equivalents. If there is no overlap in essential features, the concepts are non-equivalent.

De Groot (1998, p. 25) proposes a similar two-step procedure for the selection of equivalents: first, analysing the meaning of the source-language term; second, comparing it with the target system to find a concept with matching content. If no suitable equivalent exists, he suggests borrowing the original term, possibly in transcribed form, using a descriptive paraphrase, or creating a neologism with an explanatory footnote. Husinec (2010, p. 158–159), drawing on Nida's (1975, p. 51) theory that "meaning is not a thing in itself, but only a set of contrastive features," proposes componential analysis for identifying functional equivalence. In this method, concepts are broken down into distinctive features, marked with a plus (+) if present and a minus (-) if absent. This approach helps determine the degree of similarity between legal concepts across cultures and minimizes the risk of misunderstanding.

Applying the knowledge communication approach to legal translation Engberg (2020: 266) proposes a three-step procedure for selecting an appropriate equivalent term. The first step involves identifying the core aspects of the broader conceptual knowledge associated with the term in the source-text context (i.e., the source language and legal system). Secondly, it is necessary to determine which of these aspects are relevant in the target context and to analyse the similarities and differences between the source and target language concepts. Finally, formulations should be identified that best enable the receiver to construct the intended mental representation, based on their pre-existing knowledge.

III. METHODOLOGY

To gather relevant data from Croatian legal professionals and identify the challenges they encounter when using foreign legal languages in international legal communication, a combination of qualitative and quantitative research methods was employed.

The primary research instrument consisted of semi-structured interviews based on a set of both closed and open-ended pre-arranged questions. These interviews were conducted via video conferencing using the Google Meet platform and lasted between 45 and 60 minutes. The interview format enabled the collection of in-depth insights and concrete examples, allowing the interviewer to explore the nuances and complexities of the participants' experiences and perspectives. Prior to the interviews, respondents completed a questionnaire (see Husinec, 2025) designed to collect general background information through predominantly closed-ended questions. This preliminary data helped establish which foreign languages are most commonly used in the respondents' cross-cultural legal communication, the typical interlocutors involved, the countries of origin of the communication partners, the specific areas of law in which intercultural interaction is most prevalent, the challenges of intercultural communication the respondents encounter, and, finally, their needs. The same points of interest were further elaborated, commented and exemplified in the interviews to supplement, enrich and clarify the preliminary data gathered in the questionnaire. The data referring to each point of interest in the research and obtained from both, the questionnaire and the interviews, were analysed and synthesized to draw meaningful conclusions. For greater coherence, the combined findings from both instruments are presented in the results and discussion section of this paper.

In total, 16 legal professionals participated in the study. The sample included six lawyers employed in law firms, two in-house counsels working in companies, four judges from a municipal court, two judicial advisers from a county court and an administrative court, one tax advisor, and one notary public. The respondents were experienced professionals: four had more than 20 years of experience, eight had between 11 and 20 years, and four had fewer than 10 years of experience. They were selected using a non-probability snowball sampling method. They were either former students of the Faculty of Law at the University of Zagreb, participants in lifelong learning programs, or professional acquaintances and colleagues of those initially contacted.

IV. RESULTS AND DISCUSSION

IV.1 Foreign Languages, Contexts, and Purposes of International Interaction

The questionnaire data revealed that English serves as the lingua franca of international legal communication in Croatia. All respondents reported that they primarily communicate with foreign clients and partners in English. One exception was a respondent employed in a law firm serving predominantly German-speaking clients, where German is the principal language of interaction. In total, only four respondents reported using German to any extent. No other foreign languages were mentioned. Foreign languages are used daily by nearly all participants; only one respondent indicated that she used them only occasionally.

As indicated in the questionnaire, foreign language skills are primarily employed for communication with clients and foreign partners, as well as participation in international life-long learning programs. In addition, the interviews showed that the purposes for which legal professionals use foreign legal languages differ based on their roles. Judges mainly use foreign languages to participate in international training programs, correspond with foreign institutions and European bodies, consult EU case law and legislation, and complete EU-related documentation (e.g. Regulation on Taking of Evidence in Civil and Commercial Matters). They also occasionally read opinions of Advocates General of the Court of Justice of the European Union. Foreign language skills are further utilized during professional exchanges and study visits organized through the Judicial Academy. Conversely, lawyers, notaries public, and tax advisors use foreign legal languages more intensively in direct communication with international clients in Croatia and with colleagues or partners abroad. Their interlocutors predominantly originate from English-speaking countries, especially the United Kingdom and, to a lesser extent, the United States, followed by German-speaking countries and other European and non-European nations. English is often used even when communicating with nationals of non-English-speaking countries, reinforcing its global utility.

Given the rise in global business cooperation and migration, Croatian legal professionals frequently engage in international matters concerning company law, contract law, family law, civil law, administrative law, and private international law. Most frequently they interpret Croatian law to foreigners in English or German. The interviews revealed that the specific legal issues discussed vary based on professional roles. Judges, for instance, reported using foreign languages in contexts such as informing foreign nationals about international protection rights, processing visa requests, and engaging in judicial exchanges and training. In-house counsel, typically, correspond with foreign law firms, explain domestic court proceedings to international parties, and negotiate contracts or business cooperation terms. Practicing lawyers handle a wide array of legal matters with international clients in both oral and written formats, including discussions on data protection, court representation, trademark protection, legal interests, and company formation procedures in Croatia.

The data collected via the questionnaire additionally uncovered that receptive language skills are primarily used to consult foreign legislative texts, contracts, judgments, decisions from foreign courts, emails, business letters, legal commentaries, and case law from international or European courts. All respondents further reported regularly consulting EU directives and regulations, especially in their English versions. For example, a tax advisor must consult EU legislation on indirect taxation when preparing VAT-related legal opinions for foreign clients. This respondent noted that experts across Europe increasingly emphasize the need to align interpretations with EU case law. Even when Croatian translations of EU legal documents are available, respondents frequently prefer consulting the English originals to better understand nuances or to clarify phrases that "do not sound like natural Croatian" (judge). Many expressed dissatisfaction with the quality of Croatian translations, particularly due to the use of English borrowings when suitable Croatian equivalents exist (e.g., "reverse charge" instead of *prijenos porezne obveze*). Respondents also indicated a need to study foreign legal systems to better advise international clients about how Croatian law differs from their own legal traditions. As one tax advisor explained, understanding

another country's legal framework is essential when providing tax advice to foreign nationals residing in Croatia.

Written communication in foreign languages is predominantly needed for drafting and reviewing contracts, writing emails and legal correspondence, preparing pleadings, and occasionally composing other types of documents. Contracts are the most frequently used written genre. During the interviews, participants elaborated on their activities and needs related to contracts and other types of documents. Most of them reported revising and commenting on contracts drafted by foreign partners.

Illustrative Respondent Quotes:

"Sometimes our partners draft a contract, sometimes I do. They are always in English."

(In-house counsel)

"When my partners send an agreement, I revise it and comment on it."

(Lawyer)

"For employment contracts, I always have to draft the Croatian version first, followed by the English version for the foreign client."

(Lawyer)

"If a contract is in two versions, it must be decided which one prevails. For instance, cooperation agreements in English are always the prevailing ones, whereas employment contracts must primarily be in Croatian."

(Lawyer)

When discrepancies or ambiguous clauses arise between the Croatian and English or German versions, legal professionals research, compare, and amend the text accordingly. Several emphasized the importance of a strong command of foreign legal language to ensure that translated or foreign-drafted documents align with Croatian legal norms and accurately reflect intended legal consequences. Lawyers in firms or corporate settings rarely draft original legal documents in foreign languages, as their work generally pertains to applying Croatian law to foreign individuals or companies.

Consequently, official documents submitted to Croatian authorities must be in Croatian. More commonly, bilingual contracts are drafted, where the foreign language version is provided solely for informational purposes. One lawyer emphasized that in such cases, the prevailing language version must be clearly stated, for instance, company agreements in English are typically considered authoritative, while employment contracts for foreign workers in Croatia must be primarily in Croatian.

Notaries public handle cases delegated by the courts, such as inheritance proceedings involving U.S. citizens, and issue legally binding decisions (e.g., inheritance rulings). All such documents must be drafted in Croatian and subsequently translated for foreign clients. When foreign institutions require these documents, they must be translated by certified court interpreters. As a result, some notary offices and law firms employ certified legal translators on staff. Occasionally, only specific clauses or brief summaries are translated, depending on the client's interest in legal detail.

IV.2. Challenges of Intercultural Legal Communication

The responses from the interviewed legal professionals, as revealed through both applied research instruments, emphasized significant challenges in intercultural legal communication, particularly due to lexical issues rooted in differences between legal systems. The main challenge lies in finding appropriate terminology for system-specific concepts and institutions. In addition to lexical discrepancies, structural differences between legal systems present further obstacles, resulting in partial equivalence or even non-equivalence in terminology. Moreover, purely terminological issues, such as misleading terms that appear to be literal translations but lack conceptual overlap, or false friends also present substantial challenges. To a lesser extent, respondents also mentioned difficulties with syntactic features and diverse communicational conventions across jurisdictions.

IV.2.1. Lexical Challenges

The respondents consistently highlighted differences in legal concepts and institutions between domestic and foreign legal systems as the most challenging aspect of

intercultural legal communication, both in written and spoken forms. These differences make selecting appropriate terminology particularly difficult. A common issue arises with seemingly equivalent concepts in different national jurisdictions, which are assigned linguistically (and sometimes partially) equivalent terms. While these concepts may share certain similarities, there often exists a semantic divergence that requires careful consideration. For example, the concept of *termination of an employment agreement* in the United States differs from *otkaz ugovora o radu* (the Croatian term for "termination of an employment contract") under Croatian law. Although the terms are literal translations of one another and the outcome for the parties is the same, the procedures differ between the two legal systems. Legal professionals must understand both concepts thoroughly and be able to explain the differences to clients, such as an American citizen employed in Croatia, to ensure that they know what to expect. Similarly, the concept of *copyright* is regulated differently under US law compared to Croatian law. As one lawyer explained, "In the USA, it is the funder who is protected and owns the rights, whereas in Croatia, it is the authors who are protected, and the rights belong to them." Another example involves the term *attorney in fact* under English law and *trgovačka punomoć* (literally "commercial power of attorney") under Croatian law. A conceptual comparison reveals that *attorney in fact* is a broader term, referring to a person who is authorized to act on behalf of another to perform some official transactions. In contrast, *trgovački punomoćnik* or *prokurist* is narrower and limited to a commercial activity designating specifically a person authorized to manage a business or part of it under Croatian Companies Act (Article 44). To avoid misunderstandings, one respondent clarifies to her client that *trgovačka punomoć* is based on the *power of attorney*.[1]

Additionally, there are instances where legal concepts in different jurisdictions are only partial functional equivalents. For instance, the UK *private limited company* and the Croatian *društvo s ograničenom odgovornošću* (limited liability company) share

1 Kocbek (2006, p. 242) emphasises that the function of a *prokurist* does not exist Anglo-American company law and proposes either the usage of the source-language term or a paraphrase when communicating in English.

certain conceptual similarities but differ in some characteristics. The frequency of such conceptual discrepancies is so high that, as one lawyer noted, "wherever we touch, there is an intercultural problem due to different legal institutions and concepts." Respondents also described challenges in translating Croatian legal terms into foreign languages, particularly when only one equivalent term exists in a foreign legal system. This situation arose with the Croatian terms *smrtovnica* (the most important document issued upon a person's death, containing all personal details of the deceased) and *smrtni list* (a simple confirmation of death used, for example, to change names on utility bills). The dilemma was which term corresponds to the English *death certificate*, requiring a detailed semantic comparison between the three concepts. A similar challenge arises with the English procedural term *dismiss*, which in the context of dismissing a judgment corresponds to two distinct Croatian terms, *ukinuti presudu* (dismiss a judgment for formal reasons) and *odbiti presudu* (dismiss a judgment based on material grounds).

IV.2.2 Terminological issues

In addition to conceptual challenges, respondents also encountered purely terminological issues, particularly in relation to misleading terms that are linguistic equivalents or literal translations but lack conceptual equivalence. They are aware that these terms require careful attention in communication, they research on their content, but, as put by one of the interviewed lawyers, are still never quite certain if their lexical choices are correct. An additional difficulty represents the fact that dictionaries sometimes give false information and cause confusion. One of the examples they mentioned is the pair *legal remedy* and *pravni lijek* (literally "legal remedy"). While *legal remedy* and *pravni lijek* are word-for-word translations from one language into another and are often used as equivalents in bilingual English-Croatian dictionaries, they refer to distinct concepts in their respective legal systems. Whereas *legal remedy* represents a type of sanction in common law, legal or equitable relief (Black's law dictionary, 2004: 1320), *pravni lijek* refers to any legal means by which parties may request the competent authority to review a contested decision, annul it, or replace

it with a legally justified decision, such as any kind of appeal, complaint or objection etc. (Vidaković Mujkić, 2006: 854). The correct Croatian equivalent for *legal remedy* is *pravno sredstvo*. Another example of misleading terms, they mentioned, involves the Croatian *revizija* and the English *revision*. In Croatian, *revizija* refers to the process of auditing a company's financial records to ensure compliance with legal and accounting standards. In contrast, *revision* in English refers to the re-examination of a legal matter, typically by a higher court, to assess the legality of a decision. The appropriate English term for *revizija* in the financial context would be *audit*.

Respondents also face challenges when one term in a foreign legal system corresponds to multiple terms in Croatian law. For example, they are confused by the English company law term *share* which corresponds to the Croatian term *dionica* in the context of public limited companies. The respondents are uncertain whether to translate it as *share* (as in UK private limited companies) or as *business share* when referring to *poslovni udjeli* (lit. *business shares*) held by members of *društvo s ograničenom odgovornošću* (a Croatian type of private limited company). Many respondents opt for the latter translation. Furthermore, according to the interviews, Croatian legal professionals encounter difficulties when attempting to translate similar procedures in different institutional settings. They exemplify this challenge in the following way: When referring to the procedure of *referral* before the European Court of Human Rights, designating the procedure initiated by a party dissatisfied with a judgment of a Chamber within which the Grand Chamber of the Court should re-examine the case, they are unsure whether to use the Croatian term *žalba Velikom vijeću* (appeal to the Grand Chamber), as it would be called in national Croatian procedural terminology, or a more literal translation, *upućivanje Velikom vijeću* (referral to the Grand Chamber). Similarly, when describing the process by which a higher court reviews a contested decision in Croatian law, they must choose between *appeal on points of law* or *revision* in English, depending on the procedural context. [2]

2 As one of the judges said: „When a Croatian case comes before the ECHR the whole procedure in Croatia has to be described."

Finally, issues with near-equivalents arise frequently. Legal professionals often face uncertainty when deciding whether to use terms such as *file* versus *submit*, or when to distinguish between *termination* and *rescission* of a contract. Similarly, there is ambiguity surrounding the use of terms like *child support* versus *child maintenance*. Interestingly, some respondents pointed out that knowledge of foreign legal languages, particularly English, is necessary to understand English borrowings incorporated into official translations of international legal documents (e.g., *fiduc agreements* in civil engineering). This situation often occurs when no straightforward one-to-one equivalent exists, which is a direct consequence of the global use of English in business and law. As a result of prolonged exposure to English technical terms, businesspeople may understand the English terms more easily than their native-language counterparts. Indeed, some Croatian legal acts contain borrowings from English (e.g., *leasing*), and legal professionals, as indicated in the interviews, must carefully research these terms' legal consequences to ensure that their clients or companies are fully informed.

IV.2.3. Structural Features

A further challenge encountered by the respondents in their communication with clients abroad, or in cooperation with foreign legal specialist, whether from law firms or courts, is the differing structuring of various areas of law. The interviews confirmed that Croatian jurists are aware of the interdependence between legal systems and their corresponding languages. They noted the procedural differences between Croatian continental law and common law systems, which create difficulties when communicating in English, but also dissimilarities between continental law jurisdictions. They shared that, in most cases, they are required to interpret Croatian law for their clients in a foreign language. To do so effectively, they must understand both the similarities and differences in legal procedures and the structuring of material law in different jurisdictions. According to the respondents, this knowledge is essential for accurately explaining Croatian law and making informed decisions regarding appropriate terminology. For instance, they mentioned that there is often confusion

regarding the procedures designated as an *appeal*, *second appeal*, or *leapfrog appeal* and their application to Croatian law. Additionally, comparisons between the Croatian legal system and the legal system the client is familiar with are necessary to draw the client's attention to differences in regulations, procedures, and legal practices in their own system. One respondent articulated this need as follows: "I research what it's like elsewhere before a conversation so I can explain how things work in Croatia more clearly to my client." (lawyer) One instance of this difficulty occurred when an in-house counsel struggled to navigate the differences between Croatian and Italian procedural law. The company needed to enforce an arbitration tribunal's judgment in Croatia, and the correspondence with Italian lawyers was conducted in English. In order to understand the information provided, the counsel had to familiarize herself with the Italian civil procedure regulations.

IV.2.4. Syntactic Features and Conventions

Syntactic features are generally considered a lesser challenge compared to conceptual and terminological issues, according to the interviewees. Some respondents mentioned that long and complex sentences require careful, slow reading and frequent repetition to ensure that the meaning and legal consequences are fully understood. Additionally, one lawyer pointed out that issues with prepositions occasionally arise, leading to minor confusion.

When it comes to conventions unique to legal cultures, particularly in drafting legal documents, according to the questionnaire and the interviews respondents deemed these differences to be minor obstacles, which they manage with relative ease. However, they pointed out in the interviews that the levels of politeness in legal correspondence differ across cultures. For example, formal written communication in English and German requires more explicit politeness than in Croatian, which can make translation from Croatian more challenging. Additionally, respondents often encounter difficulties with formulaic language. For example, some were unsure when to use phrases like *Dear Sir or Madam* and *Yours sincerely* in correspondence. One respondent, who recently switched from a law firm to a legal department in a company corporate, discussed how

she had to "unlearn" the formal writing style she was accustomed to as a lawyer and adjust to the more informal communication style typical in the IT sector.

The following is an example of informal communication style from an IT sector, that the lawyer had to switch to:

Sales - Client Wants to Change Contract

On Thu, 1 Aug at 19:38, xx <xx> wrote:

"Hey! How are you?

I'm Bruno from the sales team, and I need help with this situation:

The client xx, from xxx, wants an ad with us. I sent them the standard contract, and they responded with information about proposed changes to the contract (attached).

I want to know from our legal system what changes are possible and what are not. I'm attaching the contract here.

Best,

Bruno"

A legal convention from a client's non-English-speaking native culture may also cause confusion when incorporated into a document drafted in English. One lawyer, for instance, shared in his interview that he faced difficulty interpreting a date written in an English document, which did not adhere to any of the standard English date-writing conventions. Upon further investigation, it was revealed that the date was written according to the Shia calendar, a convention specific to the client's culture.

IV.2.5. Approaches to Overcoming Intercultural Legal Challenges

The interviews revealed that Croatian legal professionals are highly aware of how cultural differences between legal systems impact language, as well as the importance of clarity and accuracy in legal communication. To prevent misunderstandings and

ensure efficiency and precision in cross-cultural and cross-linguistic communication, many respondents emphasized the need for legal and linguistic research, as well as systematic comparisons. They shared, that they typically conduct comparative research on structural features, such as specific procedural law practices or classifications of criminal offenses and torts, to identify conceptual diversities. Most often, they use the internet for this research, ensuring that they rely on reputable websites that present legal and linguistic content. When searching for appropriate terms, many start with machine translation programs and then cross-check the terms within context. Mutual consultation with colleagues is also a helpful strategy, and occasionally, when their own knowledge proves insufficient, they engage professional translators or interpreters. However, they also acknowledged that translators often lack the specialized legal expertise needed for certain branches of law, leading to potential inaccuracies.

Below are some examples of how respondents navigate intercultural challenges:

"I need to research a foreign legal system to know how to approach the case in which my company is a party." (In-house counsel)

"I research different types of companies and their specific features in a particular state to understand which one would be equivalent to what we want to set up and find partners there." (In-house counsel)

"I use Google Translate or Glosbe and online dictionaries. If that doesn't work, I search the term in context." (Tax adviser)

"When I didn't understand or wasn't sure about the application of terms in contracts related to EU-funded projects, I Googled translations in other contracts. For instance, the term *prometna sigurnost* (traffic safety)." (In-house counsel)

"The assessment of the appropriateness of expressions and forms of written communication (informal, official, or overly formal) is very difficult." (Lawyer)

Despite the challenges posed by conceptual and terminological differences, legal specialists with a higher level of foreign language proficiency and greater self-confidence in communication demonstrated greater resourcefulness in overcoming

intercultural issues. Respondents with lower proficiency in foreign legal languages are often uncertain about their choice of terminology and reluctant to use it without consulting colleagues. Some even refrain from drafting legal opinions in a foreign language due to concerns over making mistakes and causing misunderstandings. A tax consultant who frequently interprets Croatian tax regulations and double taxation agreements expressed her concerns as follows: "I am scared of drafting a legal opinion in English because the Croatian and English tax systems are fundamentally different." As a result, she prefers drafting legal opinions in Croatian and leaving the responsibility for accurate translation to the client and their professional translator. This approach is not only her personal preference but also the policy of her tax consulting agency. Similarly, a notary public mentioned that despite her experience with researching and comparing English and Croatian versions of official documents, she still finds translation and drafting difficult and is unsure if her terminological choices are always accurate.

IV.3 Needs

In light of the challenges discussed above, it is unsurprising that all interviewed legal professionals in Croatia indicated a strong need for additional support, particularly in the form of supplementary resources and various types of lifelong training programs (as revealed in the questionnaire). The respondents emphasized in the interviews that language resources and foreign language training programs are essential, especially for trainees at the start of their careers, as well as for more experienced jurists.

Among the most commonly expressed needs were comprehensive lists of phrases used in different types of legal communication, such as legal negotiations, presentations, video calls, and in various legal genres (contracts, email correspondence, judgments). These resources should also cover different branches of law, including company law, contract law, and administrative law. Additionally, many respondents expressed in their replies in the questionnaire a need for specialized terminological and collocational online dictionaries. While the respondents acknowledged the utility of existing dictionaries to some extent, they unanimously agreed that education and

training are the most effective means of improving their proficiency and intercultural competence in legal communication. Given the difficulties they face with terminology, it was anticipated that many would welcome additional training in this area. As such, many respondents expressed interest in participating in terminological workshops. Furthermore, they highlighted the need for specialized training courses that target the specific areas of law in which they specialize. One respondent summed up this need as follows: *"I feel that I have an insufficient level of knowledge of legal English and lack training that would focus on the areas of law I specialize in."*

In addition to terminology workshops, some respondents expressed a desire to attend legal drafting courses. While these two types of training—terminology workshops and legal drafting—were the most commonly requested, each respondent had their own unique set of needs articulated. For instance, some jurists wanted to practice negotiation or presentation skills, while others sought more comprehensive and detailed courses that would encompass a broader range of language skills. Despite these varying preferences, the majority of respondents appreciated shorter, more flexible formats for lifelong training, such as workshops or seminars, which are time-efficient yet still offer opportunities for communication in a foreign language. However, some respondents felt that longer courses would better serve their needs. They argued that longer courses allow for more opportunities for daily communication in a foreign language and provide a more systematic approach to language learning.

For example, some respondents shared the following insights:

"A judge must know how to introduce and present himself/herself." (Judge)

"Longer courses would be better because, in shorter courses, we don't have as much opportunity for everyday communication in a foreign language." (Judicial Adviser)

"I would be interested in longer courses in which I could systematically work on my foreign language." (Notary Public)

"If you attend a longer course, you can socialize and communicate with colleagues." (Judge)

"Legal negotiation, business communication, and legal drafting are extremely important for trainees." (Lawyer)

"I need a good training program, and it would help if I had someone to consult." (Notary Public)

In conclusion, the interviewed legal professionals expressed a strong desire for targeted training that would address both their specific legal expertise and the linguistic challenges they face in their daily work. Specialized programs, longer courses, and opportunities for practical communication in foreign languages were seen as essential to enhancing both their legal and intercultural competencies.

V. CONCLUSIONS

This study showcases that international legal communication presents significant linguistic and intercultural challenges for Croatian legal professionals. As legal practice increasingly crosses national and linguistic borders, professionals are required to navigate complex differences in legal terminology, concepts, procedural structures, and communicative conventions. English has emerged as the primary lingua franca, yet its use is complicated by the deep entrenchment of legal terms in national legal cultures and systems. The findings confirm that conceptual and terminological non-equivalence, lexical ambiguity, and structural differences between legal systems are among the most pressing issues legal professionals face in practice. While respondents show a strong awareness of these challenges and frequently employ various strategies—such as legal research, comparative analysis, and consultation with colleagues—the need for more structured and targeted support is evident. Participants expressed a strong demand for specialized lifelong learning programs, legal language resources, and targeted training in legal languages, legal drafting, and negotiation skills. These tools are essential not only for enhancing language proficiency but also for developing the intercultural competence necessary for effective communication in a multilingual and multicultural legal environment. Ultimately, this study highlights the importance of

integrating comparative legal analysis and legal linguistics into professional development for lawyers, judges, and legal staff. By fostering greater awareness and preparation for intercultural legal communication, the Croatian legal profession can more effectively meet the demands of an increasingly globalized legal landscape.

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Book review

Savić, Milica, Myrset, Anders & Economidou-Kogetsidis, Maria. *Researching and teaching speech acts with young L2 learners.*
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The title of the book clearly embraces the main topics which are developed throughout the volume. In the first place, the authors introduce relevant and updated research related to pragmatics, particularly speech acts, together with pedagogical activities to enhance pragmatic development in the classroom. Secondly, they show the connection between the above-mentioned topics with a specific group of students, that of young second language learners (YLLs). In this sense, the book is unique in that it exclusively focuses on this specific population, adding to the scant research carried out with young learners (Schauer, 2019).

The eight chapters which make up this volume are grouped into three parts. Part 1 provides the background of terms which will be used throughout the book. In this context, in Chapter 1 the authors first focus on the definition of pragmatics understood as the interplay between linguistic structures, context and speakers' and hearers' intentions and then they illustrate the components of pragmatic competence (i.e.,

pragmalinguistic, sociopragmatic and interactional competence). Chapter 2 is devoted to the discussion of the realization of six well-researched speech acts in English: requests, apologies, refusals, greetings, compliments and compliment responses. Once the key concepts for understanding pragmatic research have been explained in the first two chapters, Chapter 3 introduces an updated account of how YLLs produce and perceive speech acts not only in English, but also in diverse L1s such as Catalan, Chinese, German or Spanish. In this vein, an overview of both longitudinal and cross-sectional research on production of speech acts by YLLs is provided, along with the presentation of studies on speech act perception by this particular group of students.

Part 2 focuses on gathering pragmatic data from young learners by means of elicitation methods. The authors wisely acknowledge in Chapter 4 the challenges of conducting research with children, since power differences between adult researchers and children are at stake and children may produce answers they think may please the researcher (Pinter, 2023). In this regard, the creation of a safe research environment for young learners is paramount in order to avoid or decrease anxiety and inhibition and make children express their views freely. In an attempt to promote children's communication and engagement in the research, some specific elicitation methods are proposed, such as visual methods (photographs, animations), drama and play, and the use of puppets, among others.

Chapter 5 addresses the presentation and discussion of data elicitation methods commonly used in both L2 pragmatic production and perception with YLLs, such as role plays and written or oral discourse completion tasks (DCTs) for production. In these cases, the selection of the appropriate scenarios and roles is paramount so that children can be immersed in familiar situations while playing a role they are likely to perform in their lives. The second part of this chapter focuses on verbal protocols, multiple-choice tasks, scaled response questionnaires and metapragmatic interviews for gathering L2 pragmatic perception data. Accordingly, Chapter 5 can be considered as an introduction to the next, in which more innovative data elicitation methods are presented to be used with YLLs. Indeed, in Chapter 6 four methods the authors used

in their research are introduced, namely, Video-prompted oral DCT for pragmatic production and Readers Theatre, Emoticon task and Ranking circle for pragmatic perception. The authors encourage the readers to implement these methods in their own classrooms and research to critically examine them in different teaching contexts.

The two chapters in Part 3 focus on teaching speech acts in the YLL classroom. Despite the scant number of studies carried out with YLLs with different ages, nationalities and levels of proficiency, all these studies show that L2 pragmatics can be taught to young students. In this sense, Chapter 7 presents comprehensive approaches to teaching pragmatics based on Kasper's (1997) question regarding the teachability of pragmatics. The authors explore the fact that pragmatics is indeed teachable from three different perspectives, i.e., cognitive, socially-oriented and intercultural. The cognitive perspective includes the interlanguage hypothesis and the noticing hypothesis, whereas the socially-oriented approach embraces collaborative dialogue and concept-based perspectives to teaching pragmatics. In turn, intercultural pragmatics emphasizes the multilingual learner in a context in which speakers come from distinct cultural backgrounds. This chapter finishes with the discussion of research on L2 pragmatics instruction with YLLs, a far less explored group if compared with adults. As stated above, the results from this research reveal that L2 pragmatics is also teachable with young learners.

The last chapter of the volume describes a doctoral research project by Myrset (2021) which aimed at exploring the impact of teaching English requests to Norwegian learners aged 12-13. Therefore, the instructional design and materials are presented along with the feedback obtained from the teacher and the learners on their perceptions of the activity Readers Theatre and the instruction. Very positive feedback was obtained from both parties, since the learners reported that they would use what they had learned in the future and the teacher would incorporate L2 pragmatics in her future teaching. This chapter thus shows that L2 pragmatics can be introduced in the classroom much earlier and with low-level students so that they already have the foundation which may be developed later as they become more mature.

In the conclusion, the authors turn to address some future research topics dealing with YLLs in the field of L2 pragmatics. For example, they ask whether the presence of L2 speech acts in language textbooks is intentional or they appear simply because they can be easily inserted in dialogues. Moreover, they propose older YLLs' role of materials developers for their younger peers. Another avenue for further research focuses on L2 speech act performance in the digital world, in which players may request, apologize, or compliment as part of written or spoken communication in the game.

The present volume is a much-needed contribution to L2 pragmatics, as it addresses research on speech acts with young learners. Moreover, it offers relevant data elicitation techniques for this specific population and practical applications in the classroom. For these reasons, the book is an excellent resource for teachers and researchers working with YLLs who wish to carry out research on speech act production and perception.

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