

THE POTENTIAL OF TRIZ METHODS IN DEVELOPING COMMUNICATIVE COMPETENCE: A CASE OF UNIVERSITY STUDENTS

O POTENCIAL DOS MÉTODOS TRIZ NO DESENVOLVIMENTO DA COMPETÊNCIA COMUNICATIVA: UM CASO DE ESTUDANTES UNIVERSITÁRIOS

EL POTENCIAL DE LOS MÉTODOS TRIZ EN EL DESARROLLO DE LA COMPETENCIA COMUNICATIVA: UN CASO DE ESTUDIANTES UNIVERSITARIOS



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ABSTRACT: This study examines the use of TRIZ (Theory of Inventive Problem Solving) methods to develop communicative competence among university students majoring in linguistics. The research responds to contemporary challenges—clip thinking, post-pandemic communication gaps, and exam-oriented learning—that reduce students' ability to analyze communicative situations and engage in spontaneous dialogue. Unlike routine discussion or role-play activities, TRIZ structures problem solving through contradiction analysis, causal reasoning, brainstorming, morphological analysis, and the focal-object method. A three-stage classroom study with second-year linguistics students was used to diagnose initial competence, implement TRIZ-based tasks, and compare the results. The findings indicate improvement in communicative achievement, flexibility of linguistic choices, and conflict-resolution strategies, although some students continued to rely on simplified grammar and incomplete task analysis. The article offers practical guidance for integrating TRIZ into foreign language instruction.

KEYWORDS: Communicative competence. TRIZ methods. Foreign language teaching. Conflict resolution. Higher education.

RESUMO: Este estudo examina o uso dos métodos TRIZ (Teoria da Resolução Inventiva de Problemas) para desenvolver a competência comunicativa de estudantes universitários de linguística. A pesquisa responde a desafios contemporâneos — pensamento em cliques, lacunas comunicativas pós-pandemia e aprendizagem orientada por exames — que reduzem a capacidade dos estudantes de analisar situações comunicativas e participar de diálogos espontâneos. Diferentemente de discussões ou dramatizações rotineiras, a TRIZ estrutura a resolução de problemas por meio da análise de contradições, raciocínio causal, brainstorming, análise morfológica e método dos objetos focais. Um estudo em três etapas diagnosticou a competência inicial, implementou tarefas baseadas em TRIZ e comparou os resultados. Os achados indicam melhora no desempenho comunicativo, na flexibilidade linguística e nas estratégias de resolução de conflitos, embora alguns estudantes ainda dependam de gramática simplificada e análise incompleta das tarefas.

PALAVRAS-CHAVE: Competência comunicativa. Métodos TRIZ. Ensino de línguas estrangeiras. Resolução de conflitos. Ensino superior.

RESUMEN: Este estudio examina el uso de los métodos TRIZ (Teoría de la Resolución Inventiva de Problemas) para desarrollar la competencia comunicativa de estudiantes universitarios de lingüística. La investigación responde a desafíos contemporáneos — pensamiento fragmentario, brechas comunicativas pospandémicas y aprendizaje orientado a exámenes— que reducen la capacidad de los estudiantes para analizar situaciones comunicativas y participar en diálogos espontáneos. A diferencia de las discusiones o juegos de rol rutinarios, TRIZ estructura la resolución de problemas mediante el análisis de contradicciones, el razonamiento causal, la lluvia de ideas, el análisis morfológico y el método de objetos focales. Un estudio de aula en tres etapas diagnosticó la competencia inicial, implementó tareas basadas en TRIZ y comparó los resultados. Los hallazgos indican mejoras en el desempeño comunicativo, la flexibilidad lingüística y las estrategias de resolución de conflictos, aunque algunos estudiantes siguieron usando gramática simplificada y análisis incompleto de las tareas.

PALABRAS CLAVE: Competencia comunicativa. Métodos TRIZ. Enseñanza de lenguas extranjeras. Resolución de conflictos. Educación superior.

INTRODUCTION

Communication remains a core condition for social interaction, academic success, and professional development. In higher education, however, communicative competence cannot be treated only as the gradual accumulation of everyday speech experience; it is shaped by sociocultural, cognitive, and institutional factors that influence how students analyze situations, respond to interlocutors, and choose linguistic strategies (Altshuller, 1984; Canale & Swain, 1980; Hymes, 1972).

The present study considers three interrelated challenges that affect students' communicative development. First, the spread of social media and fragmented information consumption encourages so-called clip thinking, which may weaken sustained attention and deep analysis (Azarenok, 2009; Zemlyanskaya & Fersman, 2016). Second, the post-pandemic reduction of face-to-face interaction limited opportunities for spontaneous oral dialogue in foreign language learning (Dörnyei, 2009; Maksimenko et al., 2021). Third, exam-oriented preparation can prioritize speed and accuracy over creativity, argumentation, and collaborative problem solving (Frolova et al., 2020; Kruzhkova & Ruschitskaya, 2013).

These challenges are connected by a common pedagogical problem: students may know language forms but still have difficulty analyzing a communicative contradiction, identifying the causes of conflict, and choosing a flexible response in real time. Therefore, the article focuses not on communicative competence in general, but on methods that help students move from reproduction of language patterns to inventive and context-sensitive communication.

The Theory of Inventive Problem Solving (TRIZ) was selected because it offers a structured algorithm for working with contradictions, causal chains, alternative solutions, and creative transfer. Compared with traditional role-play or discussion tasks, TRIZ does not only ask students to speak; it guides them through the analysis of the communicative problem before speech production. This makes it especially suitable for developing linguistic, sociolinguistic, and pragmatic components of communicative competence.

The research problem is how TRIZ-based tasks can be adapted to foreign language classes in order to strengthen students' ability to analyze conflict situations, generate alternative communicative strategies, and use language resources more flexibly.

The objective of the study is to substantiate the potential of TRIZ methods for developing communicative competence among students majoring in linguistics.

To achieve this objective, the article clarifies the concepts of communicative competence and TRIZ methods, identifies the communicative components that can be

developed through TRIZ, designs classroom tasks based on selected TRIZ techniques, and evaluates the dynamics of students' performance after their implementation.

RESEARCH METHODS

The study combines analysis of theoretical literature, pedagogical task design, and a small classroom intervention. The theoretical framework includes works on contemporary education trends, communicative competence, and TRIZ applications in pedagogy. The empirical component was organized in a practical English class with second-year linguistics students and included diagnostic, formative, and control stages. Students' oral performance was evaluated according to communicative achievement and language-use criteria aligned with CEFR and FSES 3++ requirements.

RESULTS

To test the effectiveness of selected TRIZ methods in developing communicative competence, the study was organized in three stages: diagnostic, formative, and control.

1. At the diagnostic stage, students completed a conflict-resolution dialogue task designed to reveal how they analyze a communicative situation, maintain interaction, and select linguistic means.

The scenario simulated a workplace conflict between two translators sharing an office: one preferred loud music while working, whereas the other needed silence and reacted destructively because the problem had not been discussed openly.

The task assessed two key dimensions of communicative competence: linguistic competence, reflected in the range and accuracy of lexical and grammatical means, and pragmatic competence, reflected in the ability to achieve the communicative goal, respond to the interlocutor, and resolve the conflict. These dimensions correspond to CEFR descriptors and to FSES 3++ competencies related to social interaction and foreign-language communication (Ministry of Science and Higher Education of the Russian Federation, 2020; Rudn University, n.d.).

The experiment was conducted in a practical English class with second-year linguistics students whose declared language proficiency was advanced (C1). The following criteria were used (Table 1):

Table 1.*Assessment criteria according to the standardized requirements for oral production*

Communicative achievement	
2	The communicative task has been solved – the goal of communication has been achieved All aspects mentioned in the task description are disclosed The dialogical statement is constructed logically and consistently The volume requirement has been met
1	The communicative task has been solved – the goal of communication has been achieved There are difficulties in maintaining the consistency and logic of the dialogue The statement volume requirement was not met
0	The communicative task has not been solved – the goal of communication has not been achieved During the dialogue, information was mentioned that contradicts the task description There is no logic and consistency in building a dialogue The statement volume requirement was not met
Language	
2	A wide range of lexical and grammatical units was used, <i>corresponding to the claimed level of language proficiency of students</i> The language units used correspond to the task at hand
1	The language units used mostly correspond to the task at hand, but students tend to use only <i>basic-level</i> structures
0	Errors in the use of language units prevent the understanding of the utterance

Note. The authors.

The high level (3-4 points) of communicative competence development is characterized by the ability to achieve the goal of utterance, ensuring proper interaction with the interlocutor with the correct choice of a variety of linguistic means.

The basic level (2 points) of communicative competence development allows students to achieve the goal of communication, observe the logic of building a dialogue, but their reaction to the interlocutor's remarks is not always clear and consistent, and the language tools used are monotonous and correspond to the basic level of language proficiency.

The insufficient level (0-1 points) of communicative competence development is characterized by the inability to perform the communicative task of utterance; students form statements without relying on the cues of the interlocutor, make linguistic mistakes that hinder the understanding of the utterance.

During the first stage, the following results were obtained (Table 2):

Table 2.*The results of the primary testing of the level of formation of communicative competence*

Learners	Level
1	High level
2	High level
3	Basic level
4	Insufficient level
5	Basic level
6	Basic level
7	Basic level
8	Basic level
9	Insufficient level

10	Basic level
11	Basic level
12	Insufficient level

Note. The authors.

During the preliminary testing phase, the following data was obtained:

- More than half of the students in the group (7 students) exhibited a basic level of development of communicative competence;
- Two students demonstrated a high level of development of communicative competence;
- Three students exhibited an insufficient level of development, which constitutes one-quarter of the group.

The most common difficulty was students' incomplete analysis of the task conditions. Some participants overlooked key details of the conflict, reacted to only one aspect of the situation, or failed to build a coherent chain of causes and consequences. This explains why three students remained at an insufficient level: their problem was not vocabulary alone, but the inability to interpret the communicative situation as a whole and to choose an adequate conflict-resolution strategy.

From a linguistic perspective, it is noteworthy that the majority of students' speech is characterized by a rich vocabulary, yet there is a discernible tendency to employ simplified grammatical structures.

The diagnostic results justified the use of TRIZ methods because they directly target the weaknesses revealed in the first stage: insufficient causal analysis, limited generation of alternatives, and reliance on simplified language patterns. On this basis, a set of TRIZ-based tasks was designed for the formative stage:

Position 1: Brainstorming

This stage is aimed at activating the speech-thinking activity of students; being initial, it sets them up for the subsequent generation of ideas.

Within five minutes, students are asked in pairs to compile as complete a list of ways to behave in a conflict situation as possible: *What are the ways of dealing with conflicts? With your partner, list as many as possible* (Table 3).

Table 3.*A task for developing communicative competence*

Task 1	TRIZ method	The target competence
Pair discussion	Brainstorm	Universal competence -3 (FSES 3++): the ability to carry out social interaction and realize one's role in a team

Note. The authors.

Position 2: 'Why?' Fairy Tales Method

The 'Why?' Fairy Tales Method was used to help students reconstruct the causal chain of the conflict. Instead of memorizing isolated phrases, students identified why the conflict emerged, which actions intensified it, and what alternative responses could have prevented escalation.

The operational teacher-student script was condensed into a methodological summary: students first identified the cause of each action, then reformulated the chain using appropriate grammatical structures, and finally discussed how causal awareness supports more constructive communication.

Using the example of these proposals, students are invited to speculate on the importance of understanding cause-and-effect relationships in conflict situations (Table 4).

Table 4.*A task for developing communicative competence*

Task 2	TRIZ method	Target competence
Discussion, practical task on the use of grammatical construction	<i>"Why?" Fairy Tales Method</i>	Basic professional competence -1 (FSES 3++): the ability to apply a system of linguistic knowledge about the basic phonetic, lexical, grammatical, word-formation phenomena, spelling and punctuation, about the patterns of functioning of the studied foreign language, its functional varieties

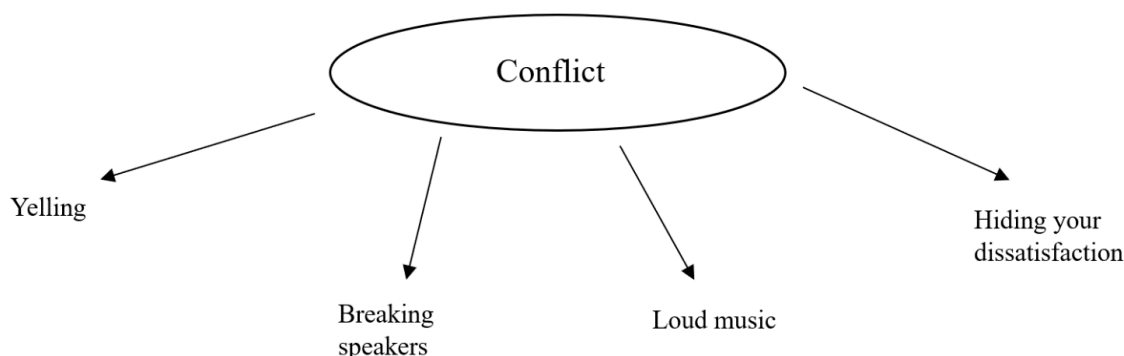
Note. The authors.

Position 3: Morphological analysis

Morphological analysis was used as a logical continuation of the causal task. Students decomposed the conflict into problem-forming elements, compared possible alternatives, and connected each element with linguistic choices that could soften the interaction.

During the discussion, the teacher suggests that students draw up a diagram of the problem-forming elements of the situation being analyzed (Figura 1).

Figure 1.
Sample scheme “Morphological analysis”



Note. The authors.

At this stage, the grammar practice was integrated into communicative analysis: students used structures such as *I wish / if only* to express regret, acknowledge responsibility, and formulate reconciliation-oriented statements.

This stage is aimed at not only developing the ability to analyze the elements of a problematic situation, but also at forming a speech strategy when participating in a conflict, namely, the opportunity to express regret for mistakes made and the desire for reconciliation. To do this, the construction of sentences with the grammatical construction *I wish / if only* is introduced and practiced. Its use should help to soften statements made in a conflict situation, as well as diversify the set of grammatical constructions used by students, moving away from simple tenses.

Table 5.
A task for developing communicative competence

Task 3	TRIZ method	Target competence
Discussion, practical task on the use of grammatical construction	Morphological analysis	Basic professional competence-1 (FSES 3++): the ability to apply a system of linguistic knowledge about the basic phonetic, lexical, grammatical, word-formation phenomena, spelling and punctuation, about the patterns of functioning of the studied foreign language, and its functional varieties

Note. The authors.

Position 4: The Method of Focal Objects

The Method of Focal Objects (MFO) was applied to broaden students' communicative repertoire. By transferring qualities associated with different professions to the conflict participants, students generated alternative behavioral and speech strategies (Table 6).

Table 6.*An example of MFO realization*

Professions	Characteristics
Doctor	Thoughtful, caring, smart
Teacher	Patient, caring, creative
Taxi-driver	Polite, careful, scrupulous
Hairdresser	Polite, careful, neat
Shop assistant	Patient, energetic, polite

Note. The authors.

During discussion, students identified politeness as a key quality for conflict situations and practiced hedging as a linguistic strategy for reducing tension and making statements less confrontational.

Table 7.*A task for developing communicative competence*

Task 3	TRIZ method	Target competence
Discussion, practical task on the use of grammatical construction	The Method of Focal Objects	Basic professional competence -1: the ability to apply a system of linguistic knowledge about the basic phonetic, lexical, grammatical, word-formation phenomena, spelling and punctuation, about the patterns of functioning of the studied foreign language, and its functional varieties

Note. The authors.

At the control stage, students performed a new workplace conflict role-play in order to assess the dynamics of communicative competence after the TRIZ-based intervention.

The scenario involved a PR-agency project in which one student had to negotiate with a demotivated team leader whose lack of communication threatened the final result. The new task preserved the conflict-resolution focus but changed the professional context, allowing the transfer of acquired strategies to a different situation.

Table 8.*Results of the dynamics of the development of communicative competence – comparison of the results of the diagnostic and control stages*

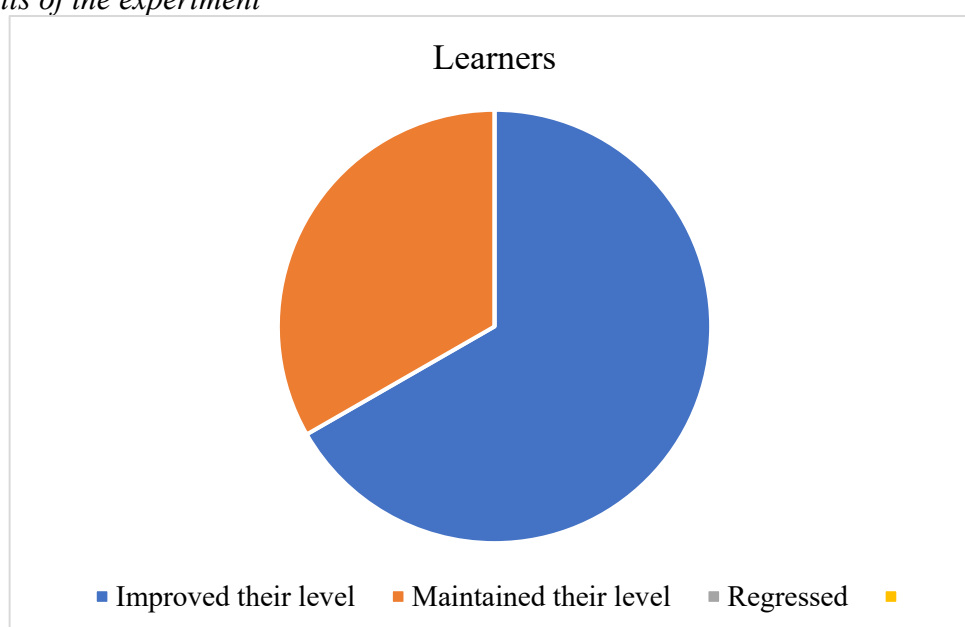
Learners	Level
1	High level -> high level
2	High level -> high level
3	Basic level -> high level
4	Insufficient level -> basic level
5	Basic level -> high level
6	Basic level -> high level
7	Basic level -> basic level
8	Basic level -> basic level
9	Low level -> basic level
10	Basic level -> high level
11	Basic level -> high level

Note. The authors.

The repeated testing showed positive dynamics in eight out of 12 students (Figure 2). They became more attentive to task conditions, analyzed conflict causes more consistently, and used a wider range of softening, conciliatory, and problem-solving constructions. However, four students showed limited or no significant progress. Their results suggest that TRIZ tasks require additional scaffolding for learners who have difficulty with independent analysis, abstract transfer, or spontaneous grammatical production.

Figure 2.

The results of the experiment



Note. The authors.

In summary, TRIZ methods demonstrated two practical advantages for foreign language instruction: they helped students analyze communicative contradictions before speaking, and they created a meaningful reason to introduce grammar and vocabulary as tools for solving a concrete communicative problem (Sokol et al., 2008).

DISCUSSION

The findings show that TRIZ methods are effective not simply because they make classes more interactive, but because they provide students with a structured algorithm for analyzing communicative contradictions.

Brainstorming supported rapid generation of possible responses and reduced psychological inertia; the ‘Why?’ method developed causal reasoning; morphological analysis decomposed the conflict into problem links; and the focal-object method helped students transfer alternative qualities and strategies to a communicative situation.

Compared with conventional role-play, TRIZ adds an analytical stage before performance. This stage is important for students who can reproduce language forms but struggle to understand why a conflict has emerged, what the interlocutor needs, and which speech strategy can resolve the problem.

The cases without significant progress are also meaningful. They indicate that TRIZ is not a universal remedy: students with weaker analytical autonomy or unstable grammatical control may need preliminary modeling, sentence frames, and guided reflection before they can benefit fully from inventive problem-solving tasks.

Thus, TRIZ should be implemented as a staged pedagogical technology rather than as an isolated creative activity. Its effectiveness depends on clear assessment criteria, teacher scaffolding, repeated transfer to new communicative situations, and integration with CEFR and FSES competence requirements.

Table 9.

TRIZ methods and their target competences according to CEFR and FSES 3++

TRIZ method	Target competence according to CEFR	Target competence according to FSES
Brainstorm	<i>Pragmatic</i> component of communicative competence (CEFR): knowledge of strategies of behavior in communication situations	Universal competence -3 (FSES 3++): the ability to engage in social interaction and realize their role in the team
“Why?” Fairy Tales Method	<i>Linguistic</i> component of communicative competence (CEFR): the use of a wide range of grammatical constructions	Basic professional competence -1 (FSES 3++): the ability to apply a system of linguistic knowledge about the basic phonetic, lexical, grammatical, word-formation phenomena, spelling and punctuation, about the patterns of functioning of the studied foreign language, its functional varieties
Morphological analysis	<i>Linguistic</i> component of communicative competence (CEFR): the use of a wide range of grammatical constructions <i>Pragmatic</i> component (CEFR): the ability to select linguistic means to achieve the goal of communication	Basic professional competence -1 (FSES 3++): the ability to apply a system of linguistic knowledge about the basic phonetic, lexical, grammatical, word-formation phenomena, spelling and punctuation, about the patterns of functioning of the studied foreign language, its functional varieties

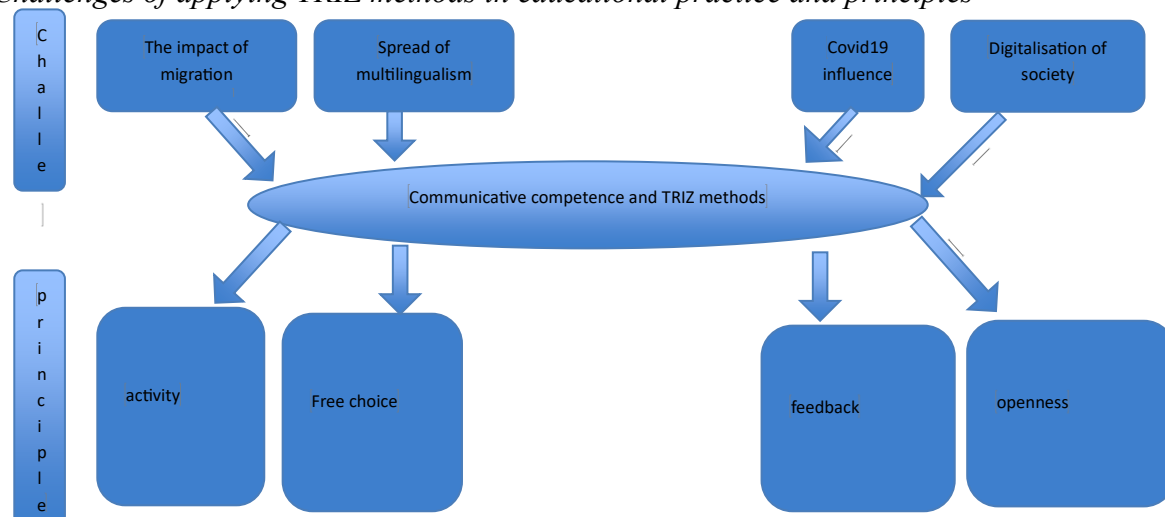
The method of focal objects	<i>Linguistic</i> component of communicative competence (CEFR): the use of a wide range of grammatical constructions <i>Pragmatic</i> component (CEFR): the ability to select linguistic means to achieve the goal of communication	Basic professional competence -1 (FSES 3++): the ability to apply a system of linguistic knowledge about the basic phonetic, lexical, grammatical, word-formation phenomena, spelling and punctuation, about the patterns of functioning of the studied foreign language, its functional varieties
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Note. The authors.

For broader implementation, the proposed tasks can be adapted to different foreign-language courses, but they should be supported by teacher training, a bank of conflict scenarios, rubrics for communicative achievement, and follow-up reflection on unsuccessful cases.

Figure 3.

Challenges of applying TRIZ methods in educational practice and principles



Note. The authors.

FINAL CONSIDERATIONS

The study demonstrates that TRIZ methods can be used as a purposeful tool for developing communicative competence among university students majoring in linguistics.

The main contribution of the article is the adaptation of TRIZ principles to foreign language instruction: communicative tasks are treated as contradictions that require analysis, generation of alternatives, and selection of context-sensitive speech strategies.

For practical implementation, universities should integrate TRIZ-based tasks into speaking modules, train teachers to guide causal and morphological analysis, and use rubrics

that evaluate not only language accuracy but also conflict resolution, flexibility, and responsiveness to the interlocutor.

Large-scale implementation will require testing the method with larger samples, comparing TRIZ-based instruction with traditional role-play, and examining why some students show limited progress. Future research should therefore include longitudinal designs and differentiated support for learners with weaker analytical or linguistic readiness.

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 - ☐ **Data and material availability:** The data and materials used in this study are available from the corresponding author upon reasonable request.
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