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4C/ID FOR FOREIGN LANGUAGE COMMUNICATION TEACHING

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ABSTRACT

Aim/Purpose	The purpose of this study is to investigate the effectiveness of a specialized instructional approach that combines empathic listening and culturally nuanced communication skills to enhance students' preparedness for real-life cross-cultural interactions. By incorporating both psychological and specific sociocultural components within the 4C/ID model framework, this study aims to address the gaps in traditional communicative language teaching, which often emphasizes linguistic competence but lacks focus on the deeper cultural, psychological, and sociological dimensions essential for meaningful communication in diverse cultural contexts. Specifically, this study seeks to determine whether this integrated approach can improve communicative competence, bridge performance gaps between high- and low-achievers, and support the development of culturally adaptive communication skills among language learners.
Background	While communicative language teaching approaches have significantly improved students' readiness for real-life interactions, traditional methods often fail to prepare learners for the complexities of cross-cultural communication.

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These approaches typically emphasize linguistic competence and practical conversation skills but rarely incorporate deeper communicative competencies rooted in cross-cultural psychology, sociology, ethnography, or cultural studies. As a result, students may be able to use the language fluently yet lack the awareness of sociocultural behaviors, non-verbal cues, and context-specific communication strategies essential for meaningful cross-cultural exchanges. This study addresses these limitations by implementing a specialized training program based on the 4C/ID model, designed to integrate empathic listening and culturally nuanced communication skills, divided into psychological and specific sociocultural components. This provides a more comprehensive approach to preparing students for authentic intercultural interactions.

Methodology	Experimental comparison of the effect sizes of a conventional language teaching methodology (the control group) and a 4C/ID model for communication teaching (the experimental group). Twenty-seven adults (25 females, 2 males, age range 18-36, mean age = 21.3) were randomly divided into control and experimental groups. They underwent cognitive testing before the learning period. The analysis showed no statistically significant differences in the groups' results (Mann-Whitney U test). The students were taught Japanese using two methodologies for nine months. The experimental group had 4C/ID communication training, while the control group had conventional tasks. To assess language skills, written and oral tests were employed. The assessment of subjects' oral skills was a blind test performed by a native speaker.
Contribution	This paper contributes to the field of language education by advancing a comprehensive approach to teaching communicative competence that goes beyond traditional linguistic training. It introduces an instructional model that integrates empathic listening with culturally specific skills, combining insights from cross-cultural psychology, sociology, and ethnography within the framework of the 4C/ID model.
Findings	<ul style="list-style-type: none">- The ability to maintain dialogue is improved by the awareness of extralinguistic phenomena pertaining to a given speech community.- The systematic approach to communication teaching decreases the gap between low-achievers and high-achievers.- Special communication training affects the oral exam results but not the written exam.
Recommendations for Practitioners	Combining empathic listening and sociocultural training with structured, task-based practice will help to build communicative competence and, hence, oral examination results.
Recommendations for Researchers	To enhance the clarity and accuracy of research findings, it is advisable to differentiate between the pure linguistic, psychological, and sociocultural aspects of communication. Utilizing tests such as pre-tests and/or post-tests, tailored to the specific research objectives, can help in measuring these aspects separately and in isolation.
Impact on Society	This approach to language education fosters deeper cultural understanding and empathy, equipping learners with skills essential for meaningful cross-cultural communication. By developing adaptive communicative competence, this method promotes inclusivity, reduces cultural misunderstandings, and supports more cohesive, globally aware communities.

Future Research	Future studies should explore the long-term effects of empathic listening and sociocultural training on communicative competence across diverse cultural contexts. Additionally, the research could investigate the minimum linguistic proficiency required to effectively employ these skills and the potential for adapting this approach to other fields where cross-cultural communication is essential, such as international business and healthcare.
Keywords	teaching, communicative approach, communicative competence, social context

INTRODUCTION

In a world of increasing globalization, why do so many language learners struggle to communicate effectively across cultures, even after years of study? Communication skills go beyond grammar and vocabulary, demanding cultural insight, psychological awareness, and adaptability to diverse social contexts. According to the American Psychological Association (2018), effective communication encompasses “the exchange of information, thoughts, and feelings through verbal and nonverbal means,” requiring skills far beyond language mechanics. Research consistently highlights that, while students may succeed in isolated language tasks, they often encounter challenges when trying to engage in cohesive, international exchanges (Bruton, 2011; Taillefer, 2013).

The communicative approach (CA), or Communicative Language Teaching (CLT), developed in the 1970s, marked a turning point in language instruction by moving beyond traditional grammar-translation methods. CLT remains a central paradigm in language education today, with a strong presence in both the scientific literature and practical applications worldwide. Current studies continue to emphasize CLT’s strengths in promoting authentic language use and communicative competence. For example, research by Littlewood (2014) highlights CLT’s focus on real-life communication tasks that enable students to develop functional fluency, underscoring its effectiveness in language acquisition through interaction. Similarly, Leaver and Willis (2004) argue that CLT helps learners internalize language structures more naturally through “meaningful, student-centered activities.”

Despite its successes, several gaps remain in the CLT approach, particularly regarding the systematic integration of cross-cultural psychological and sociocultural factors. Research has shown that while CLT effectively promotes verbal skills, it often lacks an emphasis on the nonverbal and emotional aspects of communication that vary across cultures. For instance, Matsumoto (2006) notes that nonverbal behaviors, such as facial expressions and gestures, are deeply influenced by cultural norms and can lead to misunderstandings if not properly addressed in language instruction. Studies like that of Fang and Baker (2018) argue that while CLT encourages spontaneous language use, it frequently overlooks the cultural dimensions of communication, which can lead to misunderstandings in intercultural contexts.

Furthermore, there is limited guidance within CLT frameworks for systematically addressing sociocultural aspects, such as understanding and applying the norms and values that shape communication in different cultural settings. Cross-cultural psychology studies, including Lyusin and Amiraslanova (2022), Chentsova-Dutton (Chentsova-Dutton et al., 2007; Chentsova-Dutton & Vaughn, 2012; Chentsova-Dutton & Ryder, 2020; Chentsova-Dutton et al., 2020) and Matsumoto and Hwang (2020), emphasize that cultural values significantly affect communicative behaviors, but these insights are often absent in traditional CLT methodologies. Current approaches rarely incorporate structured training in emotional expression and recognition, crucial skills in cross-cultural interactions, as emphasized by Ryder et al. (2011), who advocate for a “cultural-clinical psychology model” to address the ways culture shapes psychological experiences and nonverbal communication.

Arakawa and colleagues, for example, have shown that while current colloquial language teaching materials attempt to mirror real-life scenarios, they often fall short of meeting students’ real-world

needs (Arakawa et al., 2023). This issue is further complicated in immersive methods, such as Content and Language Integrated Learning (CLIL), where students are thrust into real-world language environments without receiving explicit communication instruction. As a result, immersion can exacerbate disparities in student achievement by leaving gaps between low-achieving and high-achieving students (Bruton, 2011, 2013; Kirschner et al., 2006; Roussel et al., 2017; Taillefer, 2013).

These gaps suggest a need for a more comprehensive approach that combines CLT's strengths with systematic instruction in sociocultural and cross-cultural psychological competencies. This study seeks to fill these gaps by integrating structured explanations of sociocultural norms and cross-cultural emotional understanding into the Four-Component Instructional Design model (4C/ID) that was developed to facilitate the teaching of complex skills (van Merriënboer et al., 2002), thereby preparing learners for more effective and culturally adaptable communication.

Given these challenges, some researchers have adapted structured instructional frameworks to address these deficiencies, including the 4C/ID model. Although typically used in technical skill instruction, the 4C/ID model has shown some potential for complex language tasks. For instance, Zhou et al. (2020) used elements of 4C/ID to teach oral English. However, their primary focus remained on situational appropriateness without extensive emphasis on psychological dimensions like empathy and interpersonal relationship skills. This example, however, differs from the approach of this study, which employs the 4C/ID model to systematically address not only linguistic but also interpersonal and cross-cultural communication competencies. Unlike previous applications, this research centers on developing learners' psychological awareness in interpersonal relationships and their ability to navigate diverse cultural contexts, aiming for a more holistic communicative competence.

Building on these studies, this research employs the 4C/ID model, or Four Component Instructional Design model (van Merriënboer & Kirschner, 2013), to systematically address both linguistic and extralinguistic competencies. Although widely applied in technical fields, this framework remains underutilized in foreign language instruction with an explicit focus on psychological and sociocultural dimensions. By leveraging the model's focus on complex skill-building, this research aims to develop a comprehensive instructional framework that prepares learners for authentic, cross-cultural communication.

RESEARCH QUESTIONS:

- 1) How can the 4C/ID model be adapted to enhance communicative competence in a foreign language setting?
- 2) Will there be a statistically significant difference in communicative competence between the control group, which interacts with native speakers without structured extralinguistic training, and the experimental group, which receives structured explanations of psychological and sociocultural aspects in addition to these interactions?
- 3) Can psychological and sociocultural training help bridge the performance gap between low-achievers and high-achievers in cross-cultural communication skills?
- 4) What is the relationship between communicative and linguistic competences?

To clarify our approach, we begin by identifying communication as a complex skill requiring a multidisciplinary model that synthesizes insights from psychology, sociology, ethnography, and cultural studies. This paper argues that bridging the gap between classroom instruction and effective cross-cultural communication hinges on integrating these extralinguistic competencies into language learning.

The research steps were:

- Defining the complex skill of communication: We defined a complex skill of communication, which includes both linguistic and communicative competence. Communicative competence was further broken down into psychological and sociocultural aspects.

- Assessment system and teaching materials: We developed the 4C/ID model. The assessment system was designed, where the written exam focused on linguistic competence and the oral exam focused on communicative competence using multimodal discourse analysis. Teaching materials were developed based on four components, as outlined in Method.
- Recruitment
- Cognitive Testing 1.
- Intervention: Participants underwent a structured intervention using a methodology based on extralinguistic and psychological skills training.
- Cognitive Testing 2.
- Data collection: Observations, cognitive test results, and course performance data were gathered.
- Analysis: Data was analyzed to evaluate the impact of the methodology on cross-cultural communication and psychological awareness.

LITERATURE

COMMUNICATION

Communication is a complex skill studied across various fields beyond linguistics, including psychology, sociology, ethnography, and cultural studies. Each discipline offers unique insights. Psychology and cross-cultural psychology, for example, explore how cognitive, emotional, and cultural processes shape communication, with studies indicating that “effective communication requires not only linguistic competence but also social and emotional intelligence” (Hoff, 2006). Emotions are central to human interaction, as they influence the way we relate to others and interpret social contexts (Markus & Kitayama, 1991). Cross-cultural studies show that emotional expression varies widely, with “display rules” dictating when and how emotions are expressed according to cultural norms (Matsumoto, 1990; Matsumoto et al., 1998; Uchida et al., 2004). Sociology examines the influence of social norms and group behaviors, as communication often serves as a tool for social cohesion and identity formation (Goffman, 1981). Ethnography considers cultural expressions, emphasizing that language is a social practice deeply embedded in cultural contexts (Hymes, 1972a; Moerman, 1988). Cultural studies contribute by examining how language and identity are intertwined, as language reflects and shapes cultural values, beliefs, and worldviews (Hall, 1997).

Integrating these interdisciplinary perspectives is essential for a holistic approach to communicative competence, particularly in foreign language instruction, where social, cultural, and emotional factors influence effective communication.

We employed the distinction of communicative and linguistic competences, first defined by Dell Hymes in 1966. Linguistic competence refers to the use of spoken or written language elements such as pronunciation, morphology, vocabulary, and syntax. Communicative competence encompasses both verbal and non-verbal behavior, such as appropriate language use across different social contexts, which is vital for effective interaction. According to Hymes, communicative competence includes the ability to adapt language use based on social conventions and norms, making it more than just linguistic proficiency. Hymes’s S-P-E-A-K-I-N-G (setting, participants, ends, acts, key, instrumentalities, norms, genre) model captures the broader social dimensions of communication, providing a framework that has informed multidisciplinary studies in language and social context. Together with linguists John Gumperz, William Labov, and sociologist Irving Goffman, Hymes advanced the idea that language and social contexts are inherently linked, setting a foundation for analyzing verbal and non-verbal communication as interdependent.

Nonverbal behavior involves the use of gestures, facial expressions, body language, eye contact, and other non-linguistic cues that accompany or replace spoken language. Research highlights the cultural variability of nonverbal cues. Matsumoto (1990) notes that “display rules” guide the appropriate ex-

pression of emotions, which can vary significantly across cultures. This study emphasizes that non-verbal behavior reflects underlying social norms and signals emotional and relational information that verbal behavior alone cannot convey (Chentsova-Dutton et al., 2010).

Empirical evidence from experimental psychology, aligned with Hymes's studies, suggests that emotional expression, facial displays, and display rules vary significantly across cultures. For instance, Clancy (1986) showed that Japanese mothers comfort their infants without verbal cues, while American mothers tend to use speech as a primary means of interaction. Similar cultural variations in communication patterns were observed in adults; Japanese speakers, for example, are often described as more reserved in verbal exchanges compared to their American counterparts. Doi (1973) noted that when he arrived in the United States, he found Americans' constant talking, even during meals, to be "hypermanic."

Research also indicates that emotional displays have cultural nuances closely tied to body language and social behavior (Kashima et al., 2020; Senft et al., 2023; Tsai & Chentsova-Dutton, 2003). Cultural expectations shape the appropriateness of emotional expressions, which are often perceived as normal, honorific, or even offensive, depending on the context. For example, Chentsova-Dutton et al.'s (2021) analysis of children's picture books revealed cultural disparities, with Russian books containing more expressions of sadness and anger than American ones. This variability underscores that emotional expression is not solely about intensity but is heavily influenced by cultural norms. To understand such differences, Ryder et al. (2011) proposed the cultural-clinical psychology model, highlighting how cultural frameworks shape psychological experiences, including non-verbal behavior (Chentsova-Dutton & Tsai, 2010).

The rules governing emotional expression and social norms are profoundly shaped by societal influences, reflecting each culture's unique model of normalcy and deviance. Cross-cultural studies indicate differences even in complex social behaviors like advice-giving, suggesting that communication competence involves a deep understanding of culturally specific non-verbal cues (Chentsova-Dutton et al., 2007; Chentsova-Dutton & Vaughn, 2012; Chentsova-Dutton & Ryder, 2020; Chentsova-Dutton et al., 2020).

These two components – verbal and nonverbal behavior – are integral to communicative competence, enabling individuals to communicate effectively by integrating both linguistic accuracy and cultural appropriateness across diverse interactions.

The transfer paradox: Language tests versus real-life tasks

Language use is inherently dependent on **psychological, social, and cultural factors**, which shape how meaning is conveyed and understood in different settings. However, in traditional language instruction, these factors are often generalized and simplified under the broad label of "context." Rather than distinguishing and teaching these dimensions explicitly, they are bundled together as if "context" alone accounts for the complexities of real-world communication. This lack of distinction contributes to what is known as the "transfer paradox," where students perform well on language tests focused on linguistic competence but struggle with effective communication in real-life situations that require nuanced social and cultural understanding (Bartning et al., 2010; Saito, 2004; Shohamy, 2000).

The term "context" is commonly used in Second Language Acquisition (SLA) to refer to the setting, social structures, and psychological nuances of intercultural interactions. Merriam-Webster broadly defines context as both the surrounding discourse and the situational conditions that affect meaning (Merriam-Webster, n.d.). Yet, this broad application often fails to capture the intricacies of communication that are influenced by distinct psychological and sociocultural variables (Ervin-Tripp, 1996). Language assessments rarely account for these elements explicitly, resulting in a limited focus on grammatical and lexical skills that overlook the importance of social cues and cultural norms in effective communication.

Research demonstrates that language comprehension and usage are deeply intertwined with contextual cues, impacting both grammar and vocabulary processing (Bergs & Dieweld, 2009; Bychkova & Rakhilina, 2023; Çetinavcı, 2014; Cuyckens & Zawada, 2001; Givón, 1987; Haselow, 2019, 2021; Hu & Nassaji, 2012; Inal, 2021; Willems & Peelen, 2021). For example, the meaning of polysemous words varies significantly based on context, but studies show that learners often need explicit instruction to understand these meanings fully (Alsaawi, 2013; Gablasova, 2015; Mokhtar & Rawian, 2012). Kaivanpanah and Alavi (2008) and Kanatlar and Gül Peker (2009) emphasize that inferring meaning through context alone is often inadequate, especially for low-frequency or technical terms, underscoring the limitations of relying solely on context without clear, structured guidance.

Broader comprehension skills, including reading and listening, also illustrate the limitations of lumping all extralinguistic elements into “context.” Studies by Lorent et al. (2020, 2022) found that literacy skills are connected to social and emotional competencies, suggesting that comprehension involves psychological and sociological understanding beyond linguistic decoding. Meng et al. (2023) demonstrated that students find semantic understanding more challenging than vocabulary recognition, indicating that background knowledge and contextual awareness are critical in language acquisition.

To address these gaps, this study applies the 4C/ID model to explicitly incorporate psychological, social, and cultural dimensions as distinct elements of communicative competence. By structuring these factors individually rather than under a generalized “context” label, this approach aims to equip students with the skills necessary to engage in real-life intercultural interactions effectively.

The 4C/ID model (Four-Component Instructional Design) was developed by Jeroen J. G. van Merriënboer to support the teaching of complex skills by breaking instruction into four interrelated components: Learning Tasks, Supportive Information, Procedural Information, and Part-Task Practice (van Merriënboer & Kirschner, 2013). Originally designed for technical and professional education, 4C/ID helps learners acquire complex cognitive skills through a structured, step-by-step learning process. In language teaching, this model has been adapted to address both linguistic and communicative competencies, making it especially relevant for training that requires nuanced understanding and real-world application.

The holistic approach of the 4C/ID model contrasts with conventional language teaching methods by emphasizing the integration of linguistic, psychological, social, and cultural dimensions. In the conventional approach, language learning often focuses narrowly on linguistic competence – grammar, vocabulary, and syntax – usually without systematic instruction in the psychological, social, and cultural factors that influence language use in real-life contexts. This narrow focus means that learners may perform well on structured language tests but struggle to communicate effectively in real-world intercultural settings.

By contrast, the holistic approach in 4C/ID involves Learning Tasks that reflect authentic, real-life situations, encouraging learners to use language while navigating complex social and cultural cues. For language learning, this might involve dialogue tasks that progressively incorporate cultural and social variables, helping students develop functional fluency and cultural adaptability. In Supportive Information, learners receive essential background knowledge on sociocultural norms and social behaviors, equipping them to handle diverse communication scenarios with cultural sensitivity. This is especially relevant for developing cross-cultural awareness, as learners understand not just how to speak a language but how to use it appropriately in different cultural contexts.

The Procedural Information component offers practical, step-by-step guidance, helping learners develop complex communicative skills such as managing misunderstandings, interpreting nonverbal cues, or adapting language for specific social interactions. This contrasts with conventional methods that may teach language rules in isolation, often failing to prepare learners for spontaneous, nuanced interactions. Finally, Part-Task Practice allows focused practice of specific sub-skills, such as pronunciation or sentence construction, reinforcing linguistic accuracy within the broader communicative framework.

In essence, the 4C/ID model's holistic approach supports comprehensive communicative competence by incorporating sociocultural and psychological training, preparing students for meaningful and adaptable language use across diverse contexts.

Synthesis of the review

The literature emphasizes various aspects of communicative competence and highlights distinct approaches from linguistics, psychology, sociology, and cultural studies. Existing studies typically isolate linguistic structures or social norms without combining them into an integrated framework. This research fills that gap by merging linguistic knowledge with structured sociocultural and psychological training, aligning with interdisciplinary findings and advancing the holistic development of communicative competence in foreign language education.

METHOD

PARTICIPANTS

Participants were recruited via online public advertisement with several conditions: (1) age range between 18 and 40, (2) no experience of learning Japanese before, and (3) cognitive testing. As the students had no experience of learning Japanese before, a pre-test was impossible. Seventy-seven subjects signed the informed consent and took cognitive testing before the course. Only 27 subjects completed the course until the end, and only their results are included in the current study. Out of these 27 students, ~93% (n=25) were females, and ~7% (n=2) were males. Their ages ranged from 18 to 36, with an average of 21.3 years old. The number of years of education was from 11 to 19 (m. ~13.6). The participants were given a choice of four schedules for four groups, respectively. When four groups were formed, they were randomly assigned to be control (2 gr.) or experimental (2 gr.), regardless of any parameters of the students. Overall, there were 14 subjects in the experimental group and 13 subjects in the control group. To check whether the groups had the same cognitive abilities distribution, we employed the non-parametric Mann-Whitney U test for independent groups, which showed no statistically significant difference between the groups. Participants didn't know whether they were in the control or the experimental group until the end of the experiment.

TEACHING

This study employed a typical instructional design experiment with an experimental and a control group to measure the effect size of a specialized approach to enhancing communicative competence in a foreign language setting. The aim was to assess whether structured training in empathic listening (Lebedinets, 2023; Wrench et al., 2020) would improve students' communicative skills compared to conventional language training.

Common conditions across experimental and control groups

Both groups shared several baseline conditions to ensure comparability:

Same coursebook: Both groups used Marugoto Katsudou and Rikai as their main coursebook.

Interaction with native speakers: Students in both groups participated in online events with native Japanese speakers, allowing them to practice conversational skills in real-time interactions.

Lesson structure: Both groups followed a similar lesson structure that included tasks, language practice, and opportunities for verbal engagement.

Despite these shared conditions, the groups differed significantly in how communication skills were taught. While the control group received traditional language instruction, the experimental group participated in a specially designed empathic listening training program.

Control group: Conventional language training with a focus on linguistic competence

The control group received a standard language training approach, focusing primarily on linguistic competence. This approach emphasized grammar, vocabulary, and language structure as the core components of language learning. The control group's curriculum included a study of "culture", where culture is understood mainly as an appreciation of literature, art, and broader social customs. The concept of culture in this traditional framework is aligned with the following definitions from Cambridge Dictionary: "the arts of describing, showing, or performing that represent the traditions or the way of life of a particular people or group; literature, art, music, dance, theater, etc." and "music, art, theater, literature, etc." (Cambridge Dictionary, n.d.). Consequently, the control group's communication skills training was limited to linguistic competence without an explicit focus on communication strategies or cultural nuances essential for interacting with native speakers.

Experimental group: Specialized communication training in empathic listening

The experimental group received a specially created communication training program focused on empathic listening. This training was designed to develop both linguistic and communicative competences, with the latter subdivided into psychological and specific sociocultural components. The training incorporated procedural, supportive, and part-task practice, progressively building students' abilities to engage effectively in cross-cultural interactions.

Psychological training

This part of the training targeted foundational empathic listening skills applicable across various cultural contexts. Key elements included:

Active Listening: Students practiced focusing intently on the speaker, using gestures like nodding and eye contact to show engagement.

Paraphrasing: Training included rephrasing the speaker's statements to confirm understanding and foster effective communication.

Non-Judgmental Responses: Students were encouraged to maintain a neutral tone, avoid assumptions, and create a respectful atmosphere.

Reflective Listening: This strategy emphasized acknowledging and responding to the speaker's emotions, fostering empathy and mutual understanding.

These psychological skills provided a foundation for empathic listening that students could apply in a variety of intercultural settings, emphasizing respect, attentiveness, and active engagement.

Specific sociocultural training

This component focused on Japanese-specific communication skills, incorporating video analysis, structured explanations, and role-playing exercises to build cultural awareness. Key sociocultural skills included:

Understanding mimics and body language differences: Students learned to identify culturally specific non-verbal cues, such as facial expressions and gestures unique to Japanese communication.

Acceptability of phrasing and behavior: Training covered culturally appropriate language choices and behaviors, helping students recognize which phrases and actions are considered polite or impolite.

Rules of conduct and emotional display: Students explored norms related to emotional expression in Japanese culture, such as the preference for composure and subtlety in public interactions.

This structured training in universal and sociocultural communication skills aimed to prepare students for real-life intercultural communication with native speakers. Through supportive information, procedural instruction, and part-tasks that progressively built towards whole-tasks, the experimental group was equipped with both practical and empathetic communication tools.

In summary, this methodologically structured approach allowed the experimental group to develop communicative competence that extended beyond linguistic accuracy, incorporating psychological and sociocultural awareness essential for cross-cultural communication.

LANGUAGE ASSESSMENT

After the course, the students took written and oral tests in Japanese. The written test was conducted by a linguist, and the oral examination was conducted by a native speaker and a certified Japanese teacher who didn't know that the difference between the groups existed.

The written test took 60 minutes. For the assessment, 19 sentences were given to be translated from Russian into Japanese. The written test sentences were marked by a linguist together with a native speaker who was not aware of the difference between the groups. The mistakes were divided into several subcategories: lexis (with further subdivisions), grammar (with further subdivisions), contextual relevance (at both the lexical and grammatical levels), and orthography.

The oral examination was conducted individually for each student. The average duration of the test was 5 minutes. The task was to maintain a dialogue with a native speaker in which the questions related to a set of topics were asked. The topics were the same as in the coursebook (e.g., 'hobby,' 'sport'), and the students knew the full scope of topics in advance, but they didn't know which topic and which question they would get. The native speaker completed a special preparation for the oral exam, writing down the possible questions related to the exam topics and consulting the teacher in advance to make sure that she wouldn't use too sophisticated lexical and grammatical items for the students. All the answers were video recorded. The videos were annotated by a linguist and a Japanese language teacher who didn't know about the idea of the experiment. Inter-rater reliability was calculated based on 13 videos (half of the participants) rated by two independent raters with the reliability index being 0.91 (intraclass correlation coefficient type A-1, (95% CI [0.75, 0.97])). The overall scoring was divided according to the subcategories: 'comprehension,' 'verbal contact,' 'nonverbal contact,' 'fluency,' 'grammar,' 'lexis,' 'pronunciation,' wherein 'comprehension' was an integral category, showing the ability of the students to maintain an intelligible dialogue. Only the integral category will be described in detail, as the others are supposed to be used in the future analysis of the interrelation of the result with cognitive abilities, which will be disclosed in a separate article.

'Comprehension' is the relevance of the students' answers to the native speaker's utterances. The answers are divided into four categories: (1) completely relevant answer ("What is the weather today? It is rainy."), (2) partially relevant answer ("What was the weather yesterday? It is raining now."), (3) completely irrelevant answer ("What was the weather yesterday? My hobby is reading."), (4) no answer (or "I don't understand"). The remaining categories, such as 'grammar,' 'lexis,' 'fluency,' and 'pronunciation,' were not counted because mistakes in them do not necessarily impede understanding. However, if they did, these instances would already be reflected in the 'comprehension' category, as a completely ungrammatical utterance would get 0 points. The idea of maintaining a conversation when misunderstanding happens (counted as 'comprehension') goes in line with Dell Hymes's "Mistake – Awareness – Repair" part of the S-P-E-A-K-I-N-G model (Hymes, 1962, 1964, 1967, 1972b, 1974).

Scoring

The written examination scoring

The scoring was conducted by a linguist. The mistakes in the task (sentences translated from Russian into Japanese) were counted for each student using Microsoft Excel. Written examination mark is the

sum of four aspects, namely, grammar, lexis, orthography, and contextual relevance. Total score formula for the written examination (**IntW**, 0-100):

$\text{IntW} = (\mathbf{G} + \mathbf{L} + \mathbf{O} + \mathbf{C}) / 4$, where **G** stands for ‘grammar,’ **L** stands for ‘lexis,’ **O** stands for orthography, and **C** stands for ‘contextual relevance.’

The scores of grammar (**G**), lexis (**L**), orthography (**O**), and contextual relevance (**C**) were counted as follows:

$\mathbf{G} = 100 - \text{IndM}(\mathbf{G})$,
 $\mathbf{L} = 100 - \text{IndM}(\mathbf{L})$,
 $\mathbf{O} = 100 - \text{IndM}(\mathbf{O})$,
 $\mathbf{C} = 100 - \text{IndM}(\mathbf{C})$,

where **IndM** stands for ‘the individual score of mistakes’ on a 100-point scale. **IndM**’s formula:

$\text{IndM} = \text{IndN} * (\text{MaxM} / 100)$,

where **IndN** is the raw number of mistakes counted for each student; **MaxM** is the maximum raw number of mistakes found in the 27 students’ works, counted separately for each section (grammar (**G**), lexis (**L**), orthography (**O**), and contextual relevance (**C**)).

The oral examination scoring

The results were counted in Microsoft Excel. The integral score for the oral examination (**IntO**) was counted as follows (100-point scale):

$\text{IntO} = \text{IndP} * (\text{MaxP} / 100)$, where **IndP** stands for the raw individual number of points in ‘Comprehension,’ and **MaxP** is the maximum raw number of points gained in this category in the 27 videos.

For the ‘Comprehension’ raw score counting, a formula was used:

$\text{IndP} = (\text{Comp2} + \text{Comp1}) - (\text{Miscomp} + \text{NoAns})$

DATA ANALYSIS

Preliminary analysis

To check whether there is a difference in cognitive abilities between the groups, the participants took cognitive testing before studying Japanese. The cognitive battery was aimed at measuring non-verbal intelligence, emotional intelligence, executive functions, phoneme discrimination, verbal memory and metalinguistic abilities. It consisted of the Standard Raven’s Progressive Matrices or SRPM (Raven, 1936), the Emotional Intelligence Inventory (EmIn) (Lyusin, 2006), the Color Trails Test (CTT) (Tyburski et al., 2020), the phoneme discrimination task from the Russian Aphasia Test (Ivanova, 2021), the Russian version of Rey Auditory Verbal Learning Test or RAVLT (Rey, 1964) developed by the Centre of Language and Brain (HSE), the linguistic problem from the Russian book *Problems of Linguistic Olympiads 1965–1975* (Беликов et al., 1976). To check the difference between the groups, the Mann-Whitney U test was employed. The Mann-Whitney U test is used to check that for randomly selected values from the two groups, the probability of X>Y is equal to the probability of Y>X (Mann & Whitney, 1947).

Analysis strategy

To compare the difference of the results of the oral and written tests between the control and the experimental groups, Cohen’s d was used (Cohen, 1988). Cohen’s d is a standardized mean difference that measures effect size between the independent groups of the same size. Also, the Holm-Sidak multiple comparisons test was employed. The analysis was conducted using Google Colab with built-in IPython (Pérez & Granger, 2007) and its libraries ‘numpy,’ ‘pandas,’ ‘scipy,’ ‘stats,’ ‘statsmodels,’ ‘statsmodels,’ ‘matplotlib,’ ‘matplotlib.pyplot.’

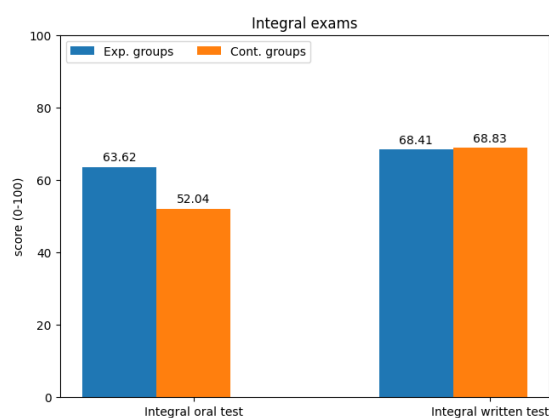
RESULTS

Both control and experimental groups' written test results had no statistically significant difference according to Cohen's d (mean res.: 68.41 for exp. and 68.83 for con. groups, effect size 0.02, p -value = 0.96). The oral test results were higher in the experimental group, the effect size being 0.61 (Cohen's d) with the p -value of 0.04 after the Holm-Sidak multiple comparisons test (Šidák, 1967). The mean result of experimental group is 63.62 (out of 100), while the control group gained 52.04 points on average.

Plots 1 and 2 show the distribution of the oral test results in the control and experimental groups. Table 1 gives the descriptive statistics.

Plot 1.

The distribution of the oral and written test results in the control and experimental groups.



Plot 2.

The distribution of oral test results in the control and experimental groups.

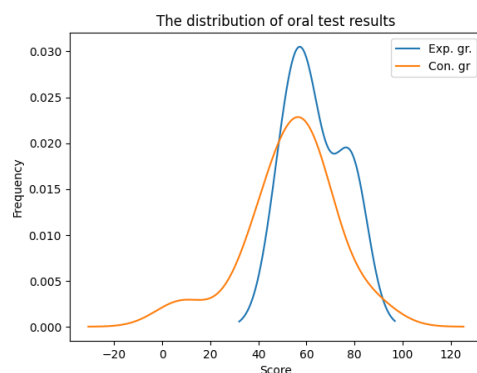


Table 1.

Descriptive statistics of the oral test results among the groups

Descriptives

	Exp.	Con.
Mean	66.2	53.4
Median	61.2	54.7
Standard deviation	14.8	18.5
IQR	22.0	14.0
Minimum	48.2	8.27
Maximum	100	86.3
25th percentile	55.8	48.2
50th percentile	61.2	54.7
75th percentile	77.9	62.2

DISCUSSION

This study aimed to address the limited empirical evidence on teaching communication skills by exploring the effectiveness of a structured approach based on the 4C/ID model. The research was guided by the following questions:

1. How can the 4C/ID model be adapted to enhance communicative competence in a foreign language setting?

2. Will there be a statistically significant difference in communicative competence between the control group, which interacts with native speakers without structured extralinguistic training, and the experimental group, which receives structured explanations of psychological and sociocultural aspects in addition to these interactions?
3. Can psychological and sociocultural training help bridge the performance gap between low-achievers and high-achievers in cross-cultural communication skills?
4. What is the relationship between communicative and linguistic competences?

ADAPTING THE 4C/ID MODEL TO ENHANCE COMMUNICATIVE COMPETENCE

To address the first research question, the study adapted the 4C/ID model to target the development of communicative competence by implementing the following measures: (1) defining the complex skill of communication based on research literature, (2) dividing the skill into verbal and non-verbal subskills (reflecting communicative and linguistic competences as defined by D. Hymes (1972b), and (3) designing whole-tasks and part-tasks with supportive and procedural information.

This structured approach proved effective, as indicated by an effect size of 0.61 (Cohen's *d*), suggesting that the 4C/ID model, originally created for complex learning, is well-suited for interdisciplinary studies involving linguistics, psychology, sociology, and ethnography. The model's focus on breaking down complex tasks into manageable components aligns with the need to systematically develop both linguistic and communicative skills.

These findings support previous research on the social dimension of language comprehension. Studies by Münster and Knoeferle (2018) and Borghi et al. (2019) emphasize the social aspect of language, while the *Words as Social Tools* framework and other studies by van Berkum (2019), Carminati and Knoeferle (2013), and Mayberry et al. (2009) highlight the role of social context in language processing. In the field of Second Language Acquisition, research by Hoff (2006) on language use in social contexts and by Busse and Krause (2016) on the effectiveness of problem-based approaches for intercultural competence aligns with the findings of this study.

COMPARING COMMUNICATIVE COMPETENCE BETWEEN EXPERIMENTAL AND CONTROL GROUPS

The second research question focused on whether a statistically significant difference in communicative competence would emerge between the experimental group, which received structured psychological and sociocultural training, and the control group, which did not.

The results indicated that communicative competence was indeed better developed in the experimental group, where specific verbal and non-verbal communication patterns were explicitly explained and practiced through role-playing in part tasks. While both groups had opportunities to interact with native speakers, students in the control group, lacking structured extralinguistic training, showed a limited grasp of Japanese communication style, behavior, and body language.

The histogram of oral test results further supports this finding, as the distribution of scores in the experimental group was more uniform than in the control group. This outcome suggests that structured supportive and procedural information, combined with part-tasks that gradually lead to whole-tasks, is essential for consistent results in communication skills training. In contrast, the "sink or swim" method, where students interact without explicit guidance, may not yield uniform outcomes. This aligns with findings from Kirschner et al. (2006), Bruton (2011, 2013), Taillefer (2013), and Roussel et al. (2017), who advocate for structured support in complex learning environments.

BRIDGING THE PERFORMANCE GAP BETWEEN LOW- AND HIGH-ACHIEVERS

The third research question investigated whether psychological and sociocultural training could help close the performance gap between low- and high-achievers in cross-cultural communication. Analysis of the oral test results revealed that communicative competence was more uniformly distributed in the experimental group, suggesting that explicit training in psychological and sociocultural aspects effectively supports low-achieving students. This structured approach enabled lower-performing students to catch up by providing them with the necessary tools to understand and apply cultural and communicative norms effectively.

In contrast, the control group, which received only interaction opportunities with native speakers, did not exhibit the same uniformity. This discrepancy may be attributed to the lack of supportive information and gradual progression in the control group's learning process. The 4C/ID model's emphasis on part-task learning with structured guidance appears essential for closing achievement gaps, as evidenced by similar research findings. Scholars such as Kirschner et al. (2006) and Bruton (2011, 2013) have shown that structured guidance is beneficial, especially for lower-achieving students, as it allows them to build confidence and competence incrementally.

RELATIONSHIP BETWEEN COMMUNICATIVE AND LINGUISTIC COMPETENCES

The test results further illustrate a distinction between linguistic and communicative competencies. While students in both groups achieved similar scores on the written test, indicating comparable linguistic competence, there was a notable difference in their oral test results. This suggests that linguistic competence alone does not equate to communicative competence, as the latter also involves extralinguistic factors from fields like cross-cultural psychology, sociology, and ethnography.

Non-verbal components of communication, such as body language and culturally appropriate expressions, require explicit explanation and practice through supportive information and part-tasks. Although communicative competence relies on a foundational level of linguistic knowledge, it also encompasses skills beyond language structure, supporting the hypothesis that linguistic and communicative competencies are related but distinct. The extent to which linguistic competence is necessary for effective communication remains a question for future research, as it is yet to be determined what minimal level of linguistic knowledge is required for different communication scenarios.

LIMITATIONS AND FUTURE RESEARCH

The current research has several limitations. First, the sample size may reduce the ability to extrapolate the findings onto a larger population. Increasing the number of students in the next experiments may strengthen the received results. Second, as the students were adults (age range 18-40), we can't generalize the conclusions for the education of children. Future research can be focused on the adaptation of the existing 4C/ID model for kids of different ages. Third, as the measures to teach communication were complex, future research should focus on singling out the linguistic and non-linguistic parameters and their role in language acquisition.

CONCLUSIONS

This study aimed to explore the adaptation of the 4C/ID model to enhance communicative competence in a foreign language setting, assess differences between groups with and without structured extralinguistic training, and investigate the impact of psychological and sociocultural training on bridging the performance gap between high- and low-achievers.

The results suggest that adapting the 4C/ID model to include both verbal and non-verbal subskills, with a structured progression from part-tasks to whole-tasks, is an effective method for fostering

communicative competence. This structured approach aligns with prior research in interdisciplinary studies, such as those by Münster and Knoeferle (2018) and Borghi et al. (2019), which emphasize the role of social factors in language comprehension.

The statistically significant improvement in the experimental group's communicative competence indicates the benefit of structured extralinguistic training. Furthermore, the findings suggest that structured support and explicit instruction can help bridge the performance gap between high- and low-achieving students. This result resonates with educational theories advocating for guided learning, as seen in the works of Kirschner et al. (2006), Bruton (2011, 2013), and others.

The interdisciplinary nature of the 4C/ID model, encompassing linguistics, psychology, sociology, and ethnography, contributed to its effectiveness in developing communicative competence. To provide further clarity, future studies could examine the specific contributions of each discipline within this framework. Additionally, a more in-depth analysis of how these findings relate to other scholarly work would strengthen the discussion.

Overall, this study underscores the importance of both linguistic and communicative competencies, while highlighting their distinctions and interdependencies. Future research could explore the minimal linguistic knowledge required for effective communication and investigate ways to further optimize communicative competence training in cross-cultural settings.

This research paper employed the holistic approach to second language acquisition to make the complex process of communication learning accessible to students. The 4C/ID model features Learning Tasks, Supportive Information, Procedural Information, and Part-Task Practice to promote a deep understanding of communication principles applicable to different social situations. It gives the students the opportunity to manage the lack of predictability of a dialogue in real-life settings. Also, the explicit instruction and a set of part-tasks on communication helped to make the results of the experimental group more uniform.

The findings may contribute to the literature on using a holistic approach to language teaching. As previous studies reported that there is a transfer paradox in implementing communication skills in real-life situations (Arakawa et al., 2023; Bartning et al., 2010; Saito, 2004; Shohamy, 2000), our goal was in trying to overcome it by using a 4C/ID model of complex learning. Our main idea was not only to give students learning tasks close to practical cases of foreign language use but also to supply them with necessary language material, algorithms of communication that foster mental schemas, and part-task practice to ensure that they are ready to achieve their speaking goals independently. Otherwise, the problem of the gap between high- and low-achievers may arise (Bruton, 2011, 2013; Kirschner et al., 2006; Roussel et al., 2017; Taillefer, 2013).

The study contributes to linguistics by defining and assessing the complex skill of communication, distinguishing linguistic and communicative competence, and using multimodal discourse analysis to evaluate language learning. It advances psychology by addressing cognitive and emotional aspects of communication, emphasizing psychological comfort and interpersonal dynamics in cross-cultural interactions. From a sociological perspective, it highlights the influence of social norms, group dynamics, and societal structures on language use. Additionally, it enriches ethnography by integrating culturally specific behaviors, body language, and conversational norms into teaching methodologies, emphasizing the role of cultural context in effective communication.

Our study has several implications for foreign language teaching and research. First, communication skills are better fostered when extralinguistic features are in the scope of the curriculum. It presupposes supportive information as well as regular practice of talking in different social situations with a focus on intercultural psychology. Second, explicit instruction of linguistic and non-linguistic parameters of SLA may be beneficial for making the results of education more uniform among students. Third, the distinction between linguistic and communicative competencies may play a role in future

research on language and communication. Finally, this 4C/ID model of language teaching can be applied to education for different purposes, including professional communication. The combination of the features of verbal and non-verbal behavior in learning tasks during education may increase mutual understanding in further intercultural situations.

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APPENDIX

Features of Teaching:

Though special emphasis on the development of communication skills and intercultural competence was placed only in the experimental group (Methodology A), several measures to ensure psychological comfort and anxiety-free interaction were implemented across all groups:

1. **Feedback:** Students did not receive marks but rather informative feedback (Kluger & DeNisi, 1996). The focus was on completing exercises and homework. If a part of the homework was missing or there was suspicion of using automatic translation programs, misunderstanding of the task, etc., the student was asked to redo/rewrite it.
 - 1.1. The teacher seldom interfered in the students' communication process, meaning that not every mistake was corrected on the spot. Instead, common mistakes were noted privately by the teacher and later addressed in the next homework or lesson warm-up.
 - 1.2. Students' questions about language learning challenges were answered from a scientific perspective (e.g., linguistics, psycholinguistics, SLA, psychology). For example, if students complained that they didn't recognize words they knew when pronounced by a native speaker, the teacher explained phoneme discrimination and how listening skills would improve through exercises designed to overcome this issue. Students were encouraged to ask questions, express doubts, and describe any difficulties (Hattie, 1999).

2. **Fostering Motivation:** Motivation was fostered by explaining that the goal is achievable for everyone (expectancy-value theory; Feather, 1982). Attendance, homework, and exercise quality were thoroughly monitored, revealing noticeable individual variance in language sub-skills. Thus, the explanation of individual variance was necessary from the outset. Students were taught that language (like many subjects) is a complex skill made up of subskills, and it is normal for anyone to have “strong and weak points” at any given time. Each student’s strong points were highlighted, and any problematic areas were used to create a personalized mission (Hattie, 1999). Progress in problematic areas was highly praised and often appreciated by the entire group.
3. **Supportive Environment:** Negative comments from peers were strictly prohibited, and violations could result in expulsion from the course. This measure ensured students felt safe asking questions and making mistakes. It was used as a foundation for reciprocal teaching (Palincsar & Brown, 1984; Rosenshine & Meister, 1993). To make all students feel comfortable, especially those uneasy with dialogues and public speaking, several techniques were employed, such as helping students when they forgot words or when conversations stalled. The goal was to create positive experiences to help students gain confidence in L2 interactions and overcome past communication difficulties.

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