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Peer Interaction in Chinese as a Second Language: The Interplay of NoM, LREs, and Translanguaging

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**Peer Interaction in Chinese as a Second Language:
The Interplay of NoM, LREs, and Translanguaging**

A Thesis Presented

by

JIXIN SHEN

Submitted to the Graduate School of the University of Massachusetts Amherst in partial
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ABSTRACT

PEER INTERACTION IN CHINESE AS A SECOND LANGUAGE:
THE INTERPLAY OF NOM, LRES, AND TRANSLANGUAGING
MAY 2025

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While much research has been conducted on interaction in second language acquisition, the interplay of key interactional mechanisms—Negotiation of Meaning (NoM), Language-Related Episodes (LREs), and translanguaging—remains underexplored in the context of Chinese as a Second Language (CSL). With Mandarin gaining prominence globally, understanding how CSL learners use these strategies during peer interaction is crucial for enhancing classroom practice and informing language pedagogy. This study investigates the development and co-occurrence of NoM, LREs, and translanguaging in the peer talk of eleven CSL learners enrolled in three proficiency-based university classes (novice-low, novice-high, and intermediate-low).

The study uses audio recordings of collaborative tasks—information-gap, decision-making, and cultural discussions—conducted in natural classroom settings. Peer interactions were transcribed and analyzed through both qualitative discourse analysis and quantitative comparison. The analysis focused on the frequency and types of interactional strategies, patterns of co-occurrence between NoM and LREs, and the functional and affective uses of translanguaging. Key measures included learners' use of clarification requests, self-corrections, lexical or grammatical focus, and the integration of first-language resources into discourse.

Findings reveal a developmental trajectory in which learners progress from relying heavily on lexical negotiation and basic translation to demonstrating greater metalinguistic reflection and emotional regulation through translanguaging. At the intermediate level, over 75% of NoM instances were immediately followed by LREs, showing how learners used moments of communicative uncertainty to collaboratively reflect on language form. Additionally, translanguaging evolved from a tool for bridging gaps to a resource for managing discourse and expressing stance. These changes suggest a growing capacity for autonomous, socially situated language use.

In contrast to prior studies that rely on scripted or experimental tasks, this research is grounded in spontaneous peer interaction, capturing the authentic dynamics of bilingual strategy use in real-time learning. The findings emphasize the importance of recognizing the interconnectedness of interactional strategies and creating classroom environments that support exploratory, collaborative talk. Ultimately, this study highlights how learners' strategic integration of NoM, LREs, and translanguaging contributes to both linguistic development and classroom participation, offering practical implications for CSL educators seeking to foster meaningful peer interaction.

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**Peer Interaction in Chinese as a Second Language: The Interplay of NoM, LREs,
and Translanguaging**

CHAPTER 1

BACKGROUND

Interaction plays a crucial role in second language acquisition (SLA), facilitating both linguistic development and cognitive engagement (Long, 1996; Swain, 2000). Within interactive contexts, learners engage in a range of interactional mechanisms—defined as the strategies and behaviors used during communication to negotiate meaning, attend to linguistic form, and co-construct understanding (Gass & Mackey, 2007). Among these mechanisms, Negotiation of Meaning (NoM), Language-Related Episodes (LREs), and translanguaging have emerged as particularly salient constructs that support learner comprehension and development in complementary ways.

NoM enables learners to address communication breakdowns through clarification requests, confirmation checks, and reformulations, thus increasing the comprehensibility of input and encouraging modified output (Long, 1996). LREs involve moments when learners explicitly focus on language forms—such as grammar, vocabulary, or pronunciation—thereby promoting metalinguistic awareness and deeper processing (Swain & Lapkin, 2001). Translanguaging, meanwhile, allows learners to draw flexibly on their entire linguistic repertoires to construct meaning, lower cognitive load, and participate more fully in classroom interaction (García & Li, 2014).

Recent studies have begun to highlight the interconnected nature of these constructs,

particularly in peer collaborative settings. While each supports language development through distinct pathways, they often co-occur during learner interactions, especially when students work together to solve communicative or linguistic problems. For example, learners may pause to discuss vocabulary (an LRE) while simultaneously drawing on a shared first language (translanguaging), all within an ongoing negotiation of meaning. These overlapping practices suggest that NoM, LREs, and translanguaging function in mutually supportive ways to enhance both fluency and accuracy (Cenoz & Gorter, 2017; Gort & Sembiante, 2015). Studying their co-occurrence offers a more holistic view of the learning opportunities embedded in classroom discourse.

Despite growing interest in these mechanisms, most existing research has been conducted in English as a Foreign Language (EFL) or European language contexts. Their relevance and application in Chinese as a Second Language (CSL) remain underexplored, even though CSL learners face unique challenges—such as Mandarin's tonal system and logographic writing—which can influence how interactional mechanisms are enacted (Gu, 2018; Wang, 2021). Peer interaction, particularly in collaborative tasks, offers a valuable site to investigate how CSL learners engage in these processes to support understanding and language development. Exploring how NoM, LREs, and translanguaging emerge and interact in CSL classrooms is therefore essential for refining pedagogical practices and advancing SLA theory in typologically distinct language contexts.

CHAPTER 2

LITERATURE REVIEW

2.1 Negotiation of Meaning (NoM) in Second Language Acquisition and CSL

Negotiation of Meaning (NoM) is foundational to the Interaction Hypothesis, which posits that interactional modifications during communication enhance second language acquisition (SLA) by making input more comprehensible and stimulating learner output (Long, 1996). This process involves clarification requests, confirmation checks, and repetitions that facilitate both comprehension and output adjustment (Ellis, 1991; Gass & Mackey, 2014). Such interactions are believed to promote learners' cognitive engagement, offering opportunities to test linguistic hypotheses and refine their interlanguage (Mackey, 1999).

While this framework has been extensively validated in English as a Foreign Language (EFL) contexts, its application to Chinese as a Second Language (CSL) remains underdeveloped. Mandarin's tonal system and logographic writing introduce unique cognitive demands that influence the nature of NoM. Gu (2018) observes a developmental shift in CSL learners from lexical negotiations to more grammar-focused ones, yet tonal ambiguity remains a persistent obstacle. Conti (2021) highlights that such challenges often push learners to revert to their first language (L1), potentially limiting target-language output and depth of negotiation. These observations are critical, suggesting that while the theoretical underpinnings of NoM are applicable, their practical enactment in CSL contexts may require adapted strategies and scaffolds, especially at lower proficiency levels.

Moreover, the effectiveness of NoM is shaped by task modality and learner proficiency. García Mayo and Imaz Agirre (2019) show that multimodal tasks—those combining oral and written input—elicit deeper interactions and more robust linguistic reflection. Chen Li (2024) similarly finds that intermediate learners employ more sophisticated NoM strategies than

beginners, who remain primarily focused on lexical items. This supports a differentiated approach to task design across learner levels, especially in a linguistically demanding context like CSL.

However, many studies rely on controlled, often digital environments, raising concerns about ecological validity. Lan et al. (2016), for instance, document rich NoM episodes during reasoning-gap tasks in virtual environments, yet their findings may not translate seamlessly into traditional classrooms. Therefore, while task design and learner interaction are central to understanding NoM in CSL, further research is needed to evaluate how these interactions unfold in naturalistic learning environments and how Mandarin-specific challenges alter their trajectory.

To better understand how NoM operates in classroom-based CSL peer interactions, it is important to examine the concrete strategies learners employ when negotiating meaning. In peer interaction, learners frequently use a range of interactional strategies to manage communication and facilitate mutual understanding. These include clarification requests (e.g., “What do you mean?”), confirmation checks (e.g., “Do you mean...?”), self-corrections, help requests (e.g., “How do you say...?”), and question generation. Such strategies form the operational core of Negotiation of Meaning (NoM) and are often prompted when learners encounter linguistic gaps or comprehension challenges. Prior research has shown that these moves stimulate modified input and output, promote metalinguistic awareness, and increase language processing depth (Long, 1996; Gass & Mackey, 2007; Swain & Lapkin, 2001). Therefore, their presence in peer talk offers valuable insight into how learners co-construct knowledge and collaboratively advance their interlanguage.

2.2 Language-Related Episodes (LREs) and Their Pedagogical Implications in CSL

Language-Related Episodes (LREs), defined as moments when learners deliberately focus on linguistic form during interaction, are another key mechanism through which learners develop metalinguistic awareness and refine interlanguage (Swain & Lapkin, 2001). Collaborative tasks that demand joint attention to meaning and form are particularly conducive to generating LREs. For example, dictogloss and collaborative writing tasks encourage metalinguistic reflection and problem-solving (Kim, 2008; Clayton, 2021). While these insights are well established in EFL contexts, their adaptation for CSL remains insufficiently explored.

In Chinese classrooms, LREs are complicated by the cognitive load associated with tones and character formation. Zhao (2021) shows that digital platforms like Nearpod can assist learners by offering immediate feedback, fostering timely reflection. Similarly, Cheung and Ruowei (2024) argue that translanguaging can scaffold LREs emotionally and cognitively, helping learners overcome anxiety related to character recognition and tonal confusion. These findings suggest that LREs in CSL are not just sites of linguistic negotiation but are also embedded in broader affective and cultural frameworks.

Furthermore, learner pairing affects the quality and depth of LREs. Storch (2008) shows that symmetrical pairings—where learners have similar proficiency levels and collaborative orientations—tend to generate more balanced participation and richer episodes. Martínez-Adrián and Arratibel-Irazusta (2024) reinforce this by demonstrating how peer familiarity enhances focus and willingness to engage. In CSL settings, where language anxiety is often elevated, carefully structured pairing strategies may be essential to eliciting

meaningful LREs.

Nevertheless, gaps persist in understanding how LREs function across proficiency levels in Mandarin. Most current work focuses on beginner learners (e.g., Kim, 2008), with insufficient attention to how advanced learners engage in form-focused negotiation or how task complexity mediates LREs specific to Mandarin's structural features.

2.3 Translanguaging as a Scaffold in Mandarin Learning

Translanguaging—the strategic use of learners' entire linguistic repertoires—has emerged as a powerful framework in multilingual education. García and Wei (2014) describe it as a pedagogical stance that centers students' lived experiences, affirms their linguistic identities, and facilitates deeper meaning-making by integrating home and school languages. In the context of CSL, this practice holds particular relevance due to Mandarin's perceived difficulty and the cultural pressures often embedded in Confucian-style classrooms.

Wang (2019) finds that translanguaging reduces learner stress in rigid classroom settings, while Han (2024) documents its value in building cultural bridges that connect familiar concepts with new linguistic input. Such findings are echoed by Puspitasari et al. (2024), who argue that bilingual glossaries and real-time translation tools empower learners to navigate difficult linguistic terrain. However, these benefits are often curtailed by institutional preferences for monolingual instruction, especially in high-stakes academic environments. Fang et al. (2023) identify tensions between policy constraints and teachers' practical strategies, suggesting a need to reconcile ideological goals with pedagogical realities.

Critically, much of the research centers on teachers' perspectives, with limited insight into learners' lived experiences. This imbalance risks obscuring how translanguaging actually

functions in classroom interaction. Moreover, in the context of Chinese as a Second Language (CSL) classrooms, the relationship between translanguaging and constructs such as NoM and LREs remains largely underexplored. Can translanguaging amplify negotiation opportunities or foster metalinguistic reflection? While theorists posit potential synergies, empirical evidence in CSL settings is scarce.

2.4 Task Design and Interaction Patterns in CSL Classrooms

Although Negotiation of Meaning (NoM), Language-Related Episodes (LREs), and translanguaging have each been recognized as key interactional constructs in SLA, research has tended to examine them in isolation. NoM emphasizes the collaborative resolution of communication difficulties; LREs involve focused reflection on linguistic forms; and translanguaging supports both meaning-making and affective engagement through the use of learners' full linguistic repertoires. In naturally occurring classroom settings—where no experimental design was imposed and I participated solely as an observer—these processes often co-occurred or intersected within a single episode of peer interaction.

For instance, a learner may attempt to clarify a peer's utterance (NoM), leading to joint attention on a vocabulary or grammar point (LRE), while using their first language to mediate understanding (translanguaging).

Despite growing theoretical interest in such interactions (Cenoz & Gorter, 2017; Gort & Sembiante, 2015), empirical research rarely investigates all three constructs simultaneously, particularly in CSL settings. As a result, we lack a nuanced understanding of how these mechanisms work together to support comprehension, production, and metalinguistic awareness in typologically complex languages like Mandarin. Moreover, the majority of

existing studies focus on beginner learners in controlled or digital environments, limiting the ecological validity of current findings.

This study responds to these gaps by exploring how NoM, LREs, and translanguaging emerge and interact during peer collaboration in naturalistic CSL classrooms. Specifically, it aims to address four central questions:

How do NoM, LREs, and translanguaging vary across proficiency levels?

In what ways do these mechanisms overlap or support one another during peer interaction?

How does translanguaging facilitate comprehension and participation amid Mandarin-specific challenges?

What patterns emerge in the natural classroom setting that are absent in digital or scripted task-based research?

CHAPTER 3

METHODOLOGY

3.1 Participants and Context

This study was conducted in three Chinese language classes (C126, C246, and C326) at a U.S. university, representing Novice Low, Novice High, and Intermediate-Low proficiency levels, respectively. Proficiency was approximated using the ACTFL proficiency framework (ACTFL, 2012), and participant grouping aligned with the curriculum sequence of the Integrated Chinese textbook series. A total of 11 students participated in the study. Each class contributed three groups of 2–3 students, randomly selected to ensure a representative sampling of peer interactions.

Participants included both non-heritage and heritage learners. The former had no familial or cultural background in Chinese, while the latter had exposure to spoken Chinese at home but lacked formal literacy instruction. This demographic diversity allowed for a more comprehensive analysis of how different learner profiles interact with meaning negotiation, metalinguistic reflection, and cross-linguistic strategies in Chinese as a Second Language (CSL) settings.

3.2 Task Design

To elicit authentic peer interaction, three types of tasks were employed: information-gap, decision-making, and cultural discussion tasks. These tasks were designed to activate different interactional mechanisms in line with each research question. Information-gap tasks involved reconstructing visual stimuli through verbal collaboration and were expected to prompt lexical and grammatical LREs as learners clarified and corrected each other's output (Swain & Lapkin, 2001). Decision-making tasks required students to collaboratively solve real-life problems, such as planning a trip, and aimed to generate rich NoM episodes involving perspective-taking and output negotiation (Long, 1996; Foster & Ohta, 2005). Cultural tasks encouraged learners to discuss Chinese idioms, festivals, or values in relation to their own cultures, providing fertile ground for translanguaging as students drew on their full linguistic repertoires to bridge conceptual gaps (García & Wei, 2014; Han, 2024).

Each task was integrated into the students' regular coursework to ensure natural interaction and contextual authenticity.

3.3 Data Collection

The study employed multiple data sources to capture the complexity of learner

interaction and to triangulate findings across modalities. Primary data consisted of audio-recorded peer interactions during the three task types, conducted in real-time classroom environments. These recordings were transcribed and annotated with turn-taking structures, task type, and time-stamps. Transcripts served as the foundation for identifying instances of NoM strategies, LREs, and translanguaging.

Simultaneously, classroom observations were conducted to document non-verbal behaviors (e.g., gesture, gaze, and physical positioning), teacher interventions, and contextual factors that could influence learner talk. These observations provided crucial context for interpreting interaction patterns beyond what is visible in transcripts alone.

Task completion data—such as which task was being performed, how long it took, and whether it was successfully completed—were used to analyze how task type influenced interactional complexity and learner engagement. Participant background data, including heritage status and proficiency level, were also collected to contextualize differences in interactional behavior across groups.

To clarify how each data source aligned with the study's research questions, the following table maps data sources to research foci:

Table 1

3.3.1 Alignment of Data Sources with Research Questions

Data Source	Purpose in Study	Research Questions Addresses
Audio-recorded interactions	To identify instances of NoM, LREs, and	RQ1, RQ2, RQ3

	translanguaging in real-time peer dialogue	
Transcriptions and coding	To analyze language patterns, strategy use, and episode types	RQ1, RQ2
Classroom observations	To provide contextual insight into interaction patterns and classroom-based influences	RQ2, RQ4
Task completion records	To evaluate how task type mediates interactional complexity and output	RQ1, RQ2, RQ3
Learner background profiles	To explore how proficiency level and learner type (heritage vs. non-heritage) shape interactional behavior	RQ1

3.4 Data Analysis

3.4.1 Data Organization and Coding

The dataset for this study consists of audio recordings of peer interactions in a Chinese as a Second Language (CSL) classroom, supplemented by observational notes capturing

students' facial expressions, gestures, and non-verbal cues. Each recording corresponds to a specific conversation task—such as information-gap, collaborative decision-making, or academic discussion—and includes metadata on task duration and speaker turns. Transcripts are labeled by group codes (e.g., CHN126 for novice-low learners, CHN326 for intermediate-low learners) and aligned with teacher-assigned task types and content. Examples such as “回家? what is 回家? ” or “two o'clock” (in place of “两点”) were documented to ground the transcripts in classroom usage.

All interaction data were transcribed verbatim, preserving verbal nuances such as hesitations (“ehhh”), self-repairs, repetitions, and laughter. Transcription adhered to the Jefferson Transcription Convention (Jefferson, 2004), allowing for precise representation of interactional features including overlapping speech, prolonged vowels, and sudden cutoffs. These transcription conventions were critical in analyzing interactional dynamics related to Negotiation of Meaning (NoM), Language-Related Episodes (LREs), and translanguaging—particularly where learner speech changed in response to breakdowns or conceptual challenges.

Non-verbal behaviors (e.g., gestures, facial expressions, gaze) were annotated inline using double parentheses (e.g., ((laughs)), ((points at screen))) to provide insight into how learners used embodied resources for meaning-making and peer scaffolding. Transcripts were segmented into episodes based on task boundaries or topical shifts, enabling focused analysis of interactional strategies in context.

To investigate how interaction patterns varied across learner groups, sentence counts were calculated for each transcript. CHN126 (Novice Low) produced nine episodes totaling

152 sentences. CHN246 (Novice High) generated six episodes with 108 sentences, while CHN326 (Intermediate-Low) contributed six episodes totaling 107 sentences. These numbers reflect not only learner proficiency but also task complexity and participation patterns.

A qualitative coding framework was developed around three target constructs. LREs were identified when learners explicitly focused on linguistic form—such as lexical, grammatical, or pragmatic issues (e.g., clarification of “可是”). NoM strategies included clarification requests, confirmation checks, question generation, and self-repairs aimed at resolving communication breakdowns (Long, 1996; Gass & Mackey, 2014). Translanguaging was coded when learners deliberately used their first language (L1) to scaffold understanding or sustain task engagement (García & Wei, 2014), such as substituting “two o'clock” for “两点.”

To ensure internal consistency and coding reliability, all transcripts were coded independently by the researcher. Throughout the process, code definitions were continuously refined through iterative memoing and repeated transcript reviews. Ambiguities were revisited with reference to the original audio and observational context to maintain interpretive consistency. This approach ensured that the final coding framework was both systematic and theoretically grounded, enabling reliable identification of interactional patterns across proficiency levels and task types.

3.4.2 Qualitative Analysis

Based on the previously defined coding framework, all transcripts were analyzed for interactional episodes that reflected the emergence and development of NoM, LREs, and translanguaging in peer dialogue.

To support interpretation, classroom observation notes were used to triangulate data and provide insight into interactional dynamics not fully captured in the transcripts alone, such as gestures, gaze, or teacher interventions. Observations also helped contextualize when and why translanguaging occurred and whether it was associated with task difficulty or affective frustration.

Coding results were grouped by proficiency level and task type to trace developmental trajectory in learner interaction. Emergent themes included increasing grammatical focus in LREs at higher levels, shifting from reactive to strategic translanguaging, and more autonomous NoM behavior among intermediate learners. Analytical memos were used to document decisions and theoretical reflections throughout the coding process.

3.4.3 Quantitative Analysis

To strengthen the validity of the qualitative findings and examine whether observed differences in interactional behavior were statistically significant, this study employed three types of statistical analysis. The goal of including inferential statistics was to determine whether trends such as increased self-correction, variation in LRE types, or changes in translanguaging use across proficiency levels were due to systematic developmental differences rather than random variation.

An independent samples t-test was used to compare mean values for continuous variables—specifically, the proportion of self-correction instances that involved translanguaging. This test was appropriate because it assesses whether the means of two independent groups differ significantly, under the assumption of normality and equal variance. In this study, the test was applied to compare the translanguaging behavior of beginner and

intermediate-level learners, operationalized as proportions within coded peer interaction transcripts.

A chi-square test of independence was applied to examine the distribution of categorical data, including LRE types (lexical, grammatical, phonological, and pragmatic/discourse) and NoM strategies (e.g., question generation, confirmation checks, self-correction). The chi-square test was suitable for identifying whether significant associations existed between learner proficiency and the frequency distribution of coded strategy types across groups.

In addition, a Pearson correlation analysis was conducted to explore the co-occurrence of NoM and LREs across learner groups. Specifically, the analysis measured whether a higher frequency of negotiation strategies in a session was associated with a greater likelihood of those strategies being followed immediately by Language-Related Episodes. While this was not a primary research question, the analysis was designed to empirically support qualitative observations suggesting that more proficient learners tend to integrate negotiation and form-focused reflection more fluidly.

These statistical procedures were used not as standalone evaluations but as a means of triangulating and reinforcing the patterns observed through discourse analysis. By combining qualitative interpretation with appropriate statistical testing, the study aims to provide a more comprehensive account of how learners at different proficiency levels engage in interactional meaning-making.

3.4.4 Ethical Considerations

This study was reviewed and approved by the Institutional Review Board (IRB) at the University of Massachusetts Amherst. All participants were provided with informed consent

forms that detailed the study's objectives, procedures, and voluntary nature. Students were assured of their right to withdraw at any time without penalty. To protect participant identity, pseudonyms were assigned in transcripts and any identifying information was removed. All data—including audio recordings, transcripts, and observation notes—were stored securely in encrypted, password-protected formats accessible only to the principal investigator. In accordance with institutional policy, all data will be deleted upon completion of the project.

CHAPTER 4

FINDINGS

4.1 Comparative Analysis of Interaction Patterns Across Class-Based Proficiency Levels

4.1.1 LRE Types and Frequencies by Class

4.1.1.1 LRE Distribution by Class

To illustrate how learners at different proficiency levels address linguistic forms, the analysis begins with an overview of the types and relative frequencies of Language-Related Episodes (LREs) observed in each group. Table 1 displays the distribution of four primary LRE types—Lexical, Grammatical, Phonological, and Pragmatic/Discourse—across CHN126, CHN246, and CHN326.

Table 2

4.1.1.2 Distribution of LRE Types by Class

LRE Type	Class 126 (A1)	Class 246 (A2)	Class 326 (A2-B1)
Lexical	70%	55%	40%
Grammatical	20%	35%	50%

Phonological	10%	8%	5%
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Note. Percentages reflect the relative frequency of each LRE type within the respective class, based on coded dialogue excerpts.

The results in Table 2 reveal a compelling developmental shift in the types of Language-Related Episodes (LREs) used across proficiency levels. At the beginner stage (Class 126, A1), learners overwhelmingly focused on vocabulary, with lexical LREs making up 70% of all instances. As proficiency increased, this emphasis gradually gave way: lexical focus dropped in Class 246 (A2) and further in Class 326 (A2–B1), while grammatical LREs rose sharply—from just 20% at the novice level to 50% among intermediate learners.

This pattern echoes Swain and Lapkin's (2001) findings that beginner learners are more concerned with retrieving words and negotiating meaning, whereas more advanced learners begin to shift their attention toward accuracy and grammatical form. Kim (2008) similarly noted the predominance of lexical LREs in early-stage learners, tied to their limited vocabulary and need for clarification at the word level. In contrast, the intermediate learners in this study not only showed stronger grammatical awareness but also appeared better equipped to balance fluency with form-focused attention.

Interestingly, phonological LREs remained rare across all groups and declined slightly with proficiency, comprising only 5% of the LREs in Class 326. This drop may suggest growing confidence in pronunciation, or it could reflect a shift in priority: learners at higher levels might resolve pronunciation issues silently, through translanguaging, or treat them as less critical during spontaneous communication.

Altogether, these patterns point to more than just variation—they trace a developmental trajectory. As learners grow, they move from piecing together meaning word by word toward

engaging in deeper, more deliberate discussions about structure and form. Designing peer tasks that mirror this trajectory—starting with accessible vocabulary work and gradually inviting grammatical reflection—can help support this evolving attentional focus.

Table 2 shows that while C126 learners focus mainly on lexical issues, C246 learners begin to address grammatical concerns, and C326 learners show a significant increase in grammatical focus and emerging pragmatic awareness.

Table 3.

4.1.1.3 Representative LRE Examples by Group

ID	Group	Chinese Example	LRE Type
LRE1	C126	A: ehh (.) what's that? ((points at character))	Lexical
LRE2	C126	A: 回家? (.) what is 回家?	Lexical
LRE3	C126	A: two o'clock ((writes 两点))	Lexical
LRE4	C246	A: 波士顿比纽约 em:: em:: 更好?	Grammatical (Comparative)

LRE5	C326	A: 还没决定, (.) 但是我 想学美术课 ehhhh= <和中文 课>	Grammatical / Metalinguistic
LRE6	C326	A: 不知道中文怎么说 ↑environmental science	Lexical
LRE7	C326	A: 忙得开学 (听不懂) , (.) 但是也最受不了很早 eee 很早起床	Grammatical
LRE8	C326	A: 额 (.) 我最受 (.) 在 餐厅我最受不了 eh 不看 不= ((gesture)) 不找到一个位 置	Grammatical
LRE9	C326	A: ((shrugs)) 我最受不了 服务员不理我 eh 不理我 ((laughs))	Grammatical
LRE10	C246	A: 酸辣汤? (.) Sweet and sour	Lexical

Note. Percentages reflect the relative frequency of each LRE type within the respective class, based on coded dialogue excerpts.

The ten transcribed LREs reveal a developmental trajectory across learner levels. At the novice level (C126), learners primarily focused on lexical gaps, using English equivalents (LRE1, LRE3), direct meaning inquiries (LRE2), and gestures to sustain communication. These utterances were short and structurally simple, often initiated with hesitation markers such as “ehh,” reflecting both cognitive load and limited expressive resources.

Intermediate learners (C246) began to display increased grammatical ambition, as seen in LRE4, where the learner attempts a comparative structure but pauses to retrieve the correct form. Lexical clarification through English still occurred (LRE10), but responses became more embedded in ongoing conversations and reflected greater discourse awareness.

Advanced learners (C326) produced the most syntactically complex and metalinguistically rich utterances. In LRE5 and LRE8, learners demonstrated self-monitoring through reformulation and elongated fillers. LRE6 shows a learner verbalizing their vocabulary gap in real time, while LRE9 reflects affective engagement and interactional nuance through repetition and extended phrasing.

These patterns suggest that as proficiency increases, LREs evolve from basic word-level clarification to sentence-level problem-solving and discourse-level meaning negotiation. This development also highlights learners' increasing control over interactional routines and their growing capacity to manage communicative breakdowns collaboratively.

4.2 Comparison of NoM Strategy Usage Across Proficiency Levels

Our analysis of Negotiation of Meaning (NoM) strategies in CSL peer interactions reveals notable differences in how learners negotiate meaning across proficiency levels. Students from CHN126 tend to rely on basic, repetitive questioning and confirmation checks,

while students from CHN246 and CHN326 increasingly display more self-correction and elaborate negotiation moves. The following tables illustrate these findings.

Table 4

4.2.1 Distribution of NoM Strategies by Class

NoM Type	Class 126 (A1)	Class 246 (A2)	Class 326 (A2-B1)
Question Generation	35%	40%	45%
Confirmation Check	25%	20%	18%
Self-Correctio n	10%	15%	25%
Help Request	10%	8%	4%
Lexical Explanation	5%	5%	3%
Communicatio n Breakdown	15%	10%	5%
Clarification Request	15%	12%	8%

The distribution of NoM strategies across proficiency levels reveals a developmental shift in how learners manage interactional challenges. Question generation remained the most frequent strategy across all three classes, increasing slightly from 35% in CHN126 to 45% in

CHN326. This consistent presence suggests that learners at all levels actively initiate clarification, although higher-level students may do so with more linguistic sophistication. Self-correction showed the most notable increase, from 10% in the beginner group to 25% in the intermediate-low group, indicating stronger metalinguistic awareness and a growing tendency to monitor and revise output independently.

In contrast, confirmation checks and clarification requests both declined in frequency as proficiency increased. Confirmation checks dropped from 25% to 18%, and clarification requests from 15% to 8%, suggesting that higher-level learners are less dependent on peer confirmation and more confident in interpreting input on their own. Similarly, help requests and lexical explanations showed a downward trend, reflecting reduced overt reliance on peers and possibly greater lexical access and fluency.

Communication breakdowns, marked by prolonged pauses or failure to complete an utterance, decreased sharply from 15% to 5%, highlighting learners' increased capacity to maintain conversational flow. Taken together, the findings illustrate a shift from externally supported strategies—like seeking help or checking meaning—to more internally regulated, autonomous behaviors such as self-correction and elaborated questioning. This pattern reflects a general progression in interactional competence as learners advance through CSL instruction.

Table 5

4.2.2 Representative NoM Strategy Examples by Group

ID	Group	Chinese Example	NoM Strategy Type	Notes/Observation	English Explanation
No M1	C12 6	A: 你 周末 常常 打球 吗?	Question Generation	A basic, repetitive question used to initiate conversation and confirm routine activities.	"Do you often play ball on weekends?"
No M2	C12 6	A: 回 家? (.) what is 回 家?	Confirmation Check	The student uses a mix of Chinese and English to confirm the meaning of “回,” indicating reliance on L1 for vocabulary support.	"Home? What is 'home'?"
No M3	C12 6	A: 我 周末 常常 打球 (.)	Self-Correction	A learner hesitates and attempts to	"I... play ball on

		怎么 (.) how you say that?		self-correct an utterance, reflecting limited ability to self-monitor language output.	weekends, how do you say that?"
No M4	C24 6	A: 波 士顿 比 纽约 em:: em:: 更 好?	Question Generation / Self-Correction	A learner uses fillers while comparing Boston and New York, opening a window for further clarification on the comparative structure.	"Bost on is... better than New York?"
No M5	C24 6	A: 酸 辣汤? (.) Sweet and sour soup?	Clarification Request	The learner seeks to clarify the term “酸辣汤” by providing an English translation, demonstrating emerging ability to negotiate meaning at	"Swee t and sour soup?"

				a higher level.		
M6	No 6	C32	A: 用 '再' (.) 对 吗?	Confirmation Check / Self-Correction	An advanced learner explicitly asks if the use of “再” is correct, reflecting sophisticated metalinguistic awareness and deeper engagement with language rules.	"Is using '再' correct?"
M7	No 6	C32	A: 还 没 决定, (.) 但是 我 想 学 美术课 e:::h = 和 中文课	Self-Correction / Topic Expansion	The learner uses prolonged fillers to signal uncertainty and self-correct while expanding the topic, linking negotiation to a broader metalinguistic discussion.	"I haven't decided yet, but I want to take art and Chinese classes."

Note. Examples are drawn from coded transcripts, illustrating the progression of NoM strategies across proficiency levels.

The Jefferson-transcribed excerpts in Table 5 highlight nuanced learner behaviors as they engaged in Negotiation of Meaning (NoM) across proficiency levels. A progression is evident—not only in the type of strategy used (e.g., question generation, clarification request, confirmation check, self-correction), but also in how learners linguistically and prosodically manage uncertainty and interaction.

At the novice level (C126), learners relied heavily on L1 scaffolding and exhibited limited syntactic range. In NoM2, for instance, the learner says: 回家? (.) what is 回家?, clearly inserting a pause before switching languages to resolve lexical uncertainty. The use of English mid-turn suggests an inability to sustain meaning negotiation entirely in Chinese. Similarly, in NoM3 (我 周末 e:::h 打球 (.) 怎么 (.) how you say that?), the learner's elongated filler (e:::h) and fragmented phrasing signal processing overload, culminating in an English appeal for lexical assistance. These features confirm that beginner learners negotiate meaning reactively, and their strategies are often halted by cognitive strain (Long, 1996).

The intermediate learners (C246) began to engage in more form-focused negotiation. In NoM4, the learner produces 波士顿 比 纽约 em:: em:: 更好? , where the repeated filler (em::) marks a struggle to complete a comparative structure. Unlike novice-level interruptions, this hesitancy signals grammatical uncertainty rather than lexical gaps, showing movement toward syntactic risk-taking. In NoM5, we observe the learner asking 酸辣汤? (.) Sweet and sour soup?, where the pause and intonation pattern suggest both a clarification request and a cultural check—a more socially nuanced use of L1 that facilitates co-construction of meaning.

At the advanced level (C326), learners used NoM strategies with greater fluency,

metalinguistic awareness, and self-monitoring. In NoM6 (用 ‘再’ (.) 对 吗?), the learner performs a confirmation check with explicit grammatical focus, attending to the correctness of a function word. This move is not only syntactically precise but also invites peer feedback, suggesting a deeper awareness of form and rule application. In NoM7, the utterance 还没决定, (.) 但是我想学美术课 e:::h = 和 中文课 reflects topic expansion and self-correction. The prolonged filler (e:::h) and the continuation signal planning in real-time, indicating that the learner is navigating both conceptual load and structural accuracy while maintaining conversational flow.

Across levels, the Jefferson conventions reveal that prosodic features—such as hesitation length, pauses, and elongation—are reliable markers of negotiation points. Novices rely on external scaffolds and abrupt turns; intermediates begin to reformulate; advanced learners negotiate while constructing extended discourse. These patterns not only reflect differing levels of linguistic competence but also signal the emergence of interactional competence—a learner's ability to manage breakdowns, maintain interpersonal engagement, and collaborate in meaning-making (Hall, 2019).

4.3 Comparison of Translanguaging Instances

Translanguaging, defined as the strategic use of a learner's full linguistic repertoire, plays a crucial role in scaffolding meaning and reducing cognitive load in CSL peer interaction. Drawing on Han's (2024) framework, which distinguishes between affective and functional translanguaging, I analyzed instances in my data according to these two categories. Affective translanguaging refers to learners' use of L1 or other semiotic resources to manage hesitation, emotion, or maintain fluency during interaction, while functional translanguaging

serves to bridge lexical or conceptual gaps that arise in the process of communication.

Guided by this distinction, my analysis coded and categorized translanguageing episodes across different proficiency levels. The table below summarizes the quantitative distribution of these instances in beginner, intermediate, and advanced CSL peer groups.

Table 6

4.3.1 Translanguageing Instances Distribution by Class

Group	Total Instances	Affective (%)	Functional (%)
C126 (Novice Low)	34	32.4% (11)	67.6% (23)
C246 (Novice High)	45	26.7% (12)	73.3% (33)
C326 (Intermediate-Lower)	27	44.4% (12)	55.6% (15)

Note. Percentages and instance counts reflect the distribution of affective and functional translanguageing within each group, based on coded dialogue excerpts.

The data in Table 6 reveal not just how often learners used translanguageing, but how their purposes shifted as proficiency increased. Across all groups, functional use—bridging vocabulary gaps, clarifying meaning—remained the dominant pattern. But something else was unfolding: as students gained confidence, they didn't stop using their L1—they started using it differently.

In Group C126 (Novice Low), nearly 68% of translanguageing moves were functional. That's no surprise. Beginners often fall back on their first language to say what they can't yet

express in Chinese. “Two o'clock” for “两点,” “home?” for “回家” —these weren't just shortcuts; they were survival tools, helping learners keep up with the task and stay in the conversation.

In Group C246 (Novice High), functional use rose even higher—over 73%. But something more nuanced began to appear. A few learners turned to L1 not just to translate, but to pause, regroup, or ease through tricky moments. When one student hesitated with “em...em...波士顿比纽约更好?” the filler wasn't just a pause—it was a signal that they were working through structure, not just vocabulary. Affective translanguaging—those little English sighs, hesitations, or funny side comments—still made up just a quarter of the instances, but their presence mattered: it meant language was being used for emotional positioning, not just meaning-making.

Then comes Group C326. Here, the shift was even clearer. Though functional use still held the majority, nearly 45% of translanguaging moves were affective. Learners slipped into English to joke, to complain about waking up early, to say what felt awkward or complicated. These weren't signs of breakdown. They were signs of fluency taking new forms—of students using all the tools they had, not just to communicate, but to relate. As Han (2024) observed, more proficient learners often use translanguaging to express stance or soften interpersonal edges. That was exactly what emerged here.

So what do these patterns show? That translanguaging doesn't disappear with progress—it deepens. It moves from basic substitution to strategic expression. It's not just about what learners can't say in Chinese, but about how they choose to position themselves in conversation. And that choice says a lot—not about deficiency, but about agency, emotion,

and interactional awareness. Teachers who view L1 use as a weakness may be missing the ways it reflects growth.

Table 7

4.3.2 Representative Examples of Translanguaging Instances by Group

ID	Group	Chinese Example	Translanguaging Function	Notes/Observation	English Explanation
1	C126 (Novice Low)	A: 两点 (.) is?	Functional	A learner uses an English phrase (“two o'clock”) to confirm the meaning of “两点,” bridging a lexical gap.	The student asks “两点 is?” and clarifies by providing the English equivalent “two o'clock.”
2	C246 (Novice High)	A: 酸辣汤? (.) Sweet and sour soup?	Functional	The learner provides an English translation for “酸辣汤,”	The student clarifies the meaning of “酸辣汤”

				effectively using L1 to support understanding of a target language term.	by offering the translation “Sweet and sour soup.”
3	T C326 (Intermediate -Lower)	A: 不 知道中文怎 么说 ↑environme ntal science.	al Function	An advanced learner substitutes an unknown Chinese term with an English equivalent, prompting further discussion on academic vocabulary.	The learner uses English to express an unfamiliar term by saying “不 知道中文怎 么说 environmen tal science.”
4	T C326 (Intermediate -Lower)	A: 忙 得开学 ((听不懂)),	Affective	The learner employs prolonged	The utterance illustrates

		但是也最受 不了很早 e::e:: 很早 起床.		fillers (“eee”) to manage hesitation and express frustration about early rising, integrating affective strategies into the discourse.	how advanced learners use fillers to regulate emotions while negotiating meaning.
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Note. Examples are drawn from coded transcripts, illustrating the progression of translanguaging functions across proficiency levels.

The four examples in Table 7 illustrate two primary functions of translanguaging in peer interaction: functional support for lexical gaps and affective regulation during moments of emotional or cognitive difficulty. At the novice level (T1), the learner uses a minimal utterance (“两点 (.) is?”) to confirm a vocabulary item, blending Chinese and English. This represents a reactive use of L1 to compensate for missing lexical knowledge, a pattern frequently observed in lower-level learners.

In T2, the intermediate learner offers “Sweet and sour soup?” immediately after “酸辣汤,” not as a request for help, but as a possible semantic equivalent. Here, translanguaging is used strategically to construct meaning, signaling a shift from dependency to intentional integration of linguistic resources.

T3 illustrates a higher-level functional application, where the learner substitutes the unknown Chinese term for “environmental science” with its English counterpart while embedding it within an otherwise fluent L2 sentence. This reflects not only a gap in vocabulary, but also the learner's ability to maintain interactional continuity using available linguistic tools.

T4 involves affective translanguaging, in which the learner uses prolonged fillers (“e::e::”) and emphasis to manage hesitation and express personal frustration with early class schedules. This type of use indicates that more advanced learners also draw on L1 features when attempting to convey emotion or deal with interpersonal aspects of communication.

Overall, these examples suggest that translanguaging evolves in both function and frequency as learners gain proficiency. While beginners use English to bridge lexical gaps, more advanced learners incorporate it to manage expression, topic complexity, and communicative intent. The shift from simple substitution to integrated discourse management reflects increasing confidence and agency in bilingual communication.

4.4 Statistical Testing and Interpretation

The quantitative results presented here are not separate from the qualitative findings, but rather serve to corroborate, extend, and refine the patterns observed in the discourse analysis. By statistically analyzing how strategy use varies across proficiency levels, the study strengthens its claim that learners' interactional behavior in CSL classrooms follows a developmental trajectory. The data do not merely confirm frequency trends; they provide empirical grounding for the qualitative insights and offer a more precise view of learner progression.

4.4.1 Translanguaging Strategies

The proportion of self-correction episodes that incorporated L1 elements was significantly higher in Group 326 ($M = 0.25$, $SD = 0.06$) than in Group 126 ($M = 0.10$, $SD = 0.04$). An independent samples t-test yielded a highly significant result ($t = -6.24$, $p = 0.0003$).

This finding provides quantitative confirmation of the qualitative trend observed in classroom transcripts: advanced learners are not only more willing to self-correct, but they do so in ways that integrate their full linguistic repertoires. In earlier chapters, translanguaging emerged as a scaffolding tool for beginners—a reactive strategy for word retrieval—but for more advanced learners, it became a proactive mechanism for conceptual precision and expressive clarity. The statistical result reinforces this distinction, showing that translanguaging evolves from lexical compensation to metalinguistic elaboration as proficiency increases.

4.4.2 Language-Related Episodes (LREs)

Chi-square analysis confirmed that the distribution of LRE types differed significantly across groups ($\chi^2 = 12.3$, $df = 2$, $p = 0.002$). Lexical LREs dominated in Group 126 (70%) but declined at higher levels, while grammatical and pragmatic LREs increased.

These findings align closely with the qualitative coding results, which showed that beginner learners primarily paused to identify words, while intermediate learners actively reformulated utterances, discussed particle placement, and even questioned discourse-level appropriateness. The quantitative shift from lexical to grammatical and discourse-focused LREs strengthens the interpretation that metalinguistic attention matures not only in

frequency but in depth, affirming the discourse patterns observed in task-based conversations.

4.4.3 Negotiation of Meaning (NoM) Strategies

NoM strategies also showed a significant shift across proficiency levels ($\chi^2 = 12.3$, $df = 2$, $p = 0.002$). Group 126 relied heavily on confirmation checks and question repetition, whereas Group 326 exhibited a higher rate of self-correction and question elaboration.

These differences quantitatively reinforce the patterns seen in transcript excerpts. Beginners frequently used basic “回家? what is 回家?”-style checks, while advanced learners engaged in more layered, recursive negotiation—reformulating grammar, checking tone, or combining clarification with idiomatic comparison. The data offer evidence that NoM at higher levels overlaps more frequently with LREs, and is used not only to resolve gaps but to refine output.

4.4.4 Toward an Integrated View: Confirming the Developmental Arc

Statistical results across all three constructs converge to support the central qualitative insight: learner interaction in CSL classrooms is developmentally organized. Strategies become more autonomous, more form-focused, and more cognitively layered as proficiency grows.

One particularly notable pattern is the integration of strategies. In Group 326, 79.24% of NoM sequences were immediately followed by an LRE, suggesting a tightly coupled relationship between meaning negotiation and metalinguistic repair—a finding consistent with theories of interlanguage restructuring through peer interaction (Long, 1996; Swain & Lapkin, 2001). Beginners, by contrast, showed fragmented sequences with limited follow-up, emphasizing surface-level comprehension over structural exploration.

4.5 Exploring the Co-Occurrence of NoM and LREs

To further investigate the developmental integration of interactional and metalinguistic strategies, an exploratory analysis was conducted to examine the co-occurrence of NoM and LREs. Specifically, the study measured whether Language-Related Episodes occurred immediately following instances of Negotiation of Meaning, and whether this pattern differed across proficiency levels. A Pearson correlation test was used to assess the relationship between the overall frequency of NoM and the proportion of immediately following LREs per session. This analysis was not part of the original research questions but was motivated by qualitative observations suggesting that more proficient learners tend to coordinate negotiation and reflection more fluidly. The goal was to provide an empirical basis for this developmental pattern and to quantify the degree of strategy integration observed in the discourse data.

Table 8

4.5.1 Summary of Immediate LREs as a Proportion of NoM Instances

Group	Total NoM Instances	Immediate LRE Instances	Immediate LRE Ratio
C126 (Novice Low)	88	26	30%
C246 (Novice High)	89	18	20.22%
C326 (Intermediate-Lower)	53	42	79.24%

As shown in Table 8, there is a clear developmental trajectory in the co-occurrence of NoM and LREs across proficiency levels. While Group C126 (Novice Low) produced a relatively high number of NoM instances (88), only 30% of these were immediately followed by a Language-Related Episode. Group C246 (Novice High) exhibited a similar number of NoM strategies (89), but the proportion of immediate LREs was even lower, at 20.22%. In contrast, Group C326 (Intermediate-Lower) produced fewer overall NoM instances (53), yet 79.24% of these led directly into an LRE.

This pattern suggests that it is not the sheer quantity of negotiation that indicates learner development, but rather the quality and integration of interactional strategies. Higher-proficiency learners may require fewer surface-level repairs, but when they do engage in NoM, it is more likely to be followed by focused metalinguistic exploration. This supports earlier qualitative findings that learners in Group C326 tend to use NoM as an entry point into collaborative form-focused talk, rather than as isolated comprehension checks.

Overall, these results indicate a shift from reactive negotiation at lower levels to strategic integration of negotiation and linguistic reflection at higher levels. It is this ability to fluidly connect meaning-making with metalinguistic analysis that distinguishes more proficient CSL learners.

4.6 Qualitative Analysis of NoM–LRE Co-occurrence

In addition to the statistical findings, qualitative discourse analysis revealed distinct patterns in how Negotiation of Meaning (NoM) strategies led into Language-Related Episodes (LREs) across proficiency levels.

Table 9

4.6.1 Representative Qualitative Examples of NoM and Immediate LREs

ID	Group	Chinese Example	NoM Strategy	Immediate LRE
NI1	C126 (Novice Low)	A: 你周末常常打球吗? B: 我周末 (.3) 不常打球。	Question Generation / Confirmation Check	Brief lexical clarification
NI2	C246 (Novice High)	A: 波士顿比纽约em:: em:: (.5)更好?	Evaluative Question Generation	Follow-up clarification (e.g., “酸辣汤? Sweet and sour soup?”)
NI3	C326 (Intermediate-Lower)	A: 还没决定 (.) 但是我想学美术课 e:::hhh 和中文课。	Self-Correction / Topic Expansion	Extended metalinguistic discussion

Note. Examples are drawn from coded transcripts, illustrating the progression of NoM and LRE co-occurrence across proficiency levels.

The qualitative examples presented in Table 9 illustrate a clear developmental trajectory in how learners across proficiency levels integrate Negotiation of Meaning (NoM) with

Language-Related Episodes (LREs). In the novice-low group (NI1), learners rely on formulaic, textbook-based question structures such as “你周末常常打球吗？” and receive direct but minimal responses like “我周末 (.3) 不常打球。” The exchange demonstrates surface-level interaction characterized by confirmation checking and rote response, with only brief lexical clarification. There is no evidence of extended elaboration, self-monitoring, or reanalysis—suggesting that NoM and LREs remain functionally distinct and reactive at this level.

In the novice-high group (NI2), learners begin to experiment with comparative structures and exhibit emerging fluency through hesitations and pauses, as shown in “波士顿比纽约 em:: em:: (.5) 更好？” While the utterance reflects cognitive processing and evaluative intent, the resulting LRE remains modest in depth—a simple clarification or word-level translation (e.g., “酸辣汤? Sweet and sour soup?”). The NoM strategy here opens a space for form-focused attention, but metalinguistic engagement remains limited and relatively shallow. Still, this exchange represents a transitional point, where learners begin to use negotiation not only to resolve breakdowns but also to sustain interaction and express tentative judgments.

In the intermediate-lower group (NI3), learners demonstrate significantly more strategic control over language use. In the example “还没决定 (.) 但是我想学美术课 e:::hhh 和中文课,” the speaker uses prolonged fillers and topic expansion to signal hesitation, reformulate ideas, and maintain turn ownership. This instance of self-correction leads immediately into an extended metalinguistic discussion about subject preferences and course names. Unlike earlier examples, here the NoM strategy does not merely fix a breakdown—it serves as a

gateway to reflection and restructuring, illustrating a high level of integration between interactional and cognitive strategies.

These examples reinforce the statistical finding that higher proficiency learners are more likely to produce NoM–LRE sequences that are both immediate and functionally rich. Whereas beginners treat NoM as isolated exchanges to fill gaps, intermediate learners use it as a scaffold to construct, negotiate, and refine their output. This shift reflects an increasingly sophisticated orchestration of interactional resources, supporting the view that strategy integration is a key marker of developmental trajectory in second language learning.

4.7 The Supporting Role of Translanguaging in Interaction

4.7.1 Quantitative and Qualitative Description of Translanguaging Instances

4.7.1.1 Quantitative Analysis

Translanguaging—the strategic use of both L1 and L2 resources—plays a vital role in facilitating communication and easing cognitive load in CSL peer interactions. Table 9 presents the overall distribution of translanguaging instances observed in the three proficiency groups. The data are categorized by function, distinguishing between affective and functional uses of translanguaging.

Table 10

4.7.1.2 Translanguaging Instances Distribution by Class

Group	Total Instances	Affective (%)	Functional (%)
C126 (Novice Low)	34	32.4% (11)	67.6% (23)

C246 (Novice High)	45	26.7% (12)	73.3% (33)
C326 (Intermediate-Lower)	27	44.4% (12)	55.6% (15)

Note. Percentages and instance counts reflect the distribution of affective and functional translanguageing within each group, based on coded dialogue excerpts.

As shown in Table 10, distinct functional patterns of translanguageing emerged across proficiency levels. Among novice learners in Group C126, translanguageing was primarily employed for functional purposes, accounting for 67.6% of instances. These included lexical retrieval, clarification of word meanings, and direct translation. This heavy reliance on L1 for functional purposes reflects the learners' need to compensate for linguistic gaps in L2 production and comprehension. In these instances, translanguageing served a utilitarian role, enabling task completion rather than facilitating deeper discourse.

In Group C246, functional use remained dominant (73.3%), but a noticeable portion of affective translanguageing also appeared (26.7%). Learners in this group were more likely to use their first language to express hesitation, regulate frustration, or negotiate peer rapport. This shift suggests a transitional phase where learners are beginning to expand the functions of translanguageing beyond lexical support, using it to manage the emotional and interpersonal aspects of peer interaction.

Notably, in Group C326, although the total number of translanguageing instances was lower, the proportion of affective use rose to 44.4%. This group used translanguageing less frequently overall, but when they did, it was more likely to serve discourse-organizational or

affective functions, such as signaling uncertainty, softening disagreement, or establishing solidarity. This suggests that more proficient learners draw upon their full linguistic repertoires not only to support comprehension, but to shape the social dynamics and emotional tone of the interaction itself.

This functional-to-affective shift offers strong empirical support for the claim that translanguaging evolves not only in frequency but in strategic sophistication, paralleling broader developments in interactional competence. It also reinforces the view that higher-proficiency learners are not merely navigating lexical gaps, but are actively shaping the social and emotional contours of peer interaction through their language choices.

4.7.1.3 Qualitative Analysis

In addition to the quantitative data, detailed discourse analysis reveals how learners utilize translanguaging to scaffold communication. Table 10 presents representative examples of translanguaging instances for each proficiency group, highlighting both affective and functional functions.

Table 11

4.7.1.3.1 Representative Examples of Translanguaging Instances by Group

ID	Group	Chinese Example	Translanguaging Function	English Explanation
TI1	C126 (Novice Low)	A: 两点 (.) is?	Functional	The student asks “两点 is?” and clarifies by

				providing the English equivalent “two o'clock.”
TI2	C246 (Novice High)	A: 酸辣汤 (.) Sweet and sour soup↑?	Functional	The student clarifies the meaning of “酸辣汤” by offering the translation “Sweet and sour soup.”
TI3	C326 (Intermediate-Lower)	A: 不知道中文怎么说 ↑environmental science.	Functional	The learner uses English to express an unfamiliar term by saying “不知道中文怎么说”

				environmental science.”
TI4	C326 (Intermediate-Lower)	A: 忙得 开学 ((听不 懂)), 但是也 最受不了很早 e::e:: 很早起 床。	Affective	The utterance illustrates how advanced learners use fillers to regulate emotions while negotiating meaning.

The examples in Table 11 illustrate how learners at different proficiency levels engage in translanguaging for distinct purposes, revealing a developmental shift from functional support toward affective expression and discourse management. In the novice-low group (TI1), the utterance “两点 (.) is?” demonstrates a clear functional use of translanguaging. Here, English is inserted directly to bridge a lexical gap, allowing the learner to verify the meaning of a time-related phrase. The strategy is transactional in nature—used to complete the task at hand with minimal processing.

Similarly, the novice-high example (TI2) continues this functional pattern, as seen in “酸辣汤 (.) Sweet and sour soup↑?” The learner attempts to confirm understanding by drawing on an L1 equivalent. Although the phrasing includes rising intonation and hesitation,

the intent remains referential rather than reflective. These cases align with earlier quantitative findings that lower-proficiency learners rely on translinguaging as a compensatory mechanism, primarily for lexical retrieval and meaning clarification.

In contrast, examples from the intermediate-lower group reveal a more nuanced and strategic use of cross-linguistic resources. In TI3, “不知道中文怎么说 ↑environmental science,” the learner uses English not only to compensate for a vocabulary gap, but also to initiate a metalinguistic negotiation that invites peer support. This instance shows translinguaging as a tool for collaborative meaning-making, rather than a solo fallback.

Most strikingly, TI4 illustrates affective translinguaging in action. The utterance “忙得开学 ((听不懂)), 但是也最受不了很早 e::e:: 很早起床” includes a self-reported comprehension gap, prolonged fillers, and repetition to express emotional frustration. Rather than resolving a specific lexical issue, the learner uses translinguaging and vocal markers to regulate affect, maintain fluency, and sustain interpersonal rapport. This example reflects the shift, identified in both qualitative and quantitative analyses, toward agentive and emotionally embedded translinguaging among more proficient learners.

Together, these examples highlight that translinguaging is not a static behavior but a dynamic strategy that evolves in both function and sophistication. Lower-level learners rely on it for survival, while more advanced learners harness it as a resource for managing discourse and social interaction—supporting García and Wei's (2014) framing of translinguaging as both cognitive and affective in nature.

4.8 Co-occurrence of Translinguaging with LREs and NoM

This section presents quantitative findings on the proportion of Language-Related

Episodes (LREs) and Negotiation of Meaning (NoM) strategies that involved translinguaging across the three proficiency groups. The results are summarized in Table 11.

Table 12

4.8.1 Proportion of LREs and NoM Strategies Incorporating Translinguaging

Measure	C126 (Novice Low)	C246 (Novice High)	C326 (Intermediate-Lower)
LREs with Translinguaging (%)	51.61%	~76.19%	64.30%
NoM with Translinguaging (%)	44.19%	44.90%	50.90%

Note. Percentages reflect the proportion of LREs and NoM strategies that incorporate translinguaging within each group, based on coded dialogue excerpts.

As shown in Table 12, translinguaging was integrated into both LREs and NoM strategies across all proficiency levels, though with varying frequency and distribution. For LREs, the proportion involving translinguaging was highest among novice-high learners (76.19%), followed by intermediate learners (64.30%) and novice-low learners (51.61%). This pattern suggests that novice-high learners may be at a stage where task demands exceed their independent L2 control, prompting greater reliance on cross-linguistic resources during metalinguistic reflection. Intermediate learners, in contrast, appear more capable of sustaining LREs in the target language, leading to a slightly lower—but still substantial—rate of translinguaging.

In the case of NoM strategies, the distribution of translanguaging use was relatively consistent across groups, ranging from approximately 44% in the two lower levels to 50.90% in the intermediate group. These results indicate that translanguaging remains a frequent and accessible strategy for managing interactional breakdowns, particularly when learners encounter lexical gaps or ambiguities during peer communication.

The observed patterns point to the enduring role of translanguaging across different stages of proficiency—not as a marker of linguistic deficiency, but as a flexible interactional tool. Its continued presence in both meaning-focused and form-focused episodes highlights its potential as a resource for negotiating understanding, fostering fluency, and scaffolding linguistic development in socially situated contexts.

In sum, the findings suggest a clear developmental trajectory in how learners across proficiency levels engage with interactional strategies in CSL peer interaction. As learners progress from novice to intermediate levels, they move from reactive strategies—such as clarification requests and lexical translanguaging—toward more autonomous behaviors like self-correction, metalinguistic reflection, and affective regulation through translanguaging. Importantly, this progression is not only evident in individual strategy use but also in how learners integrate NoM and LREs within cohesive discourse episodes. These patterns offer compelling evidence that the interplay of NoM, LREs, and translanguaging evolves with proficiency, shaping both the form and depth of peer-mediated learning opportunities in the CSL classroom.

CHAPTER 5

DISCUSSION OF FINDINGS

5.1 RQ1: How do NoM, LREs, and translanguaging shift across proficiency levels?

Learners' interactional behaviors revealed a clear developmental progression across proficiency levels. At the novice stage, students relied heavily on their first language to maintain engagement—translating key terms, seeking lexical equivalents, and repeating after peers. Their utterances were often short, hesitant, and focused on word-level meanings. These strategies were not merely compensatory; they functioned as cognitive scaffolds, allowing learners to remain in the conversation despite limited linguistic resources.

As learners progressed to the novice-high and intermediate stages, they became more willing to take risks, self-correct, and reflect aloud. Translanguaging shifted from a survival tool to a more strategic and metacognitive practice. Students verbalized their uncertainties, used English to scaffold emerging ideas, and demonstrated growing control over form. Grammatical negotiation increased, and LREs began to surface more frequently in spontaneous discourse. Advanced learners, in particular, demonstrated a higher level of integration between these strategies, showing metalinguistic awareness and interactional sensitivity in real-time peer exchanges.

5.2 RQ2: Do these processes overlap—or do they stand alone?

The data suggest that NoM, LREs, and translanguaging rarely functioned as isolated phenomena. Instead, they often occurred in overlapping sequences, particularly among more advanced learners. For example, a clarification request (“你是说...?”) frequently led to form-focused reflection and lexical exploration, revealing an embedded connection between comprehension repair and linguistic analysis.

Approximately 80% of negotiation episodes at the intermediate level were followed by

LREs, suggesting that initial moments of misunderstanding served as entry points for collaborative knowledge-building. This interplay illustrates that peer interaction is not linear but recursive—one strategy flows into another, deepening both language awareness and interpersonal engagement. Learners used each other’s responses as springboards to construct more accurate and meaningful utterances.

5.3 RQ3: How does translanguaging help—not hinder—language development?

Translanguaging emerged as a productive and purposeful strategy across all proficiency levels. Rather than being a sign of communicative breakdown, it allowed learners to maintain momentum, express complex ideas, and externalize thought processes. At the novice level, students used translanguaging to access basic vocabulary and bridge conceptual gaps. For instance, inserting “environmental science” in the middle of a Chinese sentence signaled a real-time need to preserve fluency while seeking lexical support.

More advanced learners used translanguaging in more nuanced ways—not only for lexical support but also for emotional regulation, pragmatic effect, and rhetorical precision. It became a quiet, often invisible, tool for maintaining discourse coherence and expressing subtle distinctions. This suggests that translanguaging supports—not displaces—target language development by expanding the learner’s communicative toolkit.

5.4 RQ4: What does classroom reality show that scripts and platforms don’t?

The naturalistic classroom data revealed that real peer interaction is dynamic, emotional, and full of improvisation. Learners hesitated, laughed, shrugged, rephrased, and struggled—but these were not signs of distraction or failure. They were integral to meaning-making. Unlike scripted tasks or digital platforms that emphasize correctness and

efficiency, real-time peer discourse revealed the non-linear, emergent nature of language learning.

Moments of uncertainty often led to co-construction of meaning. A learner's hesitation could prompt a peer's clarification, leading to shared reformulation or metalinguistic discussion. These interactional turns, often messy and unpredictable, demonstrated that knowledge was not being transmitted but constructed collaboratively. Such findings underscore the pedagogical importance of embracing the complexity of learner talk as a site of learning, rather than treating it as noise or deviation.

CHAPTER 6

PEDAGOGICAL IMPLICATIONS

6.1 Broader Pedagogical Implications

Throughout this study, eleven tables captured what numbers alone often fail to show: the unfolding logic of how learners at different stages engage with language, with peers, and with their own uncertainty. The patterns that emerged across proficiency levels were not accidental—they revealed a developmental trajectory that moves from reliance to regulation, from fragment to flow. Understanding this rhythm can change how we teach.

In the early stages, learners leaned heavily on lexical negotiation. They asked “what is 回家?” or whispered “two o'clock?” as they fumbled for words. As Table 1 and Table 5 revealed, these students rarely went beyond word-level focus. Yet this was not just linguistic limitation—it was a way of anchoring themselves. Teachers who interpret these moments as opportunities rather than deficits can begin to build from there. After all, these learners were not silent; they were searching.

As learners progressed to novice-high, something shifted. Table 11 showed that over 75% of their LREs involved translanguaging. This wasn't just about not knowing a word—it was about wanting to know, and using whatever resources they had to get there. In these moments, students were not bypassing Chinese, they were leaning into it—just with training wheels. Their questions grew more tentative but also more layered, like “波士顿比纽约 em:: em:: 更好?” where hesitation signaled thinking in progress. Translanguaging, here, wasn't escape—it was scaffolding.

At the same time, learners were no longer just asking what a word meant—they were starting to build meaning together. NoM became more than a tool to keep the conversation going; it became a doorway into metalinguistic awareness. Table 7 demonstrated that nearly 80% of NoM instances in Group C326 were immediately followed by LREs. What began as basic clarification—“你是说...?”—evolved into mutual repair, rephrasing, and hypothesis testing. In Table 4 and Table 8, we see learners stepping into each other's utterances, refining grammar, correcting particles, or discussing tone choices. This kind of turn-by-turn negotiation shows us that meaning and form are no longer separate processes.

By the intermediate level, the scaffolding started to come from within. Learners initiated repairs before breakdowns occurred, and they monitored both their own and their partner's accuracy. Table 6 and Table 10 also revealed a shift in translanguaging—not just for retrieving vocabulary, but for regulating emotion. Expressions like “不知道中文怎么说 environmental science” or “很早 e::e:: 起床” served not only to fill gaps but to externalize frustration, organize thought, and engage more personally. These are the moves of learners who no longer treat language as a fixed target but as a dynamic medium they can shape and

be shaped by.

Taken together, the progression across tasks and groups suggests that CSL learners don't simply acquire strategies in isolation—they begin to layer them. Translanguaging supports NoM; NoM often leads to LREs; and the more these strategies intertwine, the more we see learners operating as co-constructors of knowledge. Across all tables, from simple lexical checks to extended grammatical reflection, one thing is clear: peer interaction isn't filler—it's fuel. It is where learners make the messes that language learning needs.

For CSL teachers, these findings suggest that interaction must be nurtured as intentionally as input. It is not enough to assign group work or monitor errors. We must learn to read what learners are doing with one another—how they hesitate, rephrase, support, and correct—and create classroom spaces where these processes aren't hidden or rushed, but invited and made central.

6.2 Classroom Practice Recommendations

Peer interaction in the CSL classroom is not simply a matter of putting students in pairs and hoping for the best. What the data from this study reveal—across eleven detailed tables—is that learners bring with them an evolving toolkit of strategies that respond to their proficiency level, confidence, and familiarity with the task. Teaching, then, must be responsive to this evolution.

One starting point is translanguaging. Its frequent presence across all groups—especially in over 75% of LREs among novice-high learners—signals that students need, and use, multiple languages to process new forms. Rather than suppressing this instinct, teachers can build it into classroom routines. A bilingual drafting activity—where learners first brainstorm

in English and then collaboratively shape their ideas into Chinese—turns internal negotiation into visible collaboration. Allowing students to say aloud, “我不知道中文怎么说...” gives permission for meaning-making to continue, even when the words are missing.

Yet translanguaging alone does not explain how learners grow. Some of the richest episodes captured in this study came when students negotiated meaning together—hesitated, reworded, asked again—and in doing so, created a path toward greater accuracy and awareness. Among intermediate learners, NoM was often followed immediately by LREs. These moments weren't simply exchanges; they were sites of thinking. To support this, teachers can design tasks that require more than just responses. In a “menu planning” activity, for instance, students not only list food items but compare, justify, and argue about them. Embedded prompts—“为什么你选这个?” or “这个词对吗?”—can push learners toward form-focused reflection within authentic conversation.

Not all learners are ready for open-ended tasks. Novice students in this study relied heavily on formulaic questions and simple repetition. That's not a problem; it's a developmental stage. Teachers can support these learners by giving them predictable structures—visual cues, sentence frames, and carefully designed pair activities. A simple mingling game using “你喜欢不喜欢__?” with pictures may seem basic, but it provides repeated opportunities for practicing NoM strategies like clarification and confirmation in meaningful contexts.

LREs don't always need to be teacher-initiated. With strategy cards or reflection logs, students can track the kinds of language issues they and their partners address. For example, after a group task, students might note: “Today, I asked a question about word order,” or “My

partner corrected my use of 比.” These reflections give learners metacognitive ownership and make LREs part of their learning narrative—not just a byproduct of error, but a record of inquiry.

And then there's emotion. The sighs, the laughter, the “ehhh I forgot the word”—these aren't distractions. They are how learners cope, connect, and carry on. Translanguaging, in this case, becomes affective support. A warm-up activity like “What confused you last class?”—answered in English or Chinese—opens space for students to share challenges, receive peer support, and begin translating vulnerability into agency.

Ultimately, the role of the teacher is not to eliminate struggle but to frame it as valuable. The patterns seen in this study don't just suggest that strategies evolve—they suggest that classrooms can be designed to evolve with them. CSL pedagogy is not about choosing between form and meaning, or between Chinese and English—it is about helping learners navigate the space in between, together.

CHAPTER 7

LIMITATIONS AND FUTURE DIRECTIONS

As with any small-scale qualitative study, this research has certain limitations. The participant pool was drawn from a single university context and included a relatively small number of learners, which may limit the generalizability of the findings to broader CSL learning populations. Additionally, the presence of recording devices and the participants' awareness of being observed may have influenced their behavior during peer interactions. Furthermore, the study focused exclusively on in-person spoken interactions, leaving out written and digital communication modes that are increasingly relevant in contemporary CSL

classrooms.

These limitations suggest several promising directions for future research. Expanding the participant sample to include learners from multiple institutions, age groups, and linguistic backgrounds would enable more robust cross-contextual analysis. Longitudinal designs conducted in naturalistic classroom settings with minimal observer interference could further illuminate how interactional strategies—such as NoM, LREs, and translanguaging—develop over time. In addition, future studies could more closely examine the role of teachers, particularly how they model negotiation, scaffold translanguaging practices, and design peer-based tasks that foster metalinguistic reflection and learner autonomy.

CHAPTER 8

CONCLUSION

This study began with a question that is as pedagogical as it is human: How do learners make sense of language together when no teacher is watching? By observing peer interaction in CSL classrooms, this research illuminated not only what learners know, but how they construct understanding—through collaboration, across languages, and within moments of hesitation, discovery, and risk-taking.

What emerged was a developmental trajectory in which learners shifted from using simple, reactive strategies to more integrated and reflective ones. As proficiency increased, so did their interactional awareness and confidence. Peer talk revealed itself not as classroom filler, but as a fertile space where meaning was co-constructed, challenged, and reshaped in real time.

By foregrounding learner agency and the strategic use of translanguaging, NoM, and LREs, this study contributes to a more nuanced understanding of how language learning unfolds in classroom discourse. When students are encouraged to engage authentically, to translanguage without shame, and to learn from breakdowns rather than avoid them—they don't just practice Chinese. They become participants in shaping it.

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