

Original Paper

The Mediating Role of Social-emotional Competence in Students' Perceptions of English Collaborative Reading Classrooms and Willingness to Communicate in a Multilingual Context

Xia Liu^{1*}

¹ School of Foreign Languages, Guizhou Normal University, Guiyang, Guizhou, China

* Corresponding Author, E-mail: jenniferliuxia@163.com

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Abstract

The present study examines the relationship between perceived collaborative reading classrooms (PCRC), social-emotional competence (SEC), and willingness to communicate (WTC) in multilingual classrooms. Participants were 150 Shui ethnic senior high students in Guizhou, China. Students completed questionnaires of PCRC, SEC, and multilingual WTC, including English willingness to communicate (EWTC), Shui willingness to communicate (SWTC), and Chinese willingness to communicate (CWTC). Descriptive statistics revealed that students reported high levels of PCRC, SEC, and CWTC, while their EWTC and SWTC were at moderate levels. Correlation analyses revealed that PCRC and SEC were weakly associated with both EWTC and CWTC, whereas their associations with SWTC were not significant. Furthermore, mediation analyses showed differential effects across languages. SEC fully mediated the relationship between PCRC and EWTC and SWTC, partially mediated the effect of PCRC on CWTC. The findings offer insights into how to improve students' WTC in multilingual educational settings.

Keywords

Collaborative Reading, Multilinguals, Willingness to Communicate, Social-Emotional Competence, Senior High School Students

1. Introduction

Willingness to communicate (WTC) refers to an individual's readiness to initiate communication or

remain silent (MacIntyre, 2007). In multilingual settings, WTC not only refers to speaking or not speaking, but also to which language to use in conversation (Henry et al., 2024a). Numerous studies have shown that learners' WTC is influenced by contextual factors such as emotions and classroom environment (Wang et al., 2021; Li et al., 2022). Moreover, many studies have recently examined the impact of transient emotions like enjoyment and anxiety on WTC (Fathi et al., 2023). However, more stable social-emotional competence (SEC), which regulates these emotions and facilitates communication, has received less attention. SEC refers to the ability to recognize, understand, and manage emotions, establish positive relationships, and make responsible decisions (Collaborative for Academic, Social, and Emotional Learning, 2005). More importantly, SEC plays a crucial role in learners' communication behaviors and interactive activities (Domitrovich, 2017). The interactionist theory (Vygotsky, 1978) claims that language learning is shaped through social interactions. In multilingual settings, collaborative reading activities offer valuable opportunities for students to engage in meaningful interactions, promoting their language development and social and emotional growth. Although many studies have examined the influence of classroom environment and emotions on WTC, few studies have explored the direct connections between perceived collaborative reading classrooms (PCRC), SEC, and WTC in multilingual classrooms. To fill this gap, this study will develop and validate an integrated mediation model to clarify how PCRC facilitate multilingual WTC through SEC. Additionally, this study employs a mixed-methods approach to test this integrated mediation model among Shui ethnic high school students in China.

2. Literature Review

2.1 *Willingness to Communicate in Multilingual Contexts*

In multilingual settings, WTC is not only about speaking or not speaking but also involves decisions about which language to use in conversation (Henry et al., 2024a). The research of WTC has evolved through several phases, including theoretical refinement, methodological diversification, and perspective expansion. Theoretically, WTC has evolved from a static trait into a dynamic concept. MacIntyre et al.'s (1998) Heuristic Pyramid Model provided an integrative framework, conceptualizing WTC as the outcome of individual and contextual factors. Building on this, the recent 3D Model (Henry & MacIntyre, 2023) reframed WTC as a fluid and dynamic property, shaped by the interaction of intergroup climate, motivation, and individual emotions. Empirically, research on WTC has systematically explored two categories of antecedents. On the individual level, factors such as emotional intelligence (Zhang & Zhang, 2023), learners' belief (Peng & Woodrow, 2010), and language mindset (Wang et al., 2021) have been identified as key contributors to a learner's WTC. At the same time, situational factors, such as classroom interactions (Wang et al., 2020) and classroom environment (Li et al., 2022), have consistently been shown to play a significant role in predicting both WTC and actual communication behaviors. Methodologically, there has been a notable shift from cross-sectional studies to research that focuses on dynamics of WTC. Longitudinal and time-series research (Cao, 2013;

Henry et al., 2024a) has revealed how WTC fluctuates over time, emphasizing its complex interactions with cognitive, linguistic, and environmental factors. Finally, the theoretical framework surrounding WTC has been enriched through interdisciplinary integration. For instance, the dynamic perspective (Henry et al., 2024a) emphasizes that WTC is dynamically changed over time. Taken together, previous studies provide a robust foundation for investigating the specific mechanisms linking pedagogical activities to WTC in multilingual contexts.

While existing studies have established a solid foundation for understanding the factors influencing WTC, several critical gaps remain. First, although pedagogical practices like collaborative activities are acknowledged for enhancing WTC (Sudo & Kashiwara, 2022), the psychological processes through which collaborative activities influence WTC remain underexplored. Second, research on WTC in multilingual settings, particularly among ethnic minority learners like Shui ethnic students in China, remains limited.

2.2 Perceived Collaborative Reading Classrooms

PCRC refers to learner's perception of participating in collaborative reading tasks in English classrooms, which involve interacting with peers to read and understand texts. Through collaborative tasks, students not only improve language skills but also develop higher-level social and emotional competencies (Swain & Lapkin, 1998). Recent studies have highlighted the significant impact of PCRC on language learners' linguistic and social abilities. For instance, research by Tang et al. (2021) shows that cooperative, collaborative, and peer-tutoring strategies effectively improve English learners' reading and speaking skills. Additionally, some studies emphasize that students' positive perceptions of collaborative activities can increase their interest in learning English and overall engagement with language learning (Jin et al., 2022). In multilingual environments, interactions play a crucial role in cross-cultural communication (Henry & MacIntyre, 2023), as switching between languages enhances not only communication but also the depth of cultural exchange.

Despite the numerous studies have shown that collaborative activities effectively enhance language learning and social development, there are still unresolved issues. Most studies have focused on the outcomes of the collaborative activities rather than on the students' perceptions. Mbirimi-Hungwe (2021) examines South African multilingual students' views on using translanguaging in group discussions, emphasizing its role in enhancing communication and language learning. Thus, PCRC is expected to predict learners' WTC in multiple languages.

2.3 Social-emotional Competence

SEC involves the integration of self-awareness, self-management, social awareness, and social management skills, which collectively influence learning behaviors and academic performance (Cefai & Cavioni, 2014; Bai et al., 2024). SEC is developed through the process of social emotional learning (SEL), which aims to improve students' social and emotional competencies, especially in rural areas. Existing research has found that collaborative and cooperative works reduce learners' anxiety and promote their engagement in interactive activities (Liu et al., 2025), thereby promoting their WTC.

Moreover, SEC involves self-management skills which is considered as a type of self-regulation strategies to manage learners' emotions. As students become more confident in managing their emotions and understanding the perspectives of others, they are more likely to participate in multilingual communication settings. While a number of studies have explored the effect of emotions and interaction on WTC, the whole connection among WTC, PCRC, and SEC has little attention.

Based on previous studies, this study aims to establish a mediation model with SEC as the mediator, exploring how PCRC may enhance students' WTC in multilingual contexts. Vygotsky (1978) asserts that acquiring new knowledge is grounded in meaningful interactions with others. Grounded in social interactionist theory (Vygotsky, 1978), this study proposes that collaborative reading activities enhance social and emotional skills in and ultimately promote WTC.

3. Study and Purpose

Shui ethnic high school students navigate a unique multilingual educational environment, as interactions involve three languages: Shui (heritage language), Chinese, and English. However, there is a paucity of research examining how the SEC in collaborative reading activities shape multilingual WTC in a structured pedagogical setting. Thus, this study aims to reveal how their multilingual WTC is mediated by SEC in collaborative classrooms. Research questions are as follows.

RQ1: What are the current profiles of perceived collaborative English reading classrooms, social-emotional competence and multilingual WTC?

RQ2: What are the correlations among perceived collaborative English reading classrooms, social-emotional competence and multilingual WTC?

RQ3: Does social-emotional competence mediate the relationship between perceived collaborative English reading classrooms and multilingual WTC?

4. Methodology

4.1 Participants

This study employed a cluster sampling method to select 3 intact classrooms in Grade 10 at a public high school in Guizhou, China. The final sample consisted of 150 students from Grade 10, including 63 boys (42%) and 87 girls (58%). All participants were native Shui language speakers with advanced proficiency in Chinese and intermediate-level English learners, with an average English score of 85.62 (out of 150). Ethical approval was obtained from the Human Research Ethics Committee of the authors' university prior to data collection. Written informed consent was provided to all participants. Table 1 shows that 84.7% of the students primarily use Chinese in their daily lives, which is consistent with the actual language usage in the Shui ethnic region.

Table 1. Basic Information of Participants (N=150)

Variable	Statistic	Result
gender	Boy (n, %)	63 (42.0%)
	Girl (n, %)	87 (58.0%)
Grade	10 (n, %)	150 (100.0%)
English test score	M \pm SD	85.62 \pm 23.45
	Min - Max	0-142
Primary daily language	Chinese (n, %)	127 (84.7%)
	Shui (n, %)	15 (10.0%)
	Others(n, %)	8(5.3%)

Note. M= Mean; SD= Standard Deviation.

4.2 Instruments

This study adopted a questionnaire survey and semi-structured interviews. To assess participants' WTC in multilingual classrooms, an adapted version of Peng and Woodrow's (2010) WTC scale was used, with 6 items covering English, Shui, and Chinese. This scale is rated on a five-point Likert scale. For PCRC, a 16-item adopted from the What Is Happening In This Class (WIHIC) questionnaire was employed, focusing on teacher support, student cohesiveness, task orientation, and cooperation. Additionally, to measure SEC in English learning, Bai et al.'s (2024) SEC scale was used, consisting of 24 items. Semi-structured interview comprises 7 items, uncovering the underlying factors of language choice.

4.3 Data Collection

Students were invited to independently fill out self-report scales including PCRC, SEC and multilingual WTC. The survey required approximately 20-25 minutes to complete and was collected on-site. A purposive sampling was used to conduct follow-up interviews based on the results identified in the survey data. Ten students (2 boys, 8 girls), whose patterns were selected to participate in semi-structured interviews lasting 15-30 minutes each. All interviews were audio-recorded with participant consent and subsequently transcribed verbatim for analysis.

4.4 Data Analysis

The data was analyzed by SPSS 26.0. No missing data were found, and all core variables conform to approximately normal distribution suitable for parametric statistical analyses. All scales demonstrated high reliability (Cronbach's $\alpha > .80$) and acceptable construct validity, supported by factor loadings above .60 and cumulative explained variance exceeding 60%. Mediation analysis using Baron and Kenny's (1986) method and Bootstrapping with 5000 samples tested the mediating role of SEC (Preacher & Hayes, 2008) in the relationship between PCRC and multilingual WTC.

5. Results

5.1 Descriptive Statistics

The analysis results (Table 2) show that participants reported relatively high levels of PCRC ($M = 61.61$, $SD = 8.08$) and SEC ($M = 90.63$, $SD = 13.00$). CWTC was reported at a very high level ($M = 26.57$, $SD = 2.92$). In contrast, EWTC ($M = 18.82$, $SD = 5.28$) and SWTC ($M = 18.64$, $SD = 6.09$) were at similar moderate levels.

Table 2. Descriptive Statistics of Variables. (N=150)

Variable	M	SD	Min	Max	Skewness	Kurtosis
PCRC	61.61	8.082	22	80	-.893	3.980
SEC	90.63	12.998	26	120	-.697	4.054
EWTC	18.82	5.275	6	30	-.305	-.309
SWTC	18.64	6.094	6	30	-.422	-.409
CWTC	26.57	2.918	18	30	-.012	-1.342

Note. M=Mean, SD=Standard error.

5.2 Correlation Analysis

Table 3 shows that PCRC shows a moderate positive correlation with SEC ($r=0.458$, $p<0.01$), a weak positive correlation with CWTC ($r=0.373$, $p<0.01$) and EWTC ($r=0.233$, $p<0.01$), and no significant correlation with SWTC ($r=0.025$, $p>0.05$). SEC shows a strong positive correlation with EWTC ($r=0.524$, $p<0.01$), but a weak positive correlation with CWTC ($r=0.267$, $p<0.01$) and SWTC ($r=0.228$, $p<0.01$). EWTC shows a moderate positive correlation with SWTC ($r=0.420$, $p<0.01$), but no significant correlation with CWTC ($r=0.143$, $p>0.05$).

Table 3. Correlation Matrix of PCRC, SEC, EWTC, SWTC and CWTC

Variable	1	2	3	4	5
PCRC	—				
SEC	0.458**	—			
EWTC	0.233**	0.524**	—		
SWTC	0.025	0.228**	0.420**	—	
CWTC	0.373**	0.267**	0.143	0.080	—

Note. * $p<0.05$ · ** $p<0.01$ · *** $p<0.001$ (2-tailed).

5.3 The Mediating Effect of PCRC, SEC and Multilingual WTC

The key findings are presented in Table 4. PCRC positively and significantly predicted SEC ($\beta=.458$, $p<.001$), EWTC ($\beta=.233$, $p<.01$) and CWTC ($\beta=.317$, $p<.001$), but did not predict SWTC

($\beta = -.100, p > .05$). When SEC was included as a predictor, SEC positively and significantly predicted EWTC ($\beta = .528, p < .001$) and SWTC ($\beta = .274, p < .01$), while PCRC remained a significant predictor only for CWTC ($\beta = .317, p < .001$).

Table 4. Regression Results for Mediator Model (N=150)

Regression equations		Fit index			Coefficient			95% Confidence Interval for B		VIF
Predictor	Outcome	R	R ²	F	β	B	t	Lower bound	Upper bound	
PCRC	SEC	.458	.210	39.350**	.458	.7371	6.273**	.5049	.9693	1.000
	EWTC	.233	.055	8.524**	.233	.1523	2.920**	.0492	.2554	1.000
	SWTC	.025	.001	.094	-.100	-.0756	-1.114	-.1035	.1414	1.000
	CWTC	.373	.139	23.884**	.317	.1145	3.707**	.0802	.1890	1.000
PCRC	EWTC	-.009	-.005		-.009	-.0056	-.109	-.1076	.0963	1.266
SEC		.528	.275	27.837**	.528	.2143	6.681**	.1509	.2777	1.266
PCRC	SWTC	-.100	-.060		-.100	-.0756	-1.114	-.2096	.0585	1.266
SEC		.274	.060	4.673*	.274	.1283	3.041**	.0449	.2116	1.266
PCRC	CWTC	.317	.158	13.036**	.317	.1145	3.707**	.0534	.1755	1.266
SEC		.122	.027		.122	.0273	1.422	-.0106	.0652	1.266

Note. B=unstandardized coefficients, β =standardized coefficients.

Based on the conditions for establishing mediation (Hayes, 2013), the results indicate that the proposed mediation models demonstrate distinct patterns across the three WTC dimensions (Figures 1 to 3). For EWTC, SEC acted as a full mediator, with a significant indirect path ($a = .737***, b = .214***$). For SWTC, SEC served as a significant indirect-only mediator, where the indirect effect was significant ($a = .737***, b = .128**$) while both the direct ($c' = -.076$) and total ($c = .019$) effects of PCRC were non-significant. For CWTC, PCRC exerted a significant direct effect ($c = .135***; c' = .115***$) and the path through SEC was not significant ($b = .027$).

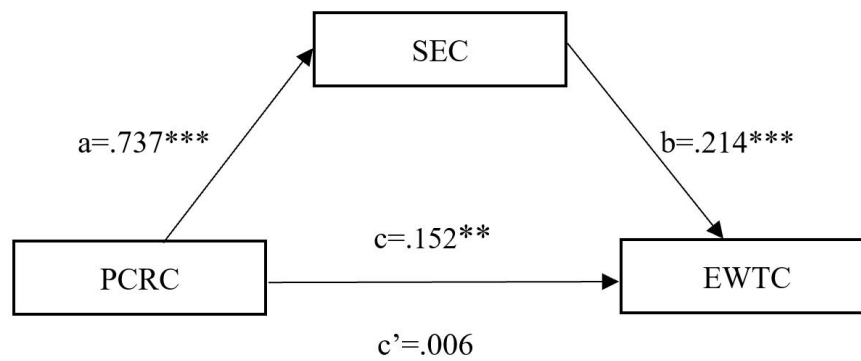


Figure 1. The Mediation Model for EWTC

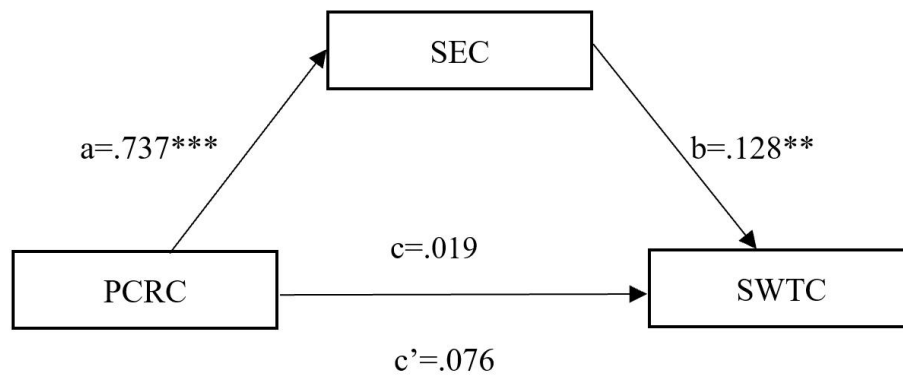


Figure 2. The Mediation Model for SWTC

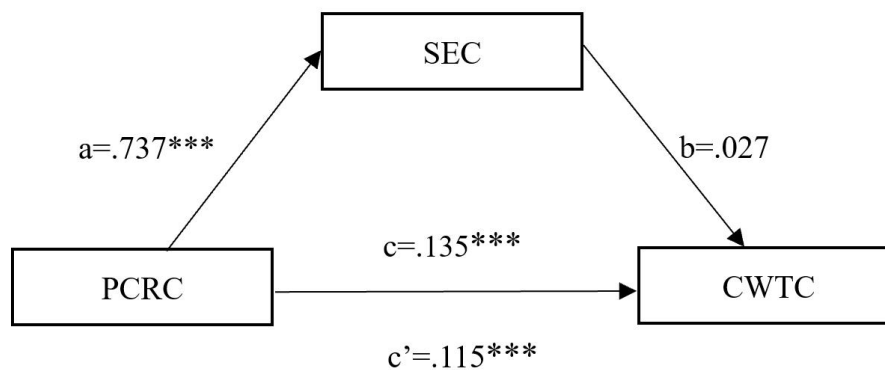


Figure 3. The Mediation Model for CWTC

As shown in Table 5, For EWTC model, the significant total effect of PCRC ($c = 0.152$, $p < 0.05$) was fully through SEC, with a confidence interval $[0.049, 0.255]$ that does not include zero. This suggests SEC acts the only role as a full mediator. For SWTC, while the total and direct effects of PCRC were non-significant, a significant indirect pathway through SEC was presented. For CWTC, PCRC exerted

a significant direct effect ($c=0.115$, $p<.001$), not mediated by SEC, was observed.

Table 5. Analysis of Mediation Model

Model	Outcome	Pathway	Effect size	SE	95% CI	p	Standardized effect
1	EWTC	Total Effect (c)	0.152	0.052	[0.049, 0.255]	.004	0.233
		Direct Effect (c')	-0.006	0.052	[-0.107, 0.096]	.913	-0.009
		Indirect Effect	0.158	0.058	[0.072, 0.299]		0.242
		a (PCRC → SEC)	0.737	0.118	[0.505, 0.969]	<.001	0.459
		b (SEC → EWTC)	0.214	0.032	[0.151, 0.278]	<.001	0.528
2	SWTC	Total Effect (c)	0.019	0.062	[-0.104, 0.141]	.760	0.025
		Direct Effect (c')	-0.076	0.068	[-0.210, 0.059]	.267	-0.100
		Indirect Effect	0.095	0.045	[0.028, 0.204]		0.125
		a (PCRC → SEC)	0.737	0.118	[0.505, 0.969]	<.001	0.458
		b (SEC → SWTC)	0.128	0.042	[0.045, 0.212]	.003	0.274
3	CWTC	Total Effect (c)	0.135	0.028	[0.080, 0.189]	<.001	0.373
		Direct Effect (c')	0.115	0.031	[0.053, 0.176]	<.001	0.317
		Indirect Effect	0.020	0.017	[-0.012, 0.056]		0.056
		a (PCRC → SEC)	0.737	0.118	[0.505, 0.969]	<.001	0.458
		b (SEC → CWTC)	0.027	0.019	[-0.011, 0.065]	.157	0.122

6. Discussion

6.1 Profiles of PCRC, SEC and Multilingual WTC

Shui ethnic students perceived high levels of PCRC and SEC, while their CWTC was significantly higher than their comparable EWTC and SWTC. This finding is consistent with prior research showing that supportive collaborative classrooms enhance positive emotions and inhibit negative emotions, which in turn, enhance their WTC (Li et al., 2022). The findings of the interview suggest that students will join in the conversation in English when the atmosphere is relaxing. In the Shui ethnic region, students have a strong command of Chinese, and their CWTC is higher than EWTC and SWTC. This aligns with the reality in China, where Chinese serves as the dominant language in most contexts. Furthermore, the Shui language, as the students' heritage language, is primarily used with family members and close friends.

6.2 Correlations Among PCRC, SEC, and Multilingual WTC

Correlation analysis revealed that PCRC showed significant positive links with SEC, EWTC and CWTC, but only weak or non-significant associations with SWTC. A positive classroom environment was found to enhance students' SEC, aligning with previous research (Heller et al., 2012), which suggests that supportive environments foster emotional development. In turn, SEC strongly correlated with students' EWTC, supporting the idea that emotional readiness is a key factor in communication willingness (Li et al., 2022). The weak correlation between PCRC and WTC in Chinese and English suggests that a positive environment boosts communication in both native and non-native languages. However, SEC is weakly correlated with Shui. This discrepancy can be attributed to the dependence on language identity and ethnic minority cultures, which play a significant role in shaping language use.

6.3 Mediating Role of SEC in PCRC and Multilingual WTC

This study reveals that SEC mediates the relationship between PCRC and WTC in all three languages, but the mediation effects is distinct. In detail, SEC fully mediates the relationship between PCRC and EWTC and SWTC. For Shui, PCRC exerted no significant direct or total effect. Previous research has demonstrated that classroom environment strongly predicts WTC (Khajavy et al., 2018; Peng, 2019) and perceptions of classroom environment promote students' social and emotional skill (Wang et al., 2024). This finding elaborates on previous research by positing SEC as the psychological mechanism through which positive classroom perceptions ultimately enhance WTC. This study presents SEC is the only pathway through which PCRC influences SWTC. In addition, the indirect effect of PCRC on SWTC is significant, with direct effect is not significant. This may be explained by the complex and underlying factors influencing SWTC in formal classrooms. The result of interview shows that students only speak Shui with classmates of the same ethnicity, and they rarely use it actively unless required by the teacher in English classes.

The result reveals that PCRC indirectly promotes EWTC by enhancing SEC, supporting prior research (Wang et al., 2024; Li et al., 2022) showing that emotional experience mediates the relationship between classroom environment and L2 WTC. In contrast, SEC represents a more stable, trait-like

learned capability. In this study, classroom environments influence WTC not just through temporary feelings, but also through long-term interpersonal and intrapersonal skills. This finding suggests that SEC is not just a mediator, but a key developmental competence that supports positive communicative engagement. This study shows that PCRC affects CWTC directly not indirectly through SEC, suggesting collaborative classroom environment enhances CWTC. A student mentioned that she wanted to take the initiative to speak in English after the teacher praised her. This finding underscores that the ability to interact with others in multilingual contexts is crucial for fostering CWTC.

7. Conclusion

This study revealed that SEC fully mediated the relationship between PCRC and EWTC, partially mediated the link for CWTC and served as the only significant pathway for SWTC, with no direct effect observed. The results underscore the critical role of SEC as a stable, developmental competence that enhancing multilingual WTC within collaborative classrooms. This study contributes to understand how collaborative pedagogical practices can foster both socio-emotional skills and multilingual engagement, which offers valuable insights for developing multilingual WTC in diverse educational settings.

8. Limitations

Several limitations must be admitted. First, the data were collected from a single Shui ethnic high school in Guizhou, China, which limits the generalizability of the findings. Second, the cross-sectional design precludes causal inferences, therefore, longitudinal or experimental studies are needed to establish directional relationships among PCRC, SEC, and WTC in multilingual contexts.

Declaration of Conflicting Interests

The authors have no potential conflicts of interest.

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