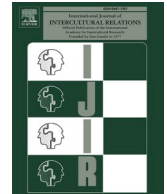




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International Journal of Intercultural Relations

journal homepage: www.elsevier.com/locate/ijintrel

Chinese students' perceptions of affordances and challenges, and their associated reactions within different contexts of intercultural communication

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ARTICLE INFO

Keywords:

Intercultural communication competence
Affordance
Challenge
Reactions
Interpretative phenomenological analysis

ABSTRACT

The perceptions of Chinese students in intercultural communication have been well-documented in literature. However, the context-dependent features of these perceptions have yet to be addressed by scholars. This study provides a qualitative examination of the perceptions of Chinese students concerning affordances, challenges, and related reactions within the contexts of personal interaction, group work, and class interaction, based on their individual experiences of intercultural communication. Interpretative phenomenological analysis was employed to explore the personal intercultural communication experiences of 22 Chinese international students within multicultural classroom settings at a Dutch university. Qualitative data suggest that the reactions of these Chinese students are closely linked to the context in which they find themselves and the perceptions they experience at the time. The challenges and affordances perceived by participants were summarized within their respective contexts, along with their reactions. The findings reveal the perception and reaction tendencies of these Chinese students across different contexts. Based on these findings, the perspective of context-sensitivity in intercultural communication is reinforced. Furthermore, the construction of appropriate contexts is considered an effective pathway to facilitate Chinese students' participation in intercultural interactions, and the group work is more appropriate than the other two contexts are for communication as a learning environment.

Introduction

As globalization advances within the realms of both economics and culture, college graduates who will soon enter the international workforce market are increasingly being expected to possess intercultural communication competence (ICC) (Griffith et al., 2016). Defined as "the ability to communicate effectively and appropriately in intercultural situations based on one's intercultural knowledge, skills, and attitudes" (Deardorff, 2006), ICC is regarded as a vital capability that helps to build a harmonious and culturally diverse community (Luo & Chan, 2022). Institutes of higher education are the foremost providers of multicultural learning opportunities to students (Deardorff, 2006). For this reason, both institutes of higher education and educators who are responsible for multicultural classes play important roles in preparing students to pursue respectful, mutually beneficial global citizenship through the

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Received 15 April 2024; Received in revised form 9 December 2024; Accepted 18 December 2024

Available online 30 December 2024

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acquisition of ICC (Murray-García & Melanie, 2017). Despite the best efforts of numerous universities to internationalize and support multicultural groups on campus, intercultural interactions among students from culturally diverse backgrounds continue to be reported as suboptimal (e.g., De Vita, 2007; Frambach et al., 2014; Popov et al., 2022; Stein et al., 2018; Volet & Ang, 1998).

Chinese students constitute the largest group of international students in many developed countries, including the United States, the United Kingdom, Australia, and Germany (UNESCO Project Atlas, 2023). Consequently, many intercultural scholars have taken an interest in the experiences of Chinese international students studying abroad, and numerous studies have indicated that language and cultural factors are the primary challenges they face in intercultural communication (e.g., Cao et al., 2021; Kwon, 2013; Willoughby-Knox & Yates, 2021). Over the past few decades, to examine these challenges and assist newcomers in adapting to new environments, the stress-coping-adaptation model has been widely applied in research related to acculturation (e.g., Kim, 2008; Pitts, 2009). However, solving static challenges is not the best solution for promoting intercultural interaction, as individuals' perceptions and reactions are dynamic and diverse. Therefore, scholars have suggested that creating or reconstructing contexts may be a new path. (Kudo, 2017; Straker, 2016). Some studies have explored students' enactment of ICC in the group work context (e.g., Kimmel & Volet, 2010, 2012; Popov et al., 2012), but we are still unclear about the robustness of these enactments in other contexts. In other words, the empirical evidence of how students enact their ICC across different contexts is missed.

Another gap is the lack of analysis of unstructured student experiences. Luo and Chan (2022) conducted a systematic review of empirical studies that used qualitative methods to assess ICC over the past 14 years, concluding that most of these studies focused on "structured student experiences". They called for more empirical research to explore unstructured experiences in order to gain a holistic perspective on intercultural communication. Before further exploring whether shaping contexts can become an effective pathway to promote intercultural interaction, we need to understand not only the individual's perceptions and reactions in different contexts but also whether there are differences in these perceptions and reactions across various contexts.

This empirical study aims to understand the extent to which context affects students' perceptions and reactions by investigating the ICC enactment of Chinese students in different contexts. The results reveal affordances and challenges that they have encountered, as well as the reaction(s) they had to respond to such situations. From a theoretical perspective, this study will provide empirical evidence to elucidate the connections between context and ICC enactment. In addition, these results provide empirical evidence based on unstructured experience which contributes to a holistic view of intercultural communication. From a practical standpoint, this study can be regarded as the cornerstone and starting point for implementing interventions to promote intercultural communication in context. Educational practitioners can select or construct contexts suitable for intercultural interaction based on the results of this study.

Theoretical framework

Intercultural communication competence (ICC)

The concept of ICC has its earliest roots in the 1950s and 1960s, stemming from the burgeoning demand for intercultural communication following the proliferation of international projects in the post-World War II era (Fantini, 2020; Spitzberg & Changnon, 2009). Subsequently, around the year 2000, the worldwide popularity of English as a global language spurred both linguist and socialist's interest in the notion of ICC, leading to the development of several influential theories and concepts in the field of intercultural research. For example, common terms include intercultural communication competence (Byram, 1997; Fantini, 2020) intercultural competence (Deardorff, 2006), global competence (Chen & Starosta, 1996), intercultural sensitivity (Bennett & Bennett, 1993), and so forth. Although there are still variations in the term usage and definition of ICC, a broad consensus has been reached on the three core dimensions that constitute ICC, namely attitudes, skills, and knowledge, or cognition, affect, and behavior (Deardorff, 2006; Hang & Zhang, 2023; Spitzberg & Changnon, 2009; Zhang & Zhou, 2019). This study employs the term "intercultural communication competence" to present such capability that enables individuals to function contentedly and successfully across cultures. This study adheres to the terminology of ICC as it is more comprehensively understood (Spitzberg & Changnon, 2009) and limits our interpretation within an affordable range.

Ecological approach to intercultural communication in academic contexts

We concur with the notion that taking different contexts into account may be an alternative way to promote intercultural interaction. However, before putting this idea into practice, the important issue of the relationship between students and intercultural context still needs to be examined. The ecological perspective is widely cited when discussing the relationship between individuals and context and considers this relationship as mutual and co-constructive (Kudo et al., 2017). This aligns with our aim to move beyond the "stress-coping" paradigm to explore new pathways, as the "stress-coping" paradigm often views the relationship between individuals and context as static, such as the host country environment that needs to be adapted to by newcomers. By introducing an ecological perspective, we can understand the mutual influences between students and intercultural contexts through a dynamic view. Previous research has attempted to explain the impact of context on intercultural interactions based on the outcomes of intercultural communication, but few studies have focused on the engagement process within specific contexts. Kimmel and Volet (2010) established the context-sensitive nature of intercultural communication, and the influence of class and group work contexts on students' attitudes has been observed (Kimmel & Volet, 2012), yet robust and comprehensive investigations within specific contexts are still needed (Straker, 2016).

To gain a holistic understanding of intercultural communication, process observation is crucial, as it can capture many interactional

details that outcome assessments may fail to reflect (Deardorff, 2009). This process can be distilled into a transition from perception to action. To elaborate this transition within a context, the concept of affordance is often mentioned (Gibson, 1986). The affordance as property of the environment-human interaction system, provides opportunities for potential action (Stoffregen, 2003). The affordance initially garnered attention from linguists and was employed to investigate interpersonal communication and second language acquisition (Van Lier, 2004). Inspired by linguists, the concept of affordance has been adopted by intercultural researchers to investigate the relationship between the university context and engagement in intercultural communication (Kim et al., 2022). Kudo et al. (2017) inferred from previous empirical studies that different contexts have varying impacts on individuals, but they did not specify the nature of these differences. Literature has documented students' behaviors and reactions within certain intercultural contexts (Hou & McDowell, 2014; Willoughby-Knox & Yates, 2021; Ye & Edwards, 2015; Zhu, 2017), yet no studies have systematically compared students' reactions across different contexts. Literature has also documented students' perceptions within specific contexts (Cai et al., 2022; Meng et al., 2019), yet no studies have systematically compared those perceptions to behaviors and reactions. In other words, there remains a paucity of empirical evidence regarding the holistic process of student interaction with intercultural contexts, specifically the transition from perception to action within a given context.

To understand this process across different contexts, we have adapted Kim et al.'s (2022) Basic Research Model of Affordance Theory to detail the interaction between students and various contexts (see Fig. 1) because this Context-Perception-Reaction model effectively delineates transition from perception to action (Bernhard et al., 2013; Suh et al., 2017). In this model, the reactions are understood as what individuals do, say or think as a result of something that has happened. To align with the purpose of this study, we define affordances as opportunities that students perceive and utilize for engaging in intercultural communication. We do not restrict the nature of affordance to social or educational contexts, as such delineations are often difficult to clearly define. We employ the term "challenges" to convey the opposite of affordances, that is, factors that engender negative perceptions towards engaging in intercultural interactions among students.

The scope of the study encompasses three contexts within a multicultural classroom setting: personal interaction, group work, and class interaction. These contexts were investigated only during class and break time. Personal interaction refers to conversation without any interdependent task or joint responsibility for a final result, and that is not necessarily listened to by all others. Group work refers to a setting in which a student collaborates with one or more individuals "from different cultural backgrounds, who have been assigned interdependent tasks and are jointly responsible for the final results" (Popov et al., 2012). Class interaction refers to open communication in the classroom as a whole. This study focuses on the interaction between individuals and intercultural contexts, aiming to investigate how Chinese international students perceive their ICC across various contexts. Thus, our study investigates the following research questions:

RQ1. What affordances and challenges do Chinese students perceive in the contexts of personal interaction, group work, and class interaction?

RQ2. How do Chinese students react when processing these affordances and challenges within intercultural interactions across three contexts?

Addressing the aforementioned research questions allows us to utilize the Context-Perception-Reaction model to observe the process of intercultural interactions to a certain extent, thereby aiding us in understanding some of the interaction details.

Method

Research setting and sample

We conducted this research within the domain of life sciences at a Dutch university, at which international students comprised 22 % of the student body in 2022, with Chinese students as the largest international student cohort. We sent a volunteer recruitment poster in four WeChat (微信, *wēixìn*; a micro-messaging platform for messaging, socialization, and mobile payment services) groups (with a total of nearly 2000 users) consisting exclusively of Chinese students studying at this university. In addition, we were provided with a list of Chinese students who were participating in or had recently completed the university's Academic Consultancy Training (ACT). The ACT course provides students with the opportunity to work in a team of five to seven master's students from diverse backgrounds on a "real world" project for an external client (e.g., company, NGO, government entity). We further employed a snowballing strategy to recruit participants' Chinese friends and classmates from the same university. We discontinued recruitment after completing the interview with the 24th participant (Table 1), and we further excluded two participants, one of whom (P3) had significantly less intercultural communication experience in the classroom, and the other of whom (P11) had not started studying at the university upon responding to the invitation. The educational and life experiences of all participants prior to the undergraduate level had taken place largely in China. To ensure that participants had experience with intercultural communication in the classroom,

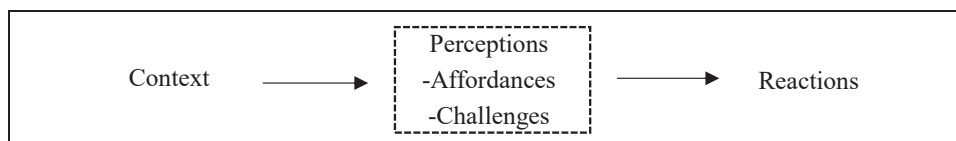


Fig. 1. Context-Perception-Reaction model.

Table 1
Demographic information on participants.

Student	Length of stay in the Netherlands (months)	Previous overseas experiences	Gender	Major	Interview Length**	Interview form
A	18	n/a	female	Development and Rural Innovation	56'49''	Online
B	24	Short-term travel in the US and Thailand	female	Food Technology	55'55''	Online
C	11	n/a	female	Nutrition Physiology	n/a	Online
D	24	Exchange in New Zealand for 1 month	female	Plant Science	38'03''	Online
E	72	Exchange in the Netherlands for 3 months	female	Nature Science*	38'24''	Online
F	5	Exchange in the UK for 3 months	female	Environmental Science	47'46''	Online
G	10	Short-term travel in European countries	female	Food Biotechnology	50'52''	Online
H	24	4 years of undergraduate study in the US	male	Social Science*	61'20''	Online
I	23	Exchange in Denmark for 1 month and in the UK for 3 months	female	Urban Environmental Management	48'12''	Online
J	16	Study in Belgium and Sweden for about 11 months; exchange in the US for 1 month	female	Aquaculture	62'37''	Online
K	n/a	n/a	male	n/a	n/a	Online
L	11	4 years of undergraduate study in the US	female	Plant Science	60'34''	Online
M	24	n/a	female	*	36'7''	Online
N	60	3 years of secondary education in Hungary; 4 years of undergraduate study in the Netherlands	female	*	38'52''	In person
O	24	Short-term travel in the US and Thailand	female	Resilient Farming and Food System	56'2''	In person
P	24	n/a	male	Resilient Farming and Food System	58'26''	In person
Q	24	1 year of secondary education and 4 years of undergraduate study in the US	female	Animal Science	65'25''	In person
R	24	Research project of 2 months in Bangladesh	male	Organic Agriculture	72'23''	In person
S	24	n/a	female	Plant Science	71'44''	In person
T	12	Short-term travel overseas	female	Animal Science	82'41''	In person
U	15	2.5 years of undergraduate study in Canada	female	Forest Reservation	103'08''	In person
V	15	n/a	male	Biological System Engineering	70'11''	In person
W	16	2 months of travel in Sweden	female	Economics of Sustainability	65'21''	In person
X	24	Exchange in the UK	female	Environmental Science	48'46''	In person
Overall 22 valid participants						

n/a = not applicable.

* Information withheld at the participant's request.

** xx'xx'' = xx (minutes) xx (seconds).

they were required to have been studying in the Netherlands for at least three months prior to participation. Due to the limited sampling conditions, only master's students were included. We did not include Ph.D. candidates as they had much more intercultural communication experience in the workplace than they did in the classroom.

Data collection

We conducted this study under the supervision of the Social Sciences Ethics Committee at the particular Dutch University in the domain of life sciences, and we collected participant data with their informed consent. We held an in-depth semi-structured interview with each participant. Each interview lasted around 40–60 minutes, and we did not cut off the conversation if participant wished to share more. We asked participants to share their personal experiences in three different contexts of communication: personal interaction, group work, and class interaction. To address research question one, we asked participants two questions regarding their perceptions within three different contexts. The first question referred to the most challenging things they had encountered during communication, and the other referred to the most engaging things they had encountered. After having shared their feelings in response to these questions, we asked participants to provide specific examples. This was followed up with a question such as, "Could you elaborate on how you coped with this situation?" This question was designed to help us understand the participants' reactions across the three different contexts to address research question two. Other questions inserted into the conversation aimed at capturing more details of the immediate situations (e.g., the topics involved, who and why they were involved). We conducted interviews mainly in Mandarin, with the sporadic use of English for the purpose of accurate self-expression, as the meaning of some terms does not match accurately with Mandarin (e.g., "peer review", "course coach"). All interviews were audio-recorded with the participants' consent, and the recordings were transcribed into text. The entire data-collection process lasted about five months, from June to the end of October 2023. We conducted interviews either in person or online, according to the preference of the participant.

Data analysis

To strengthen the rigor and transparency of the data analysis, we applied the consolidated criteria for reporting qualitative research (COREQ), a 32-item checklist for reporting on qualitative studies (Tong et al., 2007). In the data analysis, following Domain 3 of the checklist, the first author of this study shared the data and coding information with the co-authors, including raw data, coding trees, and the derivation of themes, etc. We analyzed the data according to interpretative phenomenological analysis (IPA) which is well suited to understand lived experiences without predefined category system (Larkin et al., 2009). For practical reasons, this study is based on a relatively small sample size, and the body of data was composed of in-depth interviews, which is well suited to the IPA approach (Larkin et al., 2009). We extracted the challenges and affordances perceived by the participants in the contexts of personal interaction, group work, and class interaction to address research question one. We also extracted their corresponding reactions in these three contexts to address research question two. In our IPA, we followed six steps: carefully reading, initial noting, developing emergent themes, searching for connections across emergent themes, moving to the next participant, and looking for patterns across participants. We started by transcribing the 22 raw audio recordings into text format using format-transfer software, and we then imported the text into NVivo (version 12) for the coding process. Then the research team employed a multi-step IPA process to systematically analyze the interview data and address the two research questions. The first step involved carefully reading through the interview transcripts and making initial notes to mark instances of the challenges faced by participants, the affordances they perceived, and their corresponding reactions. Building upon these initial notes, we then developed emergent themes that captured the key concepts and ideas expressed by the participants. This allowed us to start identifying patterns and relationships within the data. Next, we extracted the specific challenges, affordances, and reactions from the emergent themes. To further refine the analysis, we compared the identified themes within each individual participant. This allowed us to recognize similarities and differences in how the various participants described their experiences. We continued this iterative process of theme development, extraction, and comparison until data saturation was reached, where no new themes emerged from the analysis. Finally, we aggregated the themes identified across all participants and worked collaboratively to reach a consensus on the key findings.

To enhance trustworthiness/reliability and rigor in the analysis, we applied a peer-debriefing strategy. The raw data were coded by the first author and checked by the rest authors. All authors discussed emerging themes until an agreement reached. Two peers who were not directly involved in this study reviewed the draft, and all authors and reviewers discussed the draft in a formal open meeting.

Findings

Challenges and affordances (RQ 1)

We created Table 2 to answer what challenges and affordances perceived by the participants.

This overview of ten themes in three contexts reveals several characteristics of the participants’ perceptions. Participants mentioned the most challenges within the context of class interaction, with eight of the nine themes being perceived as challenges (although three were also identified as affordances). Seven themes were mentioned within the context of personal interaction, five of them were identified as either challenges or affordances (two were identified as both). Seven themes mentioned within the context of group work, and six of them were identified as affordances (although four were also identified as challenges). Only ‘using English for communication’ was always regarded as a challenge within all contexts, and emergent need was always perceived as an affordance within the two contexts where it was mentioned. Interestingly, some themes are not mentioned in all contexts. Specifically, self-assessment is not mentioned in the context of personal interaction. Attitudes towards others and emergent need are not mentioned in the context of group work. Maintaining silence in class and responsibility are only mentioned in the context of class interaction context and group work context, respectively.

Using English for communication

Using English for communication refers to self-presentation and understanding of others using the English language. Most of the

Table 2
Perceptions depending on context.

Theme	Context					
	Personal interaction		Group work		Class interaction	
Using English for communication	O	C	O	C	O	C
Others’ attitudes	O	A&C	O	A&C	O	A&C
Faced with a dialogue invitation	O	A	O	A	O	C
Power imbalance	O	C	O	A	O	C
Talking size	O	A	O	A&C	O	C
Self-assessment	X	n/a	O	A&C	O	A&C
Attitudes towards others	O	A&C	X	n/a	O	A&C
Emergent need	O	A	X	n/a	O	A
Maintaining silence in class	X	n/a	X	n/a	O	C
Responsibility	X	n/a	O	A&C	X	n/a

C = perceived as a challenge; A = perceived as an affordance; O = mentioned; X = not mentioned; n/a = not applicable.

participants (16/22) identified using English for communication as challenging within all three contexts. Regarding personal interaction, Student O noted that she often dropped conversations when she had trouble understanding the accents of others involved, and Student H, L, and T indicated that they avoided talking about topics that were difficult for them to elaborate. In addition, Student X shared that, throughout the ACT course, one of her groupmates had been unable to understand her English, and that they therefore had no efficient oral communication. Problems relating to using English also impeded participants from engaging in intercultural communication within the context of class interaction. As recounted by Student F, “Sometimes, I cannot understand teachers and classmates who have heavy accents, especially when they speak fast so that I can no longer join them.” In addition to using English, others’ attitudes, faced with a dialogue invitation, power imbalance, and talking size were mentioned in all three contexts as well.

Others’ attitudes

Others’ attitudes are feelings that participants perceive from people surrounding them. Most of the participants (19/22) mentioned their perceptions of others’ attitudes. When perceived as negative, others’ attitudes were identified as challenges and, when perceived as positive, they were identified as affordances. Within the context of personal interaction, Student E observed, “If the conversation tended to be relaxed and friendly, I felt more willing to [communicate].” In contrast, Student R was not eager to talk more “if the feedback was not active or nothing more than an answer to my question.” Within the context of group work, Student U emphasized that an open atmosphere is vital to everyone, and that she had enjoyed her dialogues in the ACT group because everyone had seemed “chill” and happy to hear from others. This affordance became a challenge when the conversation was dominated by certain groupmates, as the atmosphere was no longer open to everyone (e.g., Student P and S). Similarly, Student M perceived others’ attitudes as positive within the context of class interaction, noting that “a relaxed class atmosphere gave me a great deal of encouragement to interact with others.” Conversely, Student D indicated that she tended to remain silent when most other people were silent. In addition, participants exhibited varying reactions when faced with dialogue invitations from others in different contexts.

Faced with a dialogue invitation

Faced with a dialogue invitation refers to individuals are invited to express themselves. Fewer than half of the participants (9/22) shared their experiences with it. Within the context of personal interaction, the dialogue invitation could be regarded as an affordance, as participants always expressed a preference for giving a positive response to others. As described by Student W: “Personally, I prefer sharing in a topic to finding a topic for sharing.” The impact of the dialogue invitation was rarely mentioned within the context of group work context. Only Student T indicated that, despite being passive, her Chinese peers were willing to contribute to group work. Dialogue invitation could thus be regarded as an affordance for these participants within the context of group work. Within the context of class interaction, however, dialogue invitation posed a challenge to participants. For example, Student G described her experiences of being called upon to answer questions in a Dutch-language course as unbearable, commented that it had been a “huge psychological challenge.” In addition to illustrating how dialogue invitation could pose a challenge, the experiences shared by Student G revealed another theme: power imbalance.

Power imbalance

Power imbalance refers to the perceptions that the participants had of their own status relative unequal to that of other interlocutors. About half (10/22) reported perceiving their status as unequal. Power imbalance was regarded as a challenge within personal interaction context. As described by Student G, “I thought the English of my Indian and Vietnamese classmates was quite good. Although they did invite me to chat with them, I knew that my English was not sufficient to carry on any in-depth communication with them, so I basically did not take the initiative to talk.” In addition, many participants clearly reflected a sense of teacher–student status differences that had been instilled from an early age, as illustrated by Student S: “...a student absolutely had a lower status than the teacher. Furthermore, no matter how open the teacher is, a student would not ‘cross the line.’” The power imbalance was rarely mentioned within the context of group work. Only Student A noted, “I did express myself sufficiently as I took lead in that pair-group work...” The context of class interaction yielded more reflections. For example, Student I described having felt at a disadvantage once, when she was the only Chinese person in a class: “I was surrounded by people from other cultures, and my English there was the worst.” In summary, regardless of the context, being at a disadvantaged status posed a challenge to participants, while being in a powerful status could be identified as an affordance. In addition to the perception of power, the talking size also influences the participants’ reactions.

Talking size

Talking size refers to the number of interlocutors involved in a conversation. Some participants (10/22) indicated that talking size had affected their engagement in interactions. It was influential within all three contexts. In the context of individual interactions, one-on-one conversations are considered the most relaxing form of dialogue (e.g., Student Q). With regard to the context of group work, participants were generally more willing to express themselves in relatively small groups (4–7 people). As noted by Student J, “I couldn’t speak freely when there were many people. I preferred to speak more when there were fewer people, like 5 or 6.” The tolerance of Student S was lower than that of Student J, and Student I showed a higher tolerance level for conversations. Three participants (Student A, D, and M) explicitly identified sharing their points in front of all people in class as a challenge and as being stressful to them. As explained by Student H: “When I spoke in front of a lot of people, I was concerned about whether the content was valuable and whether my words were adequate, because I was using a public time.” This psychological activity was closely related to self-assessment.

Each of the five themes mentioned above were described within all three contexts. The following three themes were mentioned in

only two contexts.

Self-assessment

Self-assessment refers to a psychological activity in which one evaluates oneself before engaging in any actual expression. Nearly all participants (20/22) mentioned experiences and perceptions of engaging in self-assessment. There were two ways in which participants performed such self-assessment. One involved prejudging whether their ideas were valuable to others, and the other involved assessing whether their expressions were adequate. None of the participants reported engaging in self-assessment within the context of personal interaction, but this psychological activity was often mentioned within the contexts of group work and class interaction. In group work, self-assessment could be an affordance for participants with a strong willingness to express themselves. For example, Student X recounted being highly willing to contribute ideas to her group project, as she was convinced that these ideas could greatly improve the quality of the project reports. In contrast, Student W found it challenging to share ideas with other members of the group, especially when she was not able to judge whether her ideas were beneficial to others. Compared to the context of group work, participants noted that they were more likely to engage in self-assessment within the context of class interaction. As an affordance, Student P indicated that she was happy to join class interactions once she was convinced that her point of view would be beneficial to others. In most cases, however, self-assessment was more likely to be perceived as a challenge than as an affordance within this context. Participants usually needed a considerable amount of time to convince themselves to speak out. For instance, Student A recounted, "I could speak out only when I thought my answer was good enough, and I could express it adequately in English. I usually struggled for a long time before speaking out..." In addition to the value of content and the quality of language, participants' reactions are also often related to their own attitudes.

Attitudes towards others

Attitudes towards others refer to an evaluation of the participants on something, based on their experiences, beliefs, and values. A majority of the participants (17/22) shared that their motivation sometimes depended on private interests. This was mentioned primarily within the context of personal interaction. For example, Student L claimed that she had once joined a conversation between two classmates because she was interested in their topic of the secondary education system in Germany. Subjective preference can nevertheless also pose a challenge to the initiation of a conversation. As observed by Student O, "It was not necessary for me to make contact with other people unless I was interested in someone." Similarly, attitudes to others were identified as an affordance within the context of class interaction when the content was attractive (e.g., Student Q), while it tended to be a challenge once the topic was not attractive. For example, Student P once lost interest in joining class discussions, as all cases were based on a "Western perspectives (i.e., mainly represented by European countries and the United States)." Attitudes to others was not mentioned within the context of group work, nor was the theme of "emergent need" (as described below).

Emergent need

Emergent need refers to personal requests in terms of asking for academic and life assistance. Some participants (8/22) reported having initiated interactions in response to needs emerging at that time. Within the context of personal interaction, emergent need clearly served as an affordance to initiate conversations with others. For example, P14 indicated that she was happy to talk about local life with native students in the classroom. This kind of communicative motivation was often mentioned within the context of class interaction. Both Student S and V claimed that they had asked their lecturers for certain course materials or resources during class.

Self-assessment, attitudes to others, and emergent need were mentioned within two of the three contexts (i.e., personal interaction, group work, and class interaction). Another two themes were mentioned in only one context: maintaining silence in class and responsibility.

Maintaining silence in class

Maintaining silence in class refers to a study habit that participants bring from their past educational experiences. This habit was mentioned only within the class interaction context. Half of the participants (11/22) recognized the difference between this habit and the study habits prevalent in Dutch classrooms. Participants indicated that they were unaccustomed to casually interrupting the teacher, as illustrated by Student R: "[Previously in China] we were taught to listen carefully in class and not to interrupt the teacher." Furthermore, many participants (e.g., Student D, E, and H) regarded lectures as a public time belonging to all students, and that they should therefore keep any personal questions to themselves unless they contribute to most people in the classroom. Speaking up in front of all other students is challenging to them as well. In traditional Chinese classrooms, public speaking is common in two scenarios. First, to connect with the subsequent course content, students provide a standard answer on behalf of the teacher. Second, the teacher prompts students to pay close attention to the lecture (Student W). Although most participants also lacked experience with group collaboration in their previous education, a sense of responsibility motivated them to engage in group interactions.

Responsibility

Responsibility refers to a sense of responsibility for accomplishing something. Some participants (9/22) indicated that they had been responsible for contributing to group work. Responsibility was mentioned only within the context of group work, and it was identified as an affordance to engaging in intercultural interaction. As recounted by Student G, "I thought that active intercultural communication existed only in group work, because there was a common learning goal. Without it, I would not be active." In addition, Student V reported that "I was happy to speak in group work because I was expected to contribute something, and I wanted to be responsible for my part." For some participants, however, the sense of responsibility posed a challenge to engaging in sufficient

interaction with others. For instance, Student P noted, “The purpose of group work was to complete the group task, and so it was necessary to pursue efficiency in the limited time; no one wanted to engage in inefficient communication.” This resulted in insufficient interaction between group members, as some might have been perceived as inefficient.

From perceptions to reactions (RQ 2)

To present the participants’ interactive process, we have constructed Table 3. For instance, when ‘using English for communication’ was perceived as challenge to participants under personal interaction context, three kinds of reactions were shown.

Inconsistency between perceptions and reactions

We observed an inconsistency between the participants’ perceptions and reactions. Specifically, perceiving a challenge does not necessarily lead to a refusal to initiate or participate in intercultural interactions, and perceiving affordances does not invariably result in effective engagement in intercultural communication. For example, when ‘using English for communication’ perceived as challenge, reactions for actively engaging intercultural interactions were found in all three contexts. In the context of personal interaction, Student Q and W indicated that they would employ approaches to reduce the difficulty of conversation for participating in intercultural communication, such as discussing familiar topics with teachers (Student Q) or choosing to communicate start with culturally close friends (Student W). Another example is when some participants exhibit relatively passive reactions when invited to engage in conversations within the contexts of personal interaction and group work, such as “If I was asked for share something, I might speak more (e.g., Student E and V)” and “If others are willing to discuss more, I can continue as well (e.g., Student B and G)”. Sometimes, this inconsistency arises due to the lengthy transition process. For example, P10’s initial silence was not a refusal to interact but rather an observation of classmates to understand the rules of classroom interaction. She said: “At the very beginning, I would observe and learn from my classmates, and after about half a year, I could distinctly sense an improvement in my participation in interactions.”

Table 3
Process of intercultural communication engagement.

Personal interaction (PI), group work (GW), and class interaction (CI) context		
Themes	Reactions (as challenge)	Reactions (as affordance)
<i>Using English for communication</i>	<ul style="list-style-type: none"> ● Withdraw from the dialogue. (PI, GW, CI) ● Asking to repeat, to rephrase terms or expressions. (PI GW, CI) ● Choosing which conversation to engage in. (PI GW, CI) ● Reading as an auxiliary. (GW) ● Avoid initiating or participating in conversations. (CI) 	n/a
<i>Other’s attitudes</i>	<ul style="list-style-type: none"> ● Withdraw from the dialogue. (PI, GW, CI) 	<ul style="list-style-type: none"> ● Actively participate or initiate dialogue. (PI, GW, CI)
<i>Faced with a dialogue invitation</i>	<ul style="list-style-type: none"> ● Respond to invitations but feel resistant and nervous about participating in conversations. (CI) 	<ul style="list-style-type: none"> ● Respond to invitations but seldom take the initiative to expand or deepen the conversation. (PI, GW)
<i>Power imbalance</i>	<ul style="list-style-type: none"> ● Become sensitive, exhibit self-protective tendencies, and show reluctance to join conversations. (PI) ● Withdraw from the dialogue. (CI) ● Demonstrate aversion to joining interactions or conversations. (CI) 	<ul style="list-style-type: none"> ● Actively engage in conversation and take the leading role in communication. (GW)
<i>Talking size</i>	<ul style="list-style-type: none"> ● The pattern of engagement in conversation is primarily focused on listening. (GW) ● Feel nervous and resistant about initiating and joining conversations. (CI) 	<ul style="list-style-type: none"> ● Feel comfortable and at ease with initiating and participating in conversations. (PI) ● Participants are more likely to engage in conversation in groups of 4–7 people in size. (GW)
<i>Self-assessment</i>	<ul style="list-style-type: none"> ● Cautious and rarely shares personal or gets involved in conversations. (GW, CI) 	<ul style="list-style-type: none"> ● Actively engage in conversations and share or contribute their perspectives and content. (GW, CI)
<i>Attitudes towards others</i>	<ul style="list-style-type: none"> ● Do not take the initiative to start or participate in conversations and interactions. (PI, CI) 	<ul style="list-style-type: none"> ● Initiate or join conversations proactively, and express a desire to expand upon or engage in deeper discussions on topics they are familiar with or interested in. (PI, CI)
<i>Emergent need</i>	n/a	<ul style="list-style-type: none"> ● While they may take the initiative to start conversations, the content is generally limited to classroom material or simple local common knowledge. (PI, CI)
<i>Maintaining silence in class</i>	<ul style="list-style-type: none"> ● Habitually refrain from initiating dialogues or participating in conversations. (CI) ● Marvel at the wisdom displayed by others when they ask questions, but do not know how to initiate or join conversations through questioning. (CI) ● Observe and begin to emulate other students. (CI) 	n/a
<i>Responsibility</i>	<ul style="list-style-type: none"> ● To efficiently complete group tasks, “unnecessary” conversations are minimized. (GW) 	<ul style="list-style-type: none"> ● To advance the progress of tasks, actively organize, initiate, and participate in group conversations. (GW)

n/a = not applicable.

Comparison across contexts

Firstly, participants with the same perceptions exhibit differential reactions across various contexts. For example, participants used different approaches to address personal interaction and group context when using English for communication was perceived as challenge. In addition, the reaction of avoiding initiating or participating in interactions had only occurred in class interaction context. Secondly, reactions such as withdrawing from the dialogue, avoiding participating, or initiating interactions are more prevalent in class interaction context, and this is heavily depending on the number of participants in the interaction. Student D mentioned, "I felt more comfortable communicating in smaller groups." Other participants also discussed their challenging perceptions in managing self-expression (e.g., Student H and P) and feedback from others (e.g., Student S) in context contains tens of people. Thirdly, sometimes participants exhibit similar reactions across different contexts, especially when their perceptions are related to attitudes. Furthermore, the participants showed consistency of reactions across the contexts when they assessed themselves before speaking out.

Discussion

This study makes several important contributions to the literature on context-sensitivity in intercultural communication. First, the study provides a more nuanced understanding of the behavioral variations exhibited by Chinese international students as they navigate personal discussions, group work, and classroom settings. Prior research on this primarily focused on a single context or treat multiple contexts as a whole, overlooking the nuanced behavioral variations that students can exhibit across different interaction settings. Second, we offer a more dynamic conceptualization of the "experiential conflicts" faced by these students, recognizing the interplay between individual experiences and environmental affordances. Finally, this study highlights the importance of the group work context in facilitating intercultural interactions. Compared to personal discussions and classroom settings, group work appears to provide a more supportive environment for Chinese students to translate affordances into active engagement. Below we discuss these findings in detail.

The context-sensitivity of intercultural communication

This study investigates the intercultural communication experiences of a group of Chinese students in classrooms at a Dutch university, revealing the perceptions and reactions they had in such interactions. We observed that these students, despite having similar perceptions, display behavioral variations in different contexts. This finding not only corroborates the context-sensitivity perspective on intercultural communication as articulated by [Kimmel and Volet \(2010\)](#) but also enriches the argumentative framework of this perspective. Previous research on context and intercultural communication has predominantly focused on single context (e.g., [Straker, 2020](#)) or treated multiple contexts as a whole (e.g., [Kudo et al., 2017](#); [Meng et al., 2019](#)). The findings of this study contribute to a deeper understanding of student behavior by observing transition process across contexts. The contextual variability in these reactions can elucidate certain behaviors of Chinese students, such as their 'passivity' and 'silence' during class interactions ([Li & Pitkänen, 2018](#)). Furthermore, this variability in reactions can also be regarded as a collective characteristic, distinguishing this group from others.

Approach for addressing experiential conflicts

We observed that almost all participants experienced varying degrees of discomfort with class interactions. We also contend that it is inappropriate to attribute certain traits to Chinese students as a collective, as this overlooks the diversity within the group ([Wang & Byram, 2011](#)). Moreover, the small sample size of this study is not sufficient to support such a claim. Some studies suggest that this may be related to the latent hierarchy among students (e.g., [Zou & Yu, 2019](#)), while others argue that it is an expression of cultural homogenization ([Wang et al., 2022](#)). We prefer to conceptualize this discomfort with class interaction as an outcome of the interaction between previous and current experiences, reflecting the dynamic interplay of individual and context. Regardless of how these experiential differences are labeled, whether as disparities in educational paradigms ([Wang & Byram, 2011](#)) or cultural differences ([Cotton et al., 2013](#)), they warrant sufficient attention, as they can impact both the affective experience of intercultural interaction ([Popov et al., 2012](#)) and the outcomes of such interactions ([Reid & Garson, 2017](#)). To address the issue of 'experiential conflicts', identifying approaches that can stimulate students to demonstrate ICC may represent a more targeted method. [Zou and Yu \(2019\)](#) identify a common issue among Chinese students from Hong Kong and Mainland China in intercultural interactions: a lack of confidence to take a position and share their opinions freely. Through observation, they have identified four pairs of themes that represent the alignment of agency and affordance and posit that this alignment can build appropriate contexts so that facilitate more effective engagement in intercultural communication. Based on findings in this study, approaches for promoting participation in intercultural interactions may hold greater potential to help students in demonstrating their ICC, as Chinese students appear not to perceive enough affordances in appropriate contexts.

An appropriate context for communication as learning

Although the participants in this study could perceive affordance from both personal and class interaction contexts, they did not seize these opportunities and transferred them into actions. Participants notably engaged in more proactive and substantial intercultural interactions within the group work context, exhibiting greater ICC. As Student G stated: "I only take the initiative to

communicate when we are working on group assignments because we share common learning objectives.” Thus, group work is the optimal context to facilitate intercultural interaction. Chang (2017) indicates that “behaviors shaped by context and background are an accumulation of lifelong experiences, and, over time, these behaviors become a stable framework for people’s daily decisions.” Frambach et al. (2014) confirmed that students’ prior learning experiences can pose challenges when adapting to new learning contexts, such as transitioning from a teacher-centered to a student-centered approach. Chang (2017) posits that the change of learning habits necessitates new learning needs outweighs learning anxiety. Our findings indicate that the participants struggle to change, or require a considerable amount of time to adapt, their established learning habits within the context of personal interaction and class interaction. However, these participants are often able to translate the affordances in the group work context into actual actions. This is because their previous learning experiences generally lack similar encounters, hence they do not need to alter existing study habits but rather need to develop new ones. Consequently, compared to personal and class interaction contexts, the group work context can assist them in better managing the relationship between learning anxiety and new learning needs.

Implications

We use the findings in this study as a base to present implications for taking context into account when promoting intercultural interactions under classroom settings. To do this, we present a table that can be used to guide the practice of promoting intercultural interaction by synthesizing perceptions and reactions approached in the findings (Table 4).

We are presenting is not a necessary and sufficient relationship between perceptions and reactions, but rather which specific perceptions are more likely to trigger certain reactions. Our findings indicate that students perceive challenges and affordances differently across various contexts. In terms of engagement in intercultural interactions, the perception of affordances is more likely to trigger positive reactions, while the perception of challenges is more likely to trigger negative reactions. Moreover, perception is a dynamic sensation that can change with the surrounding environment. Therefore, to elicit positive reactions from students in intercultural interactions, we need to help them perceive as much affordance as possible from the context and minimize challenges.

Conclusion

In summary, ten perceptions of challenges and affordances were closely related to the intercultural experiences of participants

Table 4
Perception and context matrix.

Themes \ Context	Personal interaction		Group work		Class interaction	
<i>Using English for communication</i>	X	C	X	C	X	C
<i>Other’s attitudes</i>	A	C	A	C	A	C
<i>Faced with a dialogue invitation</i>	A	X	A	X	X	C
<i>Power imbalance</i>	X	C	A	X	X	C
<i>Talking size</i>	A	X	A	C	X	C
<i>Self-assessment</i>	X	X	A	C	A	C
<i>Attitudes towards others</i>	A	C	X	X	A	C
<i>Emergent need</i>	A	X	X	X	A	X
<i>Maintaining silence in class</i>	X	X	X	X	X	C
<i>Responsibility</i>	X	X	A	C	X	X
A = perceiving affordance; C = perceiving challenge ■ Negative reactions to intercultural interaction engagement □ Positive reactions to intercultural interaction engagement						

within the contexts of personal interaction, group work, and class interaction. The number, characteristics, and corresponding reactions of these perceptions differed by context. We initially observed inconsistencies between perceptions and reactions. These inconsistencies reveal two points: firstly, that behavior cannot be fully predicted based on perceptions, and secondly, that changes in behavior may be a gradual process rather than occurring at a specific point in time. Subsequently, we compared the three contexts and found that even similar perceptions can elicit different reactions in different contexts, with the class interaction context being more prone to behaviors such as withdrawing from dialogue and avoiding participation in interactions. Furthermore, behaviors triggered by attitudes are highly consistent across all contexts. Specifically, positive attitudes can lead participants to actively engage or initiate interactions, while negative attitudes result in participants discontinuing or avoiding interactions. These findings first reinforce the notion of context-sensitivity in intercultural communication from a multi-contextual perspective. Subsequently, we further discussed the homogeneity demonstrated by the participants in this study in conjunction with existing literature and conceptualized it as an 'experiential conflict.' We believe that taking context into account can effectively mitigate the negative impact of such experiential differences, such as the refusal to participate in interactions. To address the issue of Chinese students' participation in intercultural interactions, we also recommend group work as the preferred context for learning through communication, as participants generally exhibit better adaptability and change within this context.

Limitations and future research agenda

One limitation of this study is that it is based solely on interview data from students concerning their understandings of experiences with intercultural communication. The data from the interviews may have been affected by the expressions and memory accuracy of the participants, thereby resulting in bias. The accuracy of certain situations may have been obscured by emotional expressions, and memory fragmentation might have led to the omission of some important details. Further research should triangulate such subjective perspectives with other data sources (e.g., observations, focus groups, or interviews with peers and instructors). The incorporation of various data-collection methods would provide a richer, more holistic understanding of classroom communication processes within different contexts. Furthermore, understanding how individuals exchange information from the perspectives of information and information processing is crucial, as it greatly assists in predicting interactive behaviors among individuals. Thus, values are also a direction worthy of future research attention, as values refer to the importance an individual attaches to specific outcomes or modes of conduct, influencing their attitudes and actions.

Another limitation of this study is the small sample size, which is confined to Chinese master's students from a single university, thereby limiting the generalizability of the findings. This study offers a novel perspective for promoting intercultural communication beyond the stress-coping paradigm, specifically by creating suitable contexts for such interactions. Two directions deserve attention in future research. The first is identifying the contexts that can effectively facilitate intercultural communication. Since individuals exist within an ecosystem, it is necessary to consider the impact of different levels of context on the individual. The findings of this study can serve as a starting point, with future research focusing on the interrelationships between contexts. The second is the process by which individuals generate perceptions within a context. While much research has concentrated on the transition from perceptions to behaviors, few studies have explored the origins of perceptions. Understanding the sources of perceptions can help us better comprehend the dynamic interaction process between the individual and the context, which is crucial for constructing appropriate contexts for intercultural communication. Follow-up studies could assess a broader range of participants across cultural backgrounds, disciplines, and educational levels. Longitudinal research tracking the intercultural development of students over time could build on this cross-sectional snapshot. Assessment tools are needed in order to evaluate the ICC of students and to measure their growth. The present phenomenological study provides a starting point for the creation of quantitative assessments that are customized to the lived experiences of individual students.

CRedit authorship contribution statement

C.J. Yang: Writing – original draft, Investigation, Formal analysis Data curation. **H.J.A. Biemans:** Writing – review & editing, Supervision, Resources, Project administration. **V. Popov:** Writing – review & editing, Supervision, Resources.

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