

# ***Unveiling Implicit Ingroup Bias among Chinese Students Pursuing Higher Education Abroad***

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**Abstract:** This paper examines the role of ingroup bias in the social segregation experienced by Chinese International Students in North America. It proposes a novel approach to utilizing ingroup bias as a framework for analyzing this issue. The experiment uses a regular class setting to measure stress and anxiety levels during self-introductions, varying the ratio of Chinese-to-non-Chinese students (25%, 50%, and 100%). Anticipated outcomes include one optimal result and two alternative results, considering multiple contributing factors. Importantly, this paper offers a fresh perspective on the issue through the lens of ingroup bias and challenges the prevailing macro-perspective in its study.

**Keywords:** ingroup bias, Chinese international students, social segregation, culture

## **1. Introduction**

According to Yang, China has recently emerged as one of the leading countries of origin for international students [1]. However, despite the substantial presence, Chinese students often face challenges integrating into the local community and forming connections with host country individuals. Extensive research highlights critical factors contributing to these difficulties, including biases, stereotypes, English language proficiency, and cultural barriers [2-6].

However, existing studies provide only an exhaustive analysis, lacking a comprehensive exploration of Chinese students' perspectives, presenting an opportunity to delve into their experiences and perspectives while investigating their implicit ingroup biases.

The research methodology proposed in this paper is designed to understand their challenges better and uncover insights into cross-cultural dynamics, bridging the research gap and enhancing our understanding of Chinese students' integration in international educational settings, which is inspired by Jacoby-Senhor et al. [7].

## **2. Literature Review**

Jiang and Altinyelken conducted a comprehensive study aimed at identifying the barriers that hinder Chinese students from integrating into mainstream social circles in the Netherlands, which findings reveal that cultural differences, language proficiency, divergent hobbies, prejudice, and discrimination from Dutch students are key factors influencing the assimilation of Chinese students into society [4]. Furthermore, the study points out the impact of Chinese students' over-reliance on Chinese social platforms, such as WeChat, which further isolates them from the Dutch social circle.

Similarly, Lindner and Margetts conducted a study in Australia that aligns with the findings of Jiang and Altinyelken, offering parallel evidence of the challenges faced by Chinese students in integrating into local social circles [2]. Their research identifies cultural differences, the English language proficiency of Chinese students, and limited opportunities for interaction between Australian and Chinese students as critical factors influencing social integration. Additionally, Li's study emphasizes the significance of cultural and social atmospheres, highlighting how they contribute to the shyness of Chinese students and their consequent isolation from establishing friendships with local British students [8].

The research conducted by Spencer-Oatey et al. provides additional evidence for the significance of cultural differences as a primary obstacle to integration. Their study illuminates the substantial cultural divide that impedes Chinese students from effectively assimilating into their host country's social and cultural context [3]. Furthermore, the works of Zhang, Lin & Betz, Cao et al [6,9-10]. And Bertram et al [11]. emphasize the influence of language level on the experience of acculturation stress, which arises from the disparities between the students' motherland and the host culture.

However, it is essential to acknowledge that while these studies offer valuable insights, they predominantly focus on macro-perspectives and do not fully consider the psychological factors underlying the disintegration of Chinese students from local communities. Therefore, a comprehensive analysis from the psychological perspectives of Chinese students is necessary to provide a deeper understanding of the underlying reasons behind their challenges in integrating into local social circles.

Firstly, it is essential to acknowledge the existence of psychological differences between Chinese and local students across various facets. For instance, an experiment by Ji et al. revealed that Chinese participants exhibited higher accuracy in inferring emotions than European American participants [12]. This finding highlights the importance of understanding these groups' psychological nuances and potential differences in emotional perception, which can affect social interactions and relationship formation. Furthermore, it is worth noting that psychology within the Chinese population itself is diverse. Talhelm et al. conducted research demonstrating that people originating from areas where rice is cultivated more significant tendencies towards interdependence and holistic thinking than individuals hailing from regions where wheat is grown [13]. Therefore, it becomes evident that considering the psychological dimensions when examining the social circles of Chinese students is not only relevant but also necessary. Humans possess an inherent tendency to categorize individuals into ingroups and outgroups, leading to a preference for their ingroup and reliance on ingroup members for support [14]. This cognitive bias is known as intergroup bias, which involves evaluating social groups positively or negatively [15]. Within the framework of intergroup bias, manifestations of ingroup care and ingroup loyalty can be observed, representing implicit forms of bias that individuals may not explicitly recognize [14]. Dunham's review supports the universality of this bias, illustrating that individuals are more likely to interact and form connections with members of their ingroup [15]. While explicit bias can be reduced through increased exposure to other groups, implicit bias, including ingroup bias, tends to persist despite such interventions [16]. Considering that the target subjects of this study are Chinese students studying abroad, who are exposed to opportunities to learn about the outgroup, the focus of this research centers on exploring implicit ingroup bias rather than explicit bias. Furthermore, the existence of implicit ingroup bias is substantiated by neurocognitive studies that shed light on the cognitive capabilities of humans in processing social information. As a primate species, humans possess brain structures that facilitate the assessment of social communication, as reflected in our brain size [17]. Han presents neurocognitive research that provides substantiated evidence for the existence of ingroup bias [18]. This evidence is derived from studies that reveal distinct neural

reactions to perceived pain when comparing individuals of the same race to those of different races.

Hong et al. highlight that an individual's social identity can interact with implicit theories, subsequently influencing intergroup biases [19]. For instance, if Chinese students predominantly identify as Chinese rather than solely as university students, they are more inclined to cooperate and exhibit ingroup favoritism in cooperative situations [20]. Consequently, due to shared social identity, Chinese students tend to seek out friendships and establish connections with fellow Chinese students. This suggests that understanding these biases holds significant potential as a leading factor in the limited expansion of Chinese students' social circles when studying outside of China.

This paper adopts a modified version of Jacoby-Senghor et al.'s method to investigate the implicit ingroup bias among Chinese students studying abroad [7]. In the original study, white female experimenters greeted two white participants and one individual, either black or white, assigned as an instructor or a learner. Instructors underwent a subliminal priming task to evaluate their implicit racial bias before teaching the learner. Coders assessed the instructors' anxiety levels, the quality of their lessons, and the participants' performance on tests. Study 2 involved non-black participants watching videos of tasks involving individuals from different racial backgrounds to explore the influence of instructors' implicit bias on test performance [7].

Building upon the successful examination of implicit ingroup bias among white teachers in prior research, we expect that this adapted approach can produce reliable results when testing the implicit bias of Chinese students studying in North America, with appropriate adjustments. Therefore, this study incorporates the theories of implicit ingroup bias and applies the approach above to investigate the impact of ingroup bias on forming social connections among international Chinese students. The specific objective of the paper aims to explore how implicit biases affect their ability to establish friendships in a foreign educational environment. By conducting this investigation, this paper aims to offer novel insights into the dynamics of social integration and intergroup bias of Chinese international students.

### 3. Methodology

In this experiment, a random selection process will be utilized to choose 30 participants from a pool of Chinese students who recently completed their first semester at universities in North America after graduating from typical Chinese high schools to minimize the influence of past experiences and eliminate confounding variables that could impact the experiment's validity. By drawing participants from diverse backgrounds and academic disciplines, we aim to create a representative sample that comprehensively understands the experiences and perceptions of Chinese students studying abroad.

To effectively reach out to potential participants, the widely popular app among Chinese students studying abroad, Little Red Book, will be utilized since selecting participants from Little Red Book offers a unique opportunity to examine the influence of social media and online communities on the interactions and social assimilation of Chinese students. This enhances the validity and generalizability of the findings, as the results can be more confidently applied to the broader range of Chinese students pursuing high-level education abroad.

To uphold the study's integrity and reduce participant bias, the primary objective of the research will not be revealed. Instead, the experiment will be presented as a "survey set to analyze different interview styles." This approach mitigates participant expectations, allowing for more genuine responses and reducing the potential for biased behavior. For practicality, control, and an authentic, real-world experience, the Zoom meeting platform has been chosen for the experiment. Zoom has gained popularity over the past few years as a means of bridging communication gaps, mainly due to the influence of the pandemic. Additionally, the recording feature of Zoom enables convenient

capture of participants' reactions, making it the preferred option for this study.

Before the official start of the meeting, participants will be required to complete a pre-meeting survey. This survey covers various sections that contribute to the overall understanding of the participants' backgrounds and traits, including an assessment of English language proficiency to examine the potential impact of language abilities on overall performance, an exploration of the frequency of introducing themselves to non-Chinese audiences to gain insights into their prior exposure to intercultural communication, and the OCEAN personality test to determine participants' introversion or extroversion traits, which may influence their performance during the experiment.

During the experiment, a confederate will be introduced as the host in the Zoom meeting. Adopting a standardized American accent, the partner will instruct each participant to deliver a 5-minute self-introduction. Participants can access other users' names but not their faces to create a controlled environment. These names will indicate participants' national affiliations, providing cues for perception and interaction. Using phantom Confederate accounts within the Zoom platform ensures consistency and control and eliminates potential confounds introduced by human confederates.

Participants will be randomly assigned to three situations to explore the effects further. The first situation will place participants in a meeting room with four phantoms displaying prominent Chinese names, resulting in a Chinese-to-non-Chinese ratio of 1:4, excluding the host. The second situation will randomly assign participants to a Zoom room with nine phantoms having prominent Chinese names, resulting in a Chinese-to-non-Chinese ratio of approximately 1:2. The remaining participants will be assigned to a Zoom room where all spirits will have major Chinese characters, representing 100% of the participants.

Their self-introductions will be recorded in audio and video to assess participants' stress levels and examine the impact of ingroup bias. These recordings will provide valuable insights into how bias influences individuals' behavior, attitudes, and reactions when interacting with members of different groups [7]. The uncertainty-reduction hypothesis helps explain this phenomenon as individuals seek to minimize uncertainty and find meaning and belonging through group affiliation [21]. Trained coders will be recruited to analyze participants' stress and anxiety levels, ensuring a comprehensive analysis. Two coders will focus on decoding stress and anxiety levels based on participants' vocal expressions. The other two coders will compare the stress and anxiety levels exhibited in participants' muted video recordings. To ensure consistency and reliability, all coders must utilize a 7-point Likert scale to rate their perception of participants' stress and anxiety levels. Once the decoding data from these groups are obtained, the data will be compared to derive the results and draw meaningful results.

#### 4. Results Analysis

In the ideal prediction, it is expected to observe a negative correlation between the number of phantoms with Chinese names and participants' stress and anxiety levels, indicating that the ingroup bias has a mitigating effect. However, it is necessary to explore alternative scenarios that could potentially impact the predicted results and provide a more comprehensive understanding of the complex dynamics involved. In one alternative situation, the negative correlation between the number of phantoms with Chinese names and participants' anxiety and stress levels may not be strongly negative, suggesting that other unidentified factors could influence the final results. Conversely, the expected correlation between the number of phantoms with Chinese names and participants' anxiety and stress levels may not be observed in the worst-case alternative situation. These possibilities emphasize exploring potential explanations for these unexpected outcomes and considering additional factors influencing the results.

As mentioned earlier, the English proficiency of Chinese students significantly affects their social network, as individuals in the host country tend to befriend Chinese students with strong English skills. Barratt and Huba's study supports this observation, highlighting the importance of English proficiency in student adjustment and satisfaction [5]. It is reasonable to hypothesize that participants with high scores on the TOEFL/IELTS exams, indicating more robust English proficiency, may be less influenced by the presence of phantoms with Chinese names during self-introductions. However, it should be noted that participants' previous experiences and personality traits, particularly introversion, may also impact their self-introduction performance. Furthermore, it is essential to acknowledge that in this experiment, participants will not have visual access or direct interaction with the phantoms, potentially affecting their performance to some extent.

By considering these potential explanations and alternative scenarios, this proposal aims to enhance the understanding of the intricate dynamics at play and gain valuable insights into the impact of English proficiency, past experiences, and personality traits on participants' responses to the experiment.

## 5. Conclusion

The experiment proposed in this paper presents a novel approach to studying the social circles of Chinese students pursuing higher education abroad. By integrating theories of implicit ingroup bias with existing research, this study aims to provide a more nuanced and precise examination of the topic. Potential and practical solutions can be formulated if the final results align with expectations. For instance, universities could consider designing activities to facilitate collaboration between Chinese and local students, fostering fundamental trust-building. Trust has been identified as a dominant response tendency in social interactions, with participants consistently displaying a greater inclination towards trust rather than mistrust [22]. Furthermore, interventions targeting childhood, a critical period for developing racial attitudes, can be implemented to promote positive intergroup relationships [23]. Consequently, if Chinese students exhibit implicit ingroup bias, it may be necessary for the Chinese government to provide relevant education to foster racial and cultural equality.

However, it is essential to note that this experiment does not investigate the interactions between participants and confederates, unlike other research that employed the Implicit Association Test (IAT) with images to study non-explicit ingroup bias [24, 16]. Furthermore, unlike Jacoby-Senghor's study, the proposed experiment lacks a real-world setting, limiting its generalizability to real-life situations [7]. Accordingly, future studies should address these limitations to enhance the reliability and validity of the findings.

Overall, the proposed experiment represents a significant step toward analyzing the social segregation of Chinese international students from a nuanced angle. Even if the results may not align with the initial hypothesis, the endeavor is still valuable and inspiring for future relevant research to finish this highly potential puzzle.

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