The Effect of General Trust on Willingness to Communicate in English among Japanese Individuals, Groups, and Areas

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Abstract

The dissertation examined the effect of general trust on willingness to communicate (WTC) among Japanese individuals, groups, and areas. Chapter 2 reviewed the literature of WTC studies and showed the focus of the present study. Chapter 3 revealed a positive correlation between the scale of communication behavior in English and WTC in English, indicating the validity of WTC scale. In Chapter 4, it was demonstrated that general trust continued to exert a positive impact on WTC in English among Japanese individuals, even when controlling for the influence of the Big Five personality traits. Through the three studies, it was shown that general trust predicted WTC in English. In Section 1 of Chapter 5, an analysis was conducted to explore the impacts of individual-level and group-level trust on WTC in English. The study focused on Japanese university students in a group-language learning environment, revealing both individual-level and group-level effects over the course of one semester. In Section 2 of Chapter 5, the investigation shifted to examine the effects of general trust on WTC in English among Japanese individuals, considering both individual and

prefectural capital levels. Notably, the macro-level effects demonstrated a robust predictive capacity for WTC. Chapter 6 showed individuals with higher levels of general trust exhibited greater international posture and confidence in second language communication, leading to higher levels of WTC in English. Furthermore, a detailed analysis of various WTC situations revealed that irrespective of the variations in English communication scenarios, general trust consistently exerted a positive influence on each WTC situation. Chapter 7 proposed the new WTC model based on general trust. Finally, Chapter 8 discussed the results of the present study and future studies.

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Chapter 1: Introduction

English Communication in Japan

The English communication of Japanese people has numerous merits, including cultural understanding, language learning, and business opportunities (Yashima et al., 2004). Cultural understanding entails experiencing different cultures through interactions with foreigners. Language learning involves enhancing English skills. Business opportunities refer to ventures targeting foreign markets. Furthermore, English communication is crucial for business in foreign markets. In 2022, the Ministry of Economy, Trade, and Industry initiated a policy known as the “Startup Development Five-year Plan,” wherein the government invested significantly in startup companies.

According to a survey by Ito (private communication), which targeted 2240 Japanese people in their 30s and 40s, 90% of the participants answered “not at all” or “not so much” to the question, “In daily life, how often do you talk with English

speakers?" Even though the policy of foreign language education sets the guideline of "developing attitudes towards foreign language communication actively and autonomously" (Ministry of Education, Culture, Sports, Science and Technology, 2023), attaining this objective proves difficult given the restricted chances for communication in a foreign language. Therefore, research on willingness to communicate, which demonstrates positive attitudes towards communication, has a significant attention in academic fields.

Reviews and Issues of Previous Studies

The foremost predictor of communication behavior in a second language (L2) is acknowledged to be Willingness to Communicate (WTC) (MacIntyre et al., 1998). WTC in L2 is defined as the readiness to engage in conversation at a particular moment with a specific individual or individuals using a second language when one is free to do so (MacIntyre et al., 1998). Interestingly, if people have the same language ability, WTC would vary depending on their psychological state (MacIntyre et al., 1998). For example, if some Japanese individuals have the same level of English

proficiency, one of them who feels anxious may not have a positive attitude towards communication, whereas others who are confident may display a positive attitude. In short, perception and emotion in a second language communication directly influence the attitudes towards language communication.

The WTC scale was initially developed in Canada, where people speak French as a second language in their daily lives. However, in Japan, English is considered a foreign language, and Japanese people do not typically use English in their daily interactions. Therefore, it is essential to investigate whether the scale is applicable in the Japanese language context. The scale employed abstract communication situations, such as “Talking in a small group of acquaintances,” making it difficult for participants to envision the scenario. Regardless of the problem, previous studies have not sufficiently assessed the validity of the WTC scale.

Furthermore, previous studies have primarily focused on perception and emotion in a second language communication such as confidence in English communication and an international posture. For example, if individuals have confidence in speaking

English and an interest in foreign affairs, their WTC tends to be high. However, these studies have not delved into the fundamental factors of interpersonal relationships; they lack an understanding of how individuals perceive others, even though communication inherently involves the dynamics of partners. In short, they lack perspectives on evaluating communication partners. According to Yamagishi (1998), people evaluate the trustworthiness of others to form interpersonal networks. If a partner breaks a promise, it can have significant implications. Therefore, evaluating the trustworthiness of others, which is called general trust in the present study, is crucial.

In addition, the level of general trust varies not only among individuals, but also among groups and areas, and the effects on WTC also varies. For example, groups with higher general trust will exhibit a higher WTC in English, and areas with higher general trust will also demonstrate higher WTC in English. However, previous studies have not demonstrated these effects at the group or area levels. The present study explores the influence of group and area trust on WTC.

Purposes of the Dissertation

Here are the purposes of the dissertation:

1, Assessing the validity of WTC scales.

2, Examining the positive impact of general trust on English WTC.

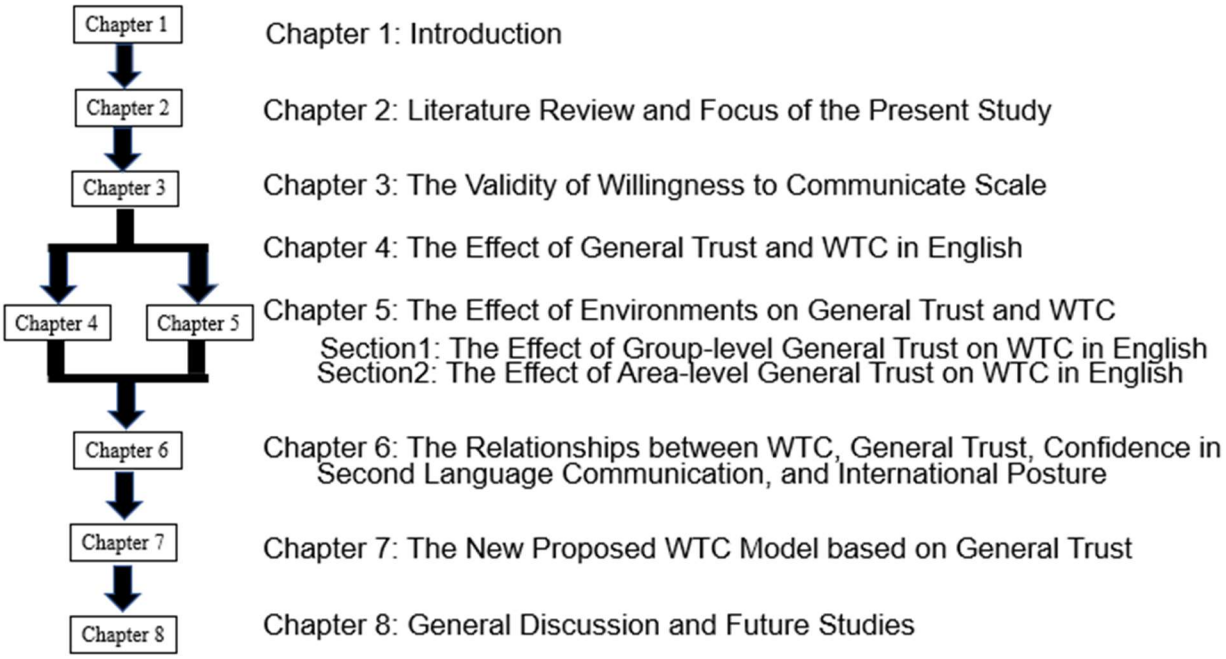
3, Examining the positive impact of group-level and area-level general trust on WTC in English.

4, Proposing a new model of WTC in English based on general trust.

Structures of the Dissertation

Figure 1-1 shows the flowchart of the dissertation.

Figure 1-1. The flowchart of the dissertation



Chapter 2 depicts the literature review and issues of the previous studies, and how general trust influences WTC in English.

Chapter 3 makes a scale to reflect actual communicating behaviors in English for Japanese people and examines the relationship between the WTC scale and the behavior scale to assess the validity of the scale.

Chapter 4 delves into the examination of the positive influence of general trust on WTC in English. The study specifically concentrates on Japanese university

students and the broader general population.

Section 1 of Chapter 5 examines the positive impact of group-level general trust on WTC in English in a group language-learning setting. Section 2 of Chapter 5 investigates the impact of area-level general trust on WTC in English in prefectures.

Chapter 6 examines the influence of general trust on WTC in English with a focus on perception and emotion in a second language communication such as confidence in English and international posture in 74 communication situations.

Chapter 7 proposed the new model of WTC in a second language based on general trust which is important for interpersonal relationships.

Chapter 2: Literature Review and Focus of the Present Study

Here, previous studies on WTC are reviewed, and the focus of the present study is discussed. This dissertation identifies the unresolved issues in those studies. It proposes that general trust is a crucial factor in addressing these problems and suggests a new model.

Research of Willingness to Communicate

The objective of language learning is to facilitate positive communication between individuals who speak different languages and come from diverse backgrounds (MacIntyre et al., 1998). The utilization of a second language (L2) is pivotal in the process of language acquisition (Yu et al., 2011). Nevertheless, East Asian populations, such as the Japanese, exhibit a low level of communication behavior in L2. In the context of a globalized society where harmonious coexistence is crucial, understanding behavior becomes essential. To propose effective interventions in L2 education, it is imperative to identify the psychological factors influencing behavior.

Researchers have endeavored to identify the psychological factors influencing communication behavior in second or foreign languages, examining various populations including Canadians (MacIntyre et al., 2001; MacIntyre & Charos, 1996; MacIntyre et al., 1998), as well as Asian individuals such as the Japanese (Hashimoto, 2002; Ito, 2013; Yashima, 2002; Yashima et al., 2004), Chinese (Peng & Woodrow, 2010), Koreans (Li, 1998), and Malaysians (Yousef et al., 2013).

Researchers have put forth various psychological factors, with willingness to communicate (WTC) in a second language (L2) being identified as the most influential factor in predicting communication behavior (MacIntyre et al., 1998). WTC in L2 is defined as the readiness to engage in conversation at a particular moment with a specific individual or individuals using a second language when one is free to do so (MacIntyre et al., 1998). Positive correlations between WTC and the frequency of communication in L2 have been documented (Hashimoto, 2002; MacIntyre & Charos, 1996; Yashima et al., 2004). Additionally, a positive correlation has been observed between WTC in L2 and academic achievement (Oz, 2014).

Interestingly, if people have the same language ability, WTC would vary depending on their psychological state (MacIntyre et al., 1998). For example, if some Japanese individuals have the same level of English proficiency, one of them who feels anxious may not have a positive attitude towards communication, whereas others who are confident may display a positive attitude. In short, perception and emotion in a second language communication directly influence the attitudes towards language communication.

Second language anxiety (anxiety in using a second language) is also an important factor in predicting WTC in L2. According to MacIntyre & Charos (1996), targeting Canadian students, second language anxiety negatively influenced WTC in L2, resulting in a lower frequency of L2 communication. Individuals with language anxiety are not positive about language communication.

Second language learning motivation (motivation to learn a second language) is also an important factor. Second language learning motivation positively influenced WTC in L2 via confidence in second language communication, targeting Japanese

university students (Yashima, 2002). Furthermore, Yousef et al. (2013) showed that second language learning motivation positively influenced WTC in L2 via confidence in second language communication, targeting university students in Malayasia. Individuals with higher second learning motivation are positive about language communication by getting higher confidence in a language communication.

Among the psychological factors predicting WTC in L2, confidence in second language communication (estimation of how well people can communicate) is the crucial factor (Khajavy et al., 2018; Peng & Woodrow, 2010; Yashima et al., 2004). Elahi Shirvan et al. (2019) investigated by a meta-analysis the correlation between WTC in L2 and three psychological factors influencing second language learners' WTC, specifically confidence in a second language communication, language anxiety, and motivation. As a result, confidence in a second language communication had the strongest power to predict WTC in L2. Individuals with confidence in a language communication are positive about language communication.

International posture (interest in international society or foreigners) is also

considered a predictive factor for WTC (Yashima, 2002). It encompasses interest in foreign or international affairs, a willingness to reside or work abroad, and an openness to engage with intercultural partners. International posture positively influenced WTC in L2. Individuals with higher international posture are positive about language communication.

Not only perception and emotion in a second language communication but also environment and personality influence WTC in L2. Chance of communicating with a second language speakers positively influenced WTC in L2, targeting Canadian students (MacIntyre & Charos, 1996). Individuals with lots of opportunities to communicate in a second language have a positive attitude toward language communication. Furthermore, Peng and Woodrow (2010) conducted an examination of the favorable impacts of classroom environment, including teacher support (comprising the teacher's assistance, friendship, trust, and demonstrated interest in students), student cohesiveness (referring to the degree to which students are acquainted, assist, and support one another), and task orientation (highlighting the

significance of completing activities and maintaining focus on the subject matter) on WTC in a second language (L2). The study specifically focused on university students in China.

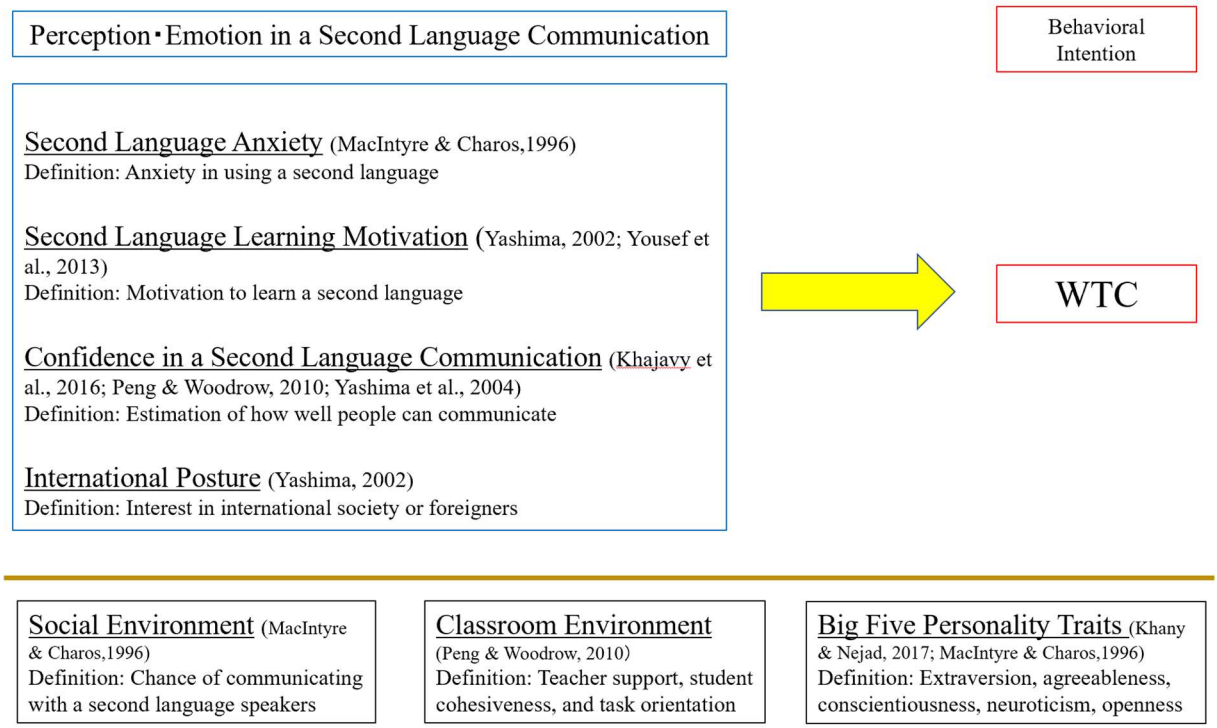
According to the pyramid model of WTC in a second language (L2) proposed by MacIntyre et al. (1998), personality traits serve as foundational factors for WTC. These traits exert their influence on WTC through affective and cognitive factors, including perceived competence and anxiety. The Big Five personality traits are commonly employed in predicting WTC in a second language. They consist of extraversion, agreeableness, conscientiousness, neuroticism, and openness (Gosling et al., 2003).

MacIntyre and Charos (1996) demonstrated that openness influenced WTC in a second language (L2) through perceived competence in an L2, while extraversion affected WTC through anxiety in L2. Additionally, agreeableness was found to have a direct relationship with WTC in L2, focusing on Canadian students. Moreover, personality traits serve as substantial predictors of foreign language proficiency,

explaining 13% of its variance, as indicated by Ghapanchi et al. (2011).

Figure 2-1 summarizes the psychological factors that predict WTC in a second language. In this summary, perceptions and emotions in second language communication directly predict WTC, while the environment and personality factors play indirect or moderating roles in predicting WTC.

Figure 2-1. Summary of the psychological and environmental factors that predict WTC in a second language



Issues with Previous Research and Focus of the Present Study

The WTC scale was initially developed in Canada, where people speak French as a second language in their daily lives. However, in Japan, English is considered a foreign language, and Japanese people do not typically use English in their daily interactions. Therefore, it is essential to investigate whether the scale is applicable in the Japanese language context. The scale employed abstract communication situations,

such as “Talking in a small group of acquaintances,” making it difficult for participants to envision the scenario. Regardless of the problem, previous studies have not sufficiently assessed the validity of the WTC scale.

Furthermore, previous studies have primarily focused on perception and emotion in a second language communication such as confidence in English communication and an international posture. For example, if individuals have confidence in speaking English and an interest in foreign affairs, their WTC tends to be high. However, these studies have not delved into the fundamental factors of interpersonal relationships; they lack an understanding of how individuals perceive others, even though communication inherently involves the dynamics of partners. In short, they lack perspectives on evaluating communication partners. According to Yamagishi (1998), people evaluate the trustworthiness of others to form interpersonal networks. If a partner breaks a promise, it can have significant implications. Therefore, evaluating the trustworthiness of others is crucial. Therefore, the present study examines whether people will trust their communication partners, as this forms the foundation of

effective English communication.

The Validity of WTC Scale (Chapter 3)

As stated above, the WTC scale was initially developed in Canada, where people speak French as a second language in their daily lives. If WTC is investigated in Japan, it is essential to examine whether the scale is applicable in the Japanese language context where Japanese people do not typically use English in their daily interactions. Even though the WTC scale employed abstract communication situations, such as “Talking in a small group of acquaintances,” making it difficult for participants to envision the scenario, the validity of the scale has not been assessed. Chapter 3 makes a scale to reflect actual communicating behaviors in English for Japanese people and examines the relationship between the WTC scale and the behavior scale to assess the validity of the scale.

General Trust and the Effect on WTC (Chapter 4)

As stated above, previous studies have not delved into the fundamental factors of interpersonal relationships; they lack an understanding of how individuals evaluate

others. According to Yamagishi (1998), people evaluate the trustworthiness of others to form interpersonal networks. If a partner breaks a promise, it can have significant implications. Therefore, evaluating the trustworthiness of others is crucial.

Within socio-ecological frameworks that illustrate the dynamic interplay between personal and environmental factors, the concept of general trust holds significance. General trust is defined as the tendency to expect that, in general, others will not betray them (Yamagishi, 1998), and it plays a crucial role in shaping interpersonal relationships. General trust pertains to trust in people within society at large, while individual trust is specific to particular individuals (Uslaner, 2002). As mentioned earlier, since the study focuses on whether people will trust their communication partners as the basis of English communication, the present research concentrates on general trust rather than individual trust. Stereotype research studies are typically associated with individual trust, as individuals tend to trust specific persons or groups based on stereotypes. In contrast, general trust targets trust in people within society in a broader sense.

Trust can be categorized into two types. One of them is trust in others' behavioral intentions, which involves the expectation that others will fulfill their responsibilities or duties, such as keeping promises. The other type is trust in others' abilities, which is the expectation that others have the capability to fulfill their social roles, such as expecting a bus driver to safely reach the destination. The present study focuses on the former because it will have an impact in the context of WTC.

General trust is characterized as an individual trait reflecting goodwill toward others (Yamagishi & Yamagishi, 1994). Individuals with higher levels of general trust are more likely to accrue social benefits compared to those with lower trust levels. This is attributed to the former group taking more risks and exerting greater effort to maximize mutually beneficial relationships, while the latter restrict their opportunities by engaging with smaller social networks (Yamagishi, 2001). In light of this perspective, it is posited that general trust is positively associated with WTC in a second language, as it represents a personal tendency that contributes to the expansion of one's social network. Chapter 4 investigates the positive impact of general trust on

English WTC, with a focus on Japanese university students and the general population.

The level of general trust varies not only among individuals, but also among groups and areas, and the effects on WTC also varies. For example, groups with higher general trust will exhibit a higher WTC in English, and areas with higher general trust will also demonstrate higher WTC in English. However, previous studies have not demonstrated these effects at the group or area levels. In Study 3, seven prefectures are examined; however, they are insufficient for conducting a multilevel analysis to investigate the area-level effects of general trust on WTC. Therefore, Chapter 4 focuses on the individual-level effects of general trust, while Chapter 5 concentrates on the area-level effects.

Trust in Group (Section 1, Chapter 5)

The level of general trust varies among groups. Individuals within a cohesive group exhibit interdependence and a reciprocal acceptance of one another. The concept of acceptance, encompassing the acknowledgment of each other's emotions, values,

and challenges, is positively linked with trust, as noted by Roark and Sharah in 1989. Consequently, the strength of the connections within a group, referred to as group cohesiveness, shows a positive correlation with trust according to the findings of Roark and Sharah in 1989. On the other hand, lower group cohesiveness results in reduced trust.

In an educational context, the impact of varying levels of group factors on WTC has been investigated. Peng and Woodrow (2010) conducted a study investigating the favorable impacts of the classroom environment on WTC in a second language (English). They specifically examined teacher support (encompassing the teacher's assistance, friendship, trust, and interest shown to students), student cohesiveness (the extent to which students are acquainted, help, and support each other), and task orientation (emphasizing the importance of completing activities and staying focused on the subject matter). The study focused on Chinese university students. In a study by Dewaele (2019), that foreign language enjoyment and the frequency of foreign language use by teachers served as positive predictors for WTC among English

learners from Spain. Khajavy et al. (2018) employed doubly latent multilevel analysis, which combines multilevel analyses with structural equation models, to demonstrate that a positive classroom environment was associated with enhanced WTC and enjoyment, as well as reduced anxiety. Their study targeted secondary school students in Iran, indicating that enjoyment increased WTC at both the student and classroom levels.

According to Chapter 4, trust will lead to positive attitudes towards language communication. As stated above, in an educational context, the impact of varying levels of group factors on WTC has been shown. Therefore, in a group-language learning setting, it will be revealed that if a group has higher trust, the group shows higher WTC in English. Section 1 of Chapter 5 examines the positive impact of group-level general trust on WTC in English in a group language-learning setting.

General trust, as defined by Yamagishi (1998), is a personal tendency regarding how much individuals trust others in general. However, in the context of group language work, trust takes on a different meaning. Specifically, it becomes a personal

tendency indicating the level of trust individuals have in their classmates with whom they have continuous interaction. Therefore, the quality of trust in a group setting differs from general trust.

Previous studies, as highlighted by Yamagishi and Komiyama (1995), suggest that general trust includes trust in the group as a whole without specifying individuals, identifying instead the overall image of the group. This concept is not directly applicable in situations involving continuous interaction, as such interactions lead to the development of specific images for each group member.

The main survey in the present study focuses on three points in time: the beginning, middle, and end of the group project. At the project's commencement, each group member is unfamiliar with the others, and their trust in fellow members is encompassed within the concept of general trust, as per its definition. However, as the project progresses, members interact and become more acquainted with each other, leading to a shift in their trust dynamics. The trust they develop toward other members differs from the initial definition of general trust. The present study aims to compare

the results of this evolving trust with its impact on WTC.

Trust in Prefecture (Section 2, Chapter 5)

The level of general trust also varies among areas. The level of general trust in individuals is influenced by the surrounding environment, specifically the extent of opportunities to form new interpersonal relationships. As explained by Yamagishi (1998), the flexibility of interpersonal relationships and networks is comparatively lower in Japan than in America. Japanese individuals encounter fewer chances to establish new connections, leading to a tendency of reduced general trust in others. In short, when people have the opportunity to meet new individuals, they also have the chance to evaluate the trustworthiness of others, potentially leading to an increase in their level of trust. This is related to “trust” (Putnam, 1993), which is one of the components of social capital, contributing to enhanced social efficiency. Taking a socio-ecological perspective, which underscores the influence of the social environment on the human mind, Ito (2021) examined the influence of area-level relational mobility—indicating the extent to which people can encounter new

individuals (Yuki et al., 2007)—on WTC in English. The study focused on Japanese individuals residing in 20 prefectural capitals (typical cities). The results of a multilevel analysis revealed that individual-level relational mobility positively affected individual-level WTC in English. Furthermore, prefectural capital-level relational mobility exerted a positive impact on prefectural capital-level WTC. For instance, individuals in areas with lots of opportunities to meet new people are likely to communicate in English with others positively. However, individuals in areas with fewer opportunities to meet new people may not communicate as positively. This study proposes that human language behavior is shaped by the social environment.

The opportunity to meet new people varies depending on prefectures (Iwatani & Muramoto, 2017), indicating that the level of general trust also varies depending on the prefecture. For instance, individuals in cities have higher trust in others due to the many opportunities to interact with foreigners, whereas people in rural areas have lower trust due to fewer such opportunities. According to Chapter 4, trust will lead to positive attitudes towards language communication. Consequently, the hypothesis is

put forth that individual-level general trust would positively influence WTC in English. Moreover, it is hypothesized that prefecture-level general trust would also have a positive impact on prefecture-level WTC in English. For example, individuals in prefectures with higher general trust are likely to communicate in English with others positively. However, individuals in prefectures with lower general trust may not communicate as positively. In Section 2 of Chapter 5, an exploration is undertaken to understand the influence of macro-level general trust on WTC. Macro-level general trust, in this context, pertains to the overarching level of trust within the social environment. It represents an aggregation of the individual trusts within that specific environment.

The Relationships between General Trust and Other Factors (Chapter 6)

Chapter 4 investigates the positive impact of general trust on WTC in English and Chapter 5 investigates the positive impact of group-level and prefecture-level general trust on WTC in English. The studies examine the relationships between general trust and WTC in English at the micro-level and macro-level. However, they have not

revealed the relationships between general trust and other psychological factors which predict WTC directly. As stated above, perception and emotion in a second language communication such as confidence in a second language communication and international posture directly influence the attitudes towards language communication. If the relationships between general trust and these factors are not examined, the actual effect of general trust on WTC in English is not revealed. Therefore, Chapter 6 aims to provide a comprehensive understanding of the WTC by examining general trust and other psychological factors which predict WTC directly. Through social survey, the influence of general trust will be revealed, with a focus on confidence in English and international posture.

Furthermore, Chapter 6 tries to reconstruct the items of the WTC scale with a detailed communication situation and to examine the impact of general trust on each situation of WTC. Previous studies have focused on ambiguous situations of WTC, such as “Talking in a small group of acquaintances,” but it was not easy for participants to imagine the situation and it is not revealed whether general trust influences 74 various

detailed communication situations. The research outlines specific communication scenarios from three angles: whether the conversation would develop or not, whether it was an active or passive interaction, and whether the conversation partner was a native or non-native speaker.

The New Proposed Model (Chapter 7)

Chapter 6 examines the relationships between general trust and other psychological factors such as confidence in a second language communication and international posture by using the reconstructed items of the WTC scale with 74 detailed communication situations. This chapter suggests that general trust is a fundamental factor for WTC in English. Chapter 7 proposes the new model of WTC in a second language based on general trust which is important for interpersonal relationships.

Summary of Dissertation

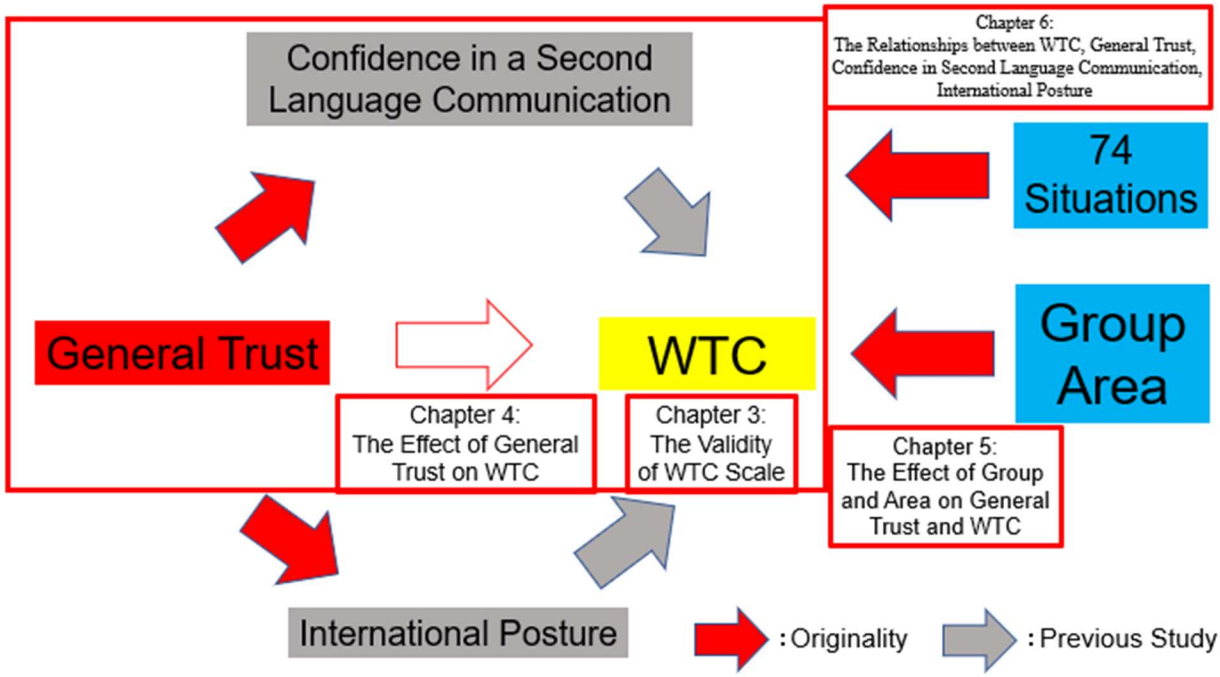
Here is the summary of Dissertation (Figure 2-2). Chapter 3 makes a scale to reflect actual communicating behaviors in English for Japanese people and examined the relationship between the WTC scale and the behavior scale to assess the validity of

the WTC scale. Chapter 4 investigates the positive impact of general trust on English WTC, focusing on Japanese university students and the general population. Section 1 of Chapter 5 examines the positive impact of group-level general trust on WTC in English in a group language-learning setting in Japan. Section 2 of Chapter 5 investigates the positive impact of prefecture-level general trust on WTC in English, targeting Japanese prefectures. Chapter 6 examines the relationships between general trust and other psychological factors such as confidence in a second language communication and international posture by using the reconstructed items of the WTC scale with 74 detailed communication situations, targeting Japanese general population. Chapter 7 proposes the new model of WTC in a second language based on general trust. Figure 2-2 shows the conceptual diagram of the present studies.

Figure 2-1 summarizes the psychological factors that predict WTC in a second language, where perception and emotion in second language communication directly predict WTC. In Figure 2-2, the effects of general trust, environments, and situations are added to Figure 2-1 as original components. Control variables such as environment

and personality are abbreviated in Figure 2-2.

Figure 2-2. The conceptual diagram of the present studies

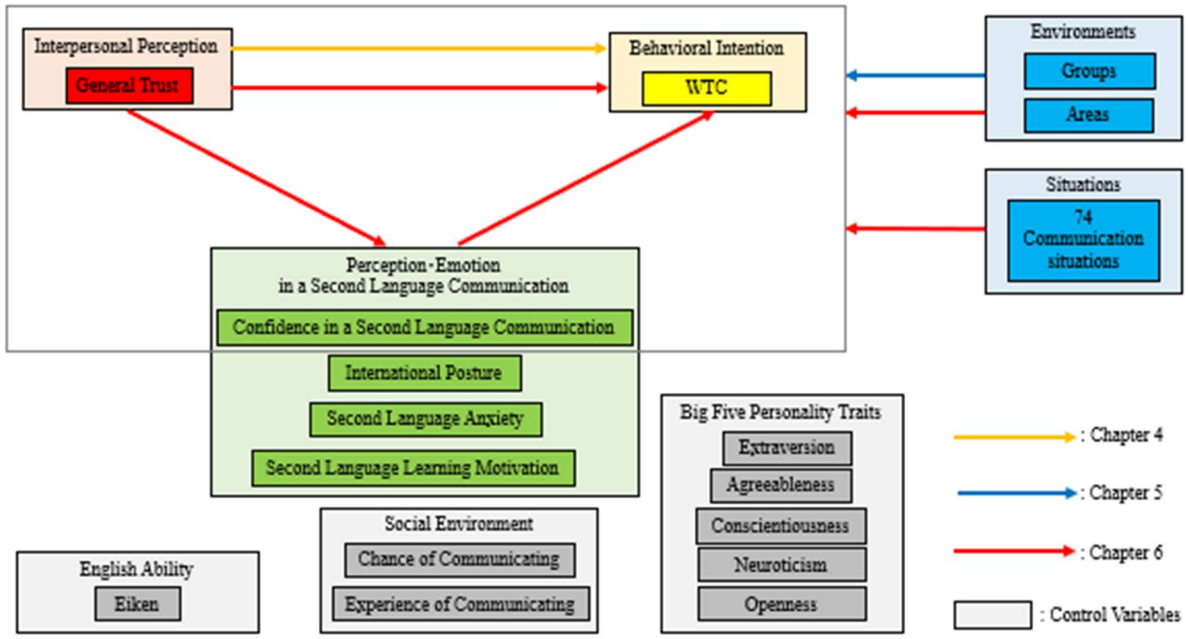


Chapter 4 presented the direct impact of general trust on WTC. However, in Chapter 6, this direct effect vanished after accounting for perception and emotion in second language communication. Consequently, in Figure 2-2, the red arrow has been altered to a red-bordered white arrow to signify the indirect effect of general trust.

The association chart illustrates the relationships among the variables to be

examined in each chapter (Figure 2-3). In Chapter 4, it will be explored the paths from interpersonal perception (general trust) to behavioral intention (WTC), controlling for the big five personality traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness), the social environment (chance of communicating), and English ability (Eiken). Chapter 5 will focus on the path from environments (Groups and Areas) to the interpersonal perception and the behavioral intention. Additionally, at Chapter 6, it will be investigated the path from the interpersonal perception to the behavioral intention, as well as the path from the perception and emotion in second language communication (confidence in second language communication, international posture, second language anxiety, and second language learning motivation) to the behavioral intention. The path from the interpersonal perception to the perception and emotion will be also examined.

Figure 2-3. The association chart of the variables in dissertation



Chapter 3: The Validity of Willingness to Communicate Scale

This chapter investigates the validity of the WTC scale (MacIntyre & Charos, 1996; McCroskey, 1992). The WTC scale was primarily developed in Canada where people speak French as a second language in their daily live to predict second-language (French) communication behaviors. However, in Japan, English is considered a foreign language, and Japanese people do not typically use English in their daily interactions. Therefore, it is essential to investigate whether the scale is applicable in the Japanese language context. The scale employed abstract communication situations, such as “Talking in a small group of acquaintances,” making it difficult for participants to envision the scenario. Therefore, the present study made a scale to reflect communicating behaviors in English for Japanese people and examined the relationship between the WTC scale and the behavior scale to assess the validity of the WTC scale.

Initially, as part of the pre-survey targeting university students who had studied

abroad, the content validity of the behavior scale was evaluated. If the Japanese English learners found certain items challenging to imagine, those items were eliminated. Furthermore, in the main survey targeting high school students, the correlation between the constructed behavior scale and the WTC scale was investigated.

Pre-survey: Content Validity of Scale of Communication Behavior in English

The content validity of the behavior scale was evaluated. If the Japanese English learners found certain items challenging to imagine, those items were eliminated.

Methods

Participants. Students from a private university in Tokyo who participated in the summer English study abroad program completed the questionnaires. Upon their return to Japan, the URL for the web questionnaires was sent to them. In the end, 39 students responded to the questionnaires (men = 17, women = 22).

Procedure. In the initial stages of creating the scale for communicating

behaviors in English, five purposes of communication were established: greeting, providing information, expressing feelings, conveying thoughts, and asking questions. Additionally, various communication contexts including location and interaction partner were incorporated to delineate clearer communication situations. Examples of items for each purpose are as follows:

Greeting: In Japan, I greet a foreign teacher in English in an English classroom.

Providing information: In Japan, I provide directions in English to foreign tourists who are lost on the street.

Expressing feelings: In English speaking country, I thank a waiter in English at a restaurant.

Conveying thoughts: In English speaking country, I express my opinion in English about the conversation topic to my host family.

Asking questions: In English speaking country, I ask a staff member in English how to transfer at a station.

Next, participants indicated the extent to which Japanese English learners could

imagine the communication situation using the following scale: 1 (possible), 2 (slightly possible), 3 (slightly not possible), 4 (not possible). If the combined ratio of responses for No. 3 and 4 was greater than 50%, these items were excluded from the main survey.

Results

In the Japanese context, responses such as “I greet in English to the foreign neighbors in the neighborhood” and “I greet in English to passing foreign tourists on the street” were greater than 50% (No.3 & 4). In English speaking countries’ context, responses such as “I complain in English to the waiter about the food ordered at the restaurant” and “I complain in English to the staff about the purchased item at the supermarket” were greater than 50% (No.3 & 4). Therefore, these items were excluded from the main survey.

The constructed scales included items such as in Japan, “I provide directions in English to foreign tourists who are lost on the street,” and in English-speaking countries, “I express my opinion in English about the conversation topic to the host

family," "I ask for directions in English from strangers on the street," and "I place food orders in English with the waiter at the restaurant." The response options were "doing actually" or "not doing."

Main Survey: The Relationship between Communication Behavior and WTC

The correlation between the constructed behavior scale and the WTC scale was investigated.

Methods

Participants. There are 341 high school students at the only boys' private school in Kanagawa prefecture, with 78 students in the 1st grade, 125 in the 2nd grade, and 138 in the 3rd grade. After excluding participants who provided insufficient answers, a total of 304 participants were included in the data analysis.

Questionnaire

WTC in English. The WTC scale was made based on the previous WTC scale (Yashima, 2002). The participants indicated their willingness to engage in each specified

activity. The scale encompassed two communication contexts, namely talking in dyads and small groups, involving two categories of receivers: strangers and acquaintances. Additionally, the scale covered communication for five distinct purposes. A total of 30 items such as “I greet in English to a stranger” and “I express my opinion in English to a group of acquaintances” was used for WTC in English ($\alpha = .97$). The response options for all statements ranged from 1 (never) to 5 (strongly).

Communication Behavior in English. The scale of communication behavior in English was developed during the pre-survey. The scale included twenty-six items. Five purposes of communication were established: greeting, providing information, expressing feelings, conveying thoughts, and asking questions. Additionally, various communication contexts including location and interaction partner were incorporated to delineate clearer communication situations. Examples of items for each purpose are, for greeting (3 items), “In Japan, I greet a foreign teacher in English in an English classroom,” for providing information (6 items), “In Japan, I provide directions in English to foreign tourists who are lost on the street,” for expressing feelings (5 items),

"In English speaking country, I thank a waiter in English at a restaurant," for conveying thoughts (4 items), "In English speaking country, I express my opinion in English about the conversation topic to my host family," and for asking questions (8 items), "In English speaking country, I ask a staff member in English how to transfer at a station."

Results

A positive correlation of .53 ($p < .01$) was found between the scale of communication behavior in English and WTC in English.

Next, the scale of communication behavior in English was divided based on five communication purposes: greeting (3 items), providing information (6 items), expressing feelings (5 items), conveying thoughts (4 items), and asking questions (8 items). Each scale score based on the purpose was calculated using the average of the sub-item scores. As a result of the correlation test, each communication behavior purpose showed a positive correlation with WTC in English (Table 3-1). Despite the various purposes of English communication, WTC demonstrated a positive relationship with all of them.

Table 3-1. Correlation between WTC and each communication purpose

	WTC
Greeting in English	.27**
Providing Information in English	.47**
Expressing Feelings in English	.40**
Conveying Thoughts in English	.43**
Asking Questions in English	.47**

** $p < .01$

Discussion

The pre-survey established the scale of communication behavior in English by assessing content validity. The main survey revealed a positive correlation between the scale of communication behavior in English and WTC in English. Furthermore, the sub-scale (five communication purposes) of communication behavior in English and WTC in English also exhibited a positive correlation. Based on the results, despite the abstract situations presented in the WTC scale, such as “I express my opinion in English to a group of acquaintances,” it is valid for measuring positive attitudes toward second

language communication.

Furthermore, as mentioned earlier, the WTC scale was initially developed in Canada, where individuals use French as a second language in their daily lives, to predict second-language (French) communication behaviors. However, in Japan, English is regarded as a foreign language, and Japanese people typically do not use English in their daily interactions. The present study demonstrated that despite the linguistic differences in daily necessity, the WTC scale developed in Canada is applicable in the Japanese language context. Starting from Chapter 4, the WTC scale will be utilized to measure positive attitudes.

It is necessary and comparatively easy for Canadian people to acquire the French language since they have used it in their daily lives from childhood. In contrast, acquiring the English language is challenging for Japanese people due to its lack of necessity in daily life and significant linguistic differences between English and Japanese. Consequently, when researchers investigate WTC in Japan, it is assumed that the influencing factors in Japan differ from those in Canada. For instance, in Canada,

integrated motivation, which involves the desire to participate in a specific community where French is used, influences WTC. In Japan, however, international posture, reflecting an interest in the global community or foreigners, plays a significant role in influencing WTC. The motivation to learn English for Japanese people differs from that of learning French for Canadian people in terms of daily life necessity. Therefore, at Chapter 6, international posture was used instead of integrated motivation to predict WTC for Japanese people.

Chapter 4: The Influence of General Trust on English WTC

This chapter demonstrates the positive influence of general trust on WTC in English, concentrating on Japanese university students and the general population. While numerous studies have emphasized the Big Five personality traits as essential predictors of WTC in a second language, the current study underscores the noteworthy impact of general trust as a foundational factor in this regard.

As stated above, previous studies of WTC have not delved into the fundamental factors of interpersonal relationships; they lack an understanding of how individuals evaluate others. According to Yamagishi (1998), people evaluate the trustworthiness of others to form interpersonal networks. If a partner breaks a promise, it can have significant implications. Therefore, evaluating the trustworthiness of others is crucial.

General trust is characterized as an individual trait reflecting goodwill towards others (Yamagishi & Yamagishi, 1994). Individuals with higher levels of general trust are more likely to accrue social benefits than those with lower trust levels. This is

attributed to the former group taking more risks and exerting greater effort to maximize mutually beneficial relations, while the latter restrict their opportunities by engaging with smaller social networks (Yamagishi, 2001). From this standpoint, it is posited that general trust is positively associated with WTC in a second language. This is because general trust is considered a personal tendency that contributes to the development of one's social network.

In Study 1, which focused on university students in Tokyo, the investigation aimed to determine whether there was a positive impact of general trust on WTC in English.

In Study 2, which focused on the general population in Tokyo, the research aimed to explore the implications of the findings from Study 1. Study 1 specifically involved Japanese university students in Tokyo, primarily associated with university life, circles, part-time jobs, or communities. In Study 2, the target expanded to the broader Japanese population in Tokyo. Unlike university students, individuals in the workforce had diverse interpersonal relationships, often belonging to social clubs or

communities. The objective of Study 2 was to validate and replicate the results obtained in Study 1.

In Study 3, which encompassed the general population across seven prefectures spanning from north to south Japan, the research aimed to investigate the implications of the findings from Studies 1 and 2. Unlike the previous studies that focused solely on individuals in Tokyo, Studies 1 and 2, the current study sought to broaden its scope for generalization. The objective was to include not only prefectures, such as Tokyo, where interpersonal relationships are deemed flexible but also those where such flexibility is comparatively less common.

As stated above, the level of general trust varies not only among individuals, but also among groups and areas, and the effects on WTC also varies. In Study 3, seven prefectures were examined; however, they were insufficient for conducting a multilevel analysis to investigate the area-level effects of general trust on WTC. Therefore, Chapter 4 focused on the individual-level effects of general trust, while Chapter 5 concentrates on the area-level effects.

Study 1: University Students in Tokyo

The primary objective of Study 1, which concentrated on university students in Tokyo, was to investigate whether there was a positive impact of general trust on WTC in English. The participants in this study were predominantly university students who were actively involved in university activities, circles, communities, or part-time jobs.

Methods

Participants. The study included 305 undergraduate students drawn from three universities in Tokyo (118 males, 183 females, 4 others; mean age = 19.67, *SD* = 1.28). The participants pursued majors in art, design, computer science, and psychology. In these institutions, every student is mandated to enroll in both an English speaking and listening class and an English reading and writing class during their first year. These classes are instructed by either a native English speaker or a Japanese English speaker. Using G*Power 3.1.9.7 software (Faul et al., 2009), a multiple linear regression analysis indicated that a minimum of 172 samples was necessary to achieve a power of .95. This

study successfully met the criterion with a sufficiently large sample size.

Procedure. Students in the classes were administered questionnaires containing scales to assess WTC in English, general trust, Big Five personality traits, and control variables. The instructor distributed paper-based questionnaires to the students for completion. The participants were notified, through information provided on the first page of the questionnaire in Japanese, that their participation was voluntary and anonymous. The students gave their consent to participate.

Questionnaire.

WTC in English. The Willingness to Communicate (WTC) scale utilized in this study was derived from McCroskey's work (1992), and the Japanese version, as developed by Yashima (2002), was employed (see Appendices). Participants indicated their willingness to engage in each item as described. The scale comprised four communication contexts (talking in dyads, small groups, large meetings, and public speaking) involving three types of receivers: strangers, acquaintances, and friends. The items consist of 4 (communication contexts) by 3 (types of receivers), totaling 12 items.

The 12 items was used for WTC in English (α = .96, an acquaintance: “Talk with an acquaintance,” “Talk in a small group of acquaintances,” “Talk in a large meeting of acquaintances,” “Present a talk to a group of acquaintances”; a stranger: “Talk with a stranger,” “Talk in a small group of strangers,” “Talk in a large meeting of strangers,” “Present a talk to a group of strangers”; and a friend: “Talk with a friend,” “Talk in a small group of friends,” “Talk in a large meeting of friends,” “Present a talk to a group of friends”). The response choices for all statements varied from 1 (never) to 5 (strongly).

General trust. A total of six items were employed to evaluate participants’ general trust, exhibiting a satisfactory internal consistency with an alpha reliability coefficient of .82. The scale, published by Yamagishi and Yamagishi (1994), was utilized, and the Japanese version by Yamagishi (1998) was applied in this study (see Appendices). The items are as follows: “Most people are basically honest,” “Most people will respond in kind when they are trusted by others,” “Most people are trustworthy,” “Most people are trustful of others,” “I am trustful,” and “Most people are basically good and kind.” The response choices for all statements ranged from 1

(strongly disagree) to 5 (strongly agree).

Big Five Personality Traits. The short form of the Big-Five scale, known as the "Ten Item Personality Inventory" (Gosling et al., 2003), was employed in its Japanese version (Oshio et al., 2012: Appendices). The reliability and validity of this version have been verified (Namikawa et al., 2012). Participants were instructed to assess the perceived personality traits by responding to the 10 items provided. This scale consisted of five personality factors: extraversion: "Extraverted, enthusiastic" and "Reserved, quiet" (reverse-scored; $r = .35$, $p < .01$); conscientiousness: "Dependable, self-disciplined" and "Disorganized, careless" (reverse-scored; $r = .29$, $p < .01$); neuroticism (reversed): "Anxious, easily upset" (reverse-scored) and "Calm, emotionally stable" ($r = .15$, $p < .01$); openness: "Open to new experiences, complex" and "Conventional, uncreative" (reverse-scored; $r = .30$, $p < .01$); and agreeableness: "Critical, quarrelsome" (reverse-scored) and "Sympathetic, warm" (reverse-scored; $r = .20$, $p < .01$). For all statements, participants were provided with response options ranging from 1 (strongly disagree) to 5 (strongly agree).

Chance of Communicating with English Speakers. Participants responded to the question: “In daily life, how often do you talk with English speakers?” with answer choices ranging from 1 = not at all to 5 = every day. Subsequently, these scores were dummy-coded as 0 (No; No chance) for answer 1 and 1 (Yes; Some chances) for answers 2–5.

Results

Table 4-1 presents the means, standard deviations, and correlation matrices. The scores for WTC in English (M = 2.34, SD = 1.00) and general trust (M = 2.83, SD = 0.80) were found to be significantly below the midpoint ($t(302) = 11.52$, $p < .01$; $t(304) = 3.62$, $p < .01$). With the exception of sex (r = -.18, $p < .01$) and age (r = .05, *n.s.*), general trust and other variables exhibited positive correlations with WTC in English. Consistent with prior research, the Big Five personality traits were also positively correlated with WTC in a second language.

Table 4-1. Average values, standard deviations, and correlation matrix

	M	*SD*	1	2	3	4	5	6	7	8	9
1. WTC in English	2.34	1.00	—								
2. General Trust	2.83	0.80	.19 **	—							
3. Extraversion	2.69	0.94	.26 **	.15 *	—						
4. Agreeableness	3.52	0.84	.16 **	.13 *	.04	—					
5. Conscientiousness	2.16	0.79	.16 **	.09	.19 **	.13 *	—				
6. Neuroticism	2.52	0.86	.23 **	.11 *	.16 **	.25 **	.21 **	—			
7. Openness	3.11	0.90	.36 **	.07	.27 **	.17 **	.19 **	.24 **	—		
8. Sex (M=0, W=1)	0.61	0.49	-.18 **	-.01	-.01	-.04	.06	-.05	-.06	—	
9. Age	19.67	1.28	.05	-.10 +	-.05	-.01	.00	-.06	.03	.09	—
10. Communicating Chance	0.43	0.50	.18 **	.09	.05	.16 **	.03	.12 *	.08	-.33 **	-.09

** $p < .01$, * $p < .05$, + $p < .10$

In the initial step of the hierarchical regression analysis, it was demonstrated that extraversion, reverse-scored neuroticism, and openness had a positive impact on WTC in English ($\beta = .15$, $p < .05$; $\beta = .12$, $p < .05$; $\beta = .25$, $p < .01$; Table 4-2). After controlling for the control variables and the Big Five personality traits, the analysis indicated that general trust positively influenced WTC in English ($\beta = .11$, $p < .05$; step 2).

Table 4-2. Effects of general trust on WTC in English

	Step1	Step2
Sex (M=0, W=1)	-.13 *	-.13 *
Age	.08	.09 +
Communicating Chance	.08	.07
Extraversion	.15 *	.13 *
Agreeableness	.07	.05
Conscientiousness	.04	.04
Neuroticism	.12 *	.11 +
Openness	.25 **	.25 **
General Trust		.11 *
R^2	.21 **	.22 **
ΔR2		.01 *

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

In addition, WTC in Japanese was controlled to examine the effect of general trust on WTC. After controlling for WTC in Japanese, general trust showed positive effects on WTC in English (β = .14, $p < .05$; Table 4-3).

Table 4-3. Effects of general trust after controlling for WTC in Japanese (Study 1).

	WTC in English
General Trust	.14 *
WTC in Japanese	.24 **
R^2	.09 **

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

Furthermore, after controlling for WTC in English, general trust showed positive effects on WTC in Japanese (β = .16, $p < .01$; Table 4-4). Therefore, general trust had an independent effect on WTC when compared to the WTC in another language.

Table 4-4. Effects of general trust after adjusting for WTC in English (Study 1).

	WTC in Japanese
General Trust	.16 **
WTC in English	.24 **
R^2	.10 **

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

Study 2: General Population in Tokyo

The objective of Study 2, focusing on the general population in Tokyo, was to investigate whether general trust had a positive impact on WTC in English and whether it also positively influenced WTC in English. As previously mentioned, general trust is influenced by the surrounding social environment of individuals. Therefore, it was crucial to study different populations with distinct social surroundings to analyze the effect of general trust on WTC in English. Study 1 involved Japanese university students

in Tokyo, predominantly engaged in university activities, circles, part-time jobs, or communities. In Study 2, the focus shifted to the broader Japanese population in Tokyo, characterized by diverse interpersonal relationships in the workplace and membership in social clubs or communities. The goal was to replicate the findings of Study 1 and demonstrate the reproducibility of the results.

Methods

Participants. The sample consisted of 601 Japanese individuals residing in Tokyo (284 men, 317 women; mean age = 39.65, *SD* = 11.00). Based on the criteria of achieving a power of .95 in multiple linear regression, G*Power 3.1.9.7 software (Faul et al., 2009) determined that a minimum of 172 samples were required for this study. Importantly, the study met this criterion with a sample size considered sufficiently large.

Procedure. The study replicated the procedure employed in Study 1, but it was conducted online using a web-based survey tool named Fastask. The survey company, "Just System," distributed emails containing links to the online system to reach the Japanese population in Tokyo. Participants had the flexibility to access the survey links

at their convenience, either through their personal computers or smartphones. Information on the first page of the questionnaire, written in Japanese, clarified that participation was voluntary and anonymous. Participants explicitly provided consent to take part in the study. Upon survey completion, participants received compensation.

Questionnaire. This study utilized the same items as those in Study 1. Participants responded to all statements using a scale ranging from 1 (strongly disagree) to 5 (strongly agree), with 6 (I do not know) considered as indicative of missing values in the analysis.

WTC in English. The study employed the identical set of 12 items for measuring WTC in English as in Study 1 ($\alpha = .97$).

General Trust. The study utilized the same set of 6 items for assessing general trust as in Study 1 ($\alpha = .89$).

Big Five Personality Traits. The study employed the identical set of 10 items to assess the Big Five personality traits as used in Study 1. This scale comprises five personality factors: extraversion ($r = .19$, $p < .01$), conscientiousness ($r = .12$, $p < .01$),

neuroticism (reversed; $r = .18$, $p < .01$), openness ($r = .15$, $p < .01$), and agreeableness ($r = .01$, *n.s.*).

Chance of Communicating with English Speakers. The study utilized the same items as those in Study 1 and applied dummy coding.

Results

Table 4-5 presents the means, standard deviations, and correlation matrices. The score for WTC in English ($M = 2.52$, $SD = 1.14$) was found to be significantly below the midpoint ($t(549) = 9.84$, $p < .01$). With the exceptions of agreeableness ($r = -.03$, *n.s.*), sex ($r = -.04$, *n.s.*), and age ($r = -.10$, $p < .05$), general trust and other variables exhibited positive correlations with WTC in English. Consistent with the findings of Study 1 and previous studies, the Big Five personality traits demonstrated positive correlations with WTC in a second language.

Table 4-5. Means, standard deviations, and correlations matrix

	M	*SD*	1	2	3	4	5	6	7	8	9
1. WTC in English	2.52	1.14	—								
2. General Trust	3.01	0.91	.31 **	—							
3. Extraversion	2.82	0.88	.27 **	.12 **	—						
4. Agreeableness	3.45	0.73	-.03	.09 *	.00	—					
5. Conscientiousness	2.93	0.82	.21 **	.07	.21 **	.20 **	—				
6. Neuroticism	2.94	0.86	.24 **	.11 **	.33 **	.23 **	.42 **	—			
7. Openness	3.08	0.83	.19 **	.04	.34 **	.03	.21 **	.24 **	—		
8. Sex (M=0, W=1)	0.53	0.50	-.04	-.06	.06	.03	-.05	-.14 **	-.09 *	—	
9. Age	39.65	11.00	-.10 *	.15 **	.02	.18 **	.05	.10 *	.08 *	-.33 **	—
10. Communicating Chance	0.54	0.50	.38 **	.11 *	.18 **	-.06	.17 **	.16 **	.21 **	-.06	-.12 **

** $p < .01$, * $p < .05$, + $p < .10$

In the hierarchical regression analysis, the first step revealed that extraversion and reverse-scored neuroticism had a positive impact on WTC in English. ($\beta = .15$, $p < .01$; $\beta = .13$, $p < .01$; Table 4-6). After considering the control variables and the Big Five personality traits, the analysis indicated that general trust had a positive influence on WTC in English ($\beta = .28$, $p < .01$; step 2).

Table 4-6. Effects of general trust on WTC in English

	Step1	Step2
Sex (M=0, W=1)	-.05	-.03
Age	-.09 +	-.12 **
Communicating Chance	.27 **	.24 **
Extraversion	.15 **	.11 *
Agreeableness	-.05	-.07
Conscientiousness	.06	.06
Neuroticism	.13 **	.12 *
Openness	.05	.06
General Trust		.28 **
R^2	.20 **	.27 **
$\Delta R2$		.07 **

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

After controlling for the Eiken English ability test, general trust still had a positive effect on WTC in English ($\beta = .35$, $p < .01$; Table 4-7). Therefore, general trust had an independent influence on WTC regardless of English ability.

Table 4-7. The impact of general trust on WTC in English after accounting for Eiken

	WTC
Sex (M=0, W=1)	-.06
Age	-.11 *
Communicating Chance	.17 **
Extraversion	.12 *
Agreeableness	.05
Conscientiousness	.00
Neuroticism	.07
Openness	.08
General Trust	.35 **
Eiken	.31 **
R^2	.44 **

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

In addition, WTC in Japanese was controlled to examine the effect of general trust on WTC. After controlling for WTC in Japanese, general trust showed positive effects on WTC in English (β = .20, $p < .01$; Table 4-8).

Table 4-8. Effects of general trust after controlling for WTC in Japanese (Study 2).

	WTC in English
General Trust	.20 **
WTC in Japanese	.37 **
R^2	.23 **

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

After controlling for WTC in English, general trust showed positive effects on WTC in Japanese (β = .22, $p < .01$; Table 4-9). Therefore, general trust had an independent effect on WTC when compared to the WTC in another language.

Table 4-9. The influence of general trust after adjusting for WTC in English (Study 2).

	WTC in Japanese
General Trust	.22 **
WTC in English	.37 **
R^2	.23 **

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

Study 3: General Population in 7 Prefectures from North to South in Japan

The aim of Study 3, directed at the general population in 7 prefectures spanning from north to south in Japan, was to investigate whether general trust had a positive impact on WTC in English. According to Iwatani and Muramoto (2017), Tokyo, Hokkaido, and Fukuoka are considered prefectures with flexible interpersonal relationships and networks, while Fukui, Akita, Yamagata, Toyama, and Wakayama are characterized as having less flexible networks. As previously mentioned, individuals

tend to exhibit higher levels of trust in environments with flexible interpersonal relationships and networks, in contrast to those with less flexibility (Yamagishi, 1998). Notably, the findings of Study 1 and Study 2 were restricted to individuals in Tokyo. To enhance generalizability, the current study included prefectures with both flexible and less flexible interpersonal relationships and networks.

Methods

Participants. The study involved 2060 Japanese participants residing in Japan, comprising 1030 men and 1030 women, with a mean age of 44.67 years (*SD* = 13.84). The participants were distributed across various prefectures, including Fukui, Fukuoka, Tokyo, Hokkaido, Akita, Yamagata, Toyama, and Wakayama. The age range encompassed individuals in their 20s to 60s, with an equal ratio across the range. Similarly, the ratio of men to women was identical. G*Power 3.1.9.7 software (Faul et al., 2009) indicated that, for a multiple linear regression with a power of .95, a minimum of 172 samples was necessary, and this study exceeded that criterion with a sufficiently large sample size.

Procedure. The study followed the same procedure as in Study 1, conducting the survey online through a web-based survey tool. The survey company "Macromill" dispatched emails containing links to the online system to the enrolled Japanese participants.

Questionnaire. This study employed the same items as those used in Study 1. Participants provided responses to all statements using a scale that ranged from 1 (strongly disagree) to 5 (strongly agree).

WTC in English. The study utilized the identical set of 12 items for measuring WTC in English as used in Study 1 ($\alpha = .96$).

General Trust. The study employed the same set of 6 items for assessing general trust as used in Study 1 ($\alpha = .88$).

Big Five Personality Traits. The study utilized the identical set of 10 items for assessing the Big Five personality traits as used in Study 1. This scale consists of five personality factors: extraversion ($r = .43$, $p < .01$), conscientiousness ($r = .37$, $p < .01$), neuroticism (reversed; $r = .35$, $p < .01$), openness ($r = .26$, $p < .01$), and agreeableness

(r = .21, p < .01).

Chance of Communicating with English Speakers. The study employed the same items as those in Study 1 and applied dummy coding.

Results

Table 4-10 presents the means, standard deviations, and correlation matrices. The scores for WTC in English (M = 1.90, SD = 0.91) and general trust (M = 2.86, SD = 0.81) were found to be significantly below the midpoint (t(2059) = 55.27, p < .01; t(2059) = 8.08, p < .01). With the exceptions of agreeableness (r = .01, *n.s.*), sex (r = -.12, p < .01), and age (r = 00, *n.s.*), general trust and other variables demonstrated positive correlations with WTC in English. Similar to Studies 1 and 2, as well as other previous studies, the Big Five personality traits displayed positive correlations with WTC in a second language. The chance of communicating with English speakers exhibited a floor effect (M = 0.24, SD = 0.43), which was excluded from the subsequent analysis.

Table 4-10. Means, standard deviations, and correlations matrix

	M	*SD*	1	2	3	4	5	6	7	8	9
1. WTC in English	1.90	0.91	—								
2. General Trust	2.86	0.81	.08 **	—							
3. Extraversion	2.69	0.92	.24 **	.14 **	—						
4. Agreeableness	3.53	0.75	.01	.25 **	-.01	—					
5. Conscientiousness	2.90	0.85	.13 **	.12 **	.19 **	.24 **	—				
6. Neuroticism	2.82	0.84	.16 **	.13 **	.27 **	.26 **	.39 **	—			
7. Openness	2.83	0.82	.24 **	.07 **	.35 **	.06 *	.23 **	.28 **	—		
8. Sex (M=0, W=1)	0.50	0.50	-.12 **	.00	.06 **	.03	-.01	-.15 **	-.15 **	—	
9. Age	44.67	13.84	.00	.16 **	.09 **	.14 **	.21 **	.19 **	-.02	-.01	—
10. Communicating Chance	0.24	0.43	.38 **	.07 **	.17 **	.06 **	.10 **	.12 **	.16 **	-.10 **	-.03 **

** $p < .01$, * $p < .05$, + $p < .10$

In the hierarchical regression analysis, the initial step indicated that extraversion, conscientiousness, reverse-scored neuroticism, and openness had a positive impact on WTC in English. ($\beta = .18$, $p < .01$; $\beta = .06$, $p < .05$; $\beta = .04$, $p < .10$; $\beta = .14$, $p < .01$; Table 4-11). After considering the control variables and the Big Five personality traits, the analysis showed that general trust positively influenced WTC in English. ($\beta = .05$, $p < .05$; step 2).

Table 4-11. Effects of general trust on WTC in English (Study 3).

	Step1	Step2
Sex (M=0, W=1)	-.10 **	-.10 **
Age	-.04	-.04 +
Extraversion	.18 **	.17 **
Agreeableness	-.02	-.03
Conscientiousness	.06 *	.06 *
Neuroticism	.04 +	.04 +
Openness	.14 **	.14 **
General Trust		.05 *
R^2	.102 **	.105 **
ΔR2		.002 *

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

After controlling for the Eiken English ability test, general trust did not have an effect on WTC in English (β = .04, *n.s.*; Table 4-12).

Table 4-12. Effects of general trust on WTC in English after controlling for Eiken (Study 3).

	WTC
Sex (M=0, W=1)	-.12 **
Age	.01
Extraversion	.13 **
Agreeableness	-.06 +
Conscientiousness	.01
Neuroticism	.05
Openness	.15 **
General Trust	.04
Eiken	.30 **
R^2	.20 **

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

In addition, WTC in Japanese was controlled to examine the effect of general trust on WTC. After controlling for WTC in Japanese, general trust showed no effects on WTC in English (β = .03, *n.s.*; Table 4-13).

Table 4-13. Effects of general trust after controlling for WTC in Japanese (Study 3).

	WTC in English
General Trust	.03
WTC in Japanese	.26 **
R^2	.07 **

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

However, after controlling for WTC in English, general trust showed positive effects on WTC in Japanese (β = .17, $p < .01$; Table 4-14).

Table 4-14. Effects of general trust after controlling for WTC in English (Study 3).

	WTC in Japanese
General Trust	.17 **
WTC in English	.26 **
R^2	.10 **

** $p < .01$, * $p < .05$, + $p < .10$; standardised coefficient

Discussion

The present study showed the positive effect of general trust on WTC in English for Japanese people. If individuals have a higher level of general trust, they tend to have positive attitudes towards English communication. Trust in others motivates individuals to establish networks, ultimately fostering positive English communication.

Across the three studies, it was demonstrated that general trust played a pivotal role in WTC in English. In Study 1, which concentrated on university students in Tokyo, hierarchical regression analysis demonstrated that, even after accounting for control variables and the Big Five personality traits, general trust had a positive impact on WTC in English. Study 2, which involved the general population in Tokyo, exhibited a similar trend to Study 1, replicating its findings even among individuals in Tokyo with varied workplace interpersonal relationships compared to university students. Study 3, targeting the general population across seven prefectures from north to south Japan, also echoed the results of Studies 1 and 2. This study replicated the findings of Studies 1 and

2, encompassing not only prefectures like Tokyo with flexible interpersonal relationships and networks but also those with less flexibility.

Even after controlling for English proficiency (Eiken), general trust still had a positive impact on WTC. Therefore, not only language ability but also psychological factors, such as general trust, are important for English communication. Furthermore, even after controlling for WTC in English, general trust had a positive impact on WTC in Japanese (mother tongue). Therefore, not only the second language but also the first language is influenced by general trust.

Many instances of WTC targeted situations where there was a need to use English, assuming a simultaneous high level of WTC and low general trust. Conversely, when general trust is high, individuals are motivated to establish new networks, resulting in elevated WTC. The assumed causal relationship from general trust to WTC was derived from WTC situations.

The current study demonstrated that general trust had a positive impact on WTC in English, even after accounting for the influence of the Big Five personality traits.

Drawing from socio-ecological frameworks, which illustrate the dynamic interplay between personal and environmental factors, it was posited that general trust would be positively linked to WTC in a second language. This assumption is grounded in the idea that general trust contributes to the development of one's social network. Unlike prior research, which predominantly focused on exploring the effects of the Big Five personality traits on WTC in a second language, the present study unveiled the noteworthy influence of general trust on WTC in English.

Among the Big Five personality traits, extroversion has consistently been recognized as a significant factor influencing WTC. Across the three studies conducted, extroversion exhibited a positive impact on WTC in English. Extroverted individuals typically seek and enjoy social interactions, placing a higher value on communication (MacIntyre et al., 1999). Similarly, individuals with higher levels of general trust are inclined towards social engagement. However, it is noteworthy that individuals with higher general trust possess the ability to assess the trustworthiness of others. If they perceive someone as untrustworthy, they may refrain from communication.

Consequently, individuals with higher general trust demonstrate a heightened ability to evaluate the trustworthiness of others, a distinct characteristic from extroversion.

Additionally, openness has been recognized as a crucial factor influencing WTC. Both Studies 1 and 3 in the conducted research revealed that openness had a positive impact on WTC in English. Students characterized by higher levels of openness displayed stable tendencies to seek satisfaction by initiating verbal interactions in a foreign language (Piechurska-Kuciel, 2018). Individuals with higher general trust similarly seek verbal interactions, but their objective is not primarily for personal gratification. Instead, it is to expand social networks with trustworthy individuals. As a result, this distinction sets openness apart from the motivations associated with general trust.

Chapter 5: The Effect of Environments on General Trust and WTC

Chapter 4 focused on the individual-level effects of general trust on WTC in English. As stated above, the level of general trust varies not only among individuals, but also among groups and areas, and the effects on WTC also varies. Whether or not people choose to communicate in English with those they trust is influenced by the environments such as groups and areas. It is possible that an individual with higher general trust may choose not to communicate in English depending on the environments. Chapter 5 concentrates on the group-level and area-level effects of general trust on WTC in English.

Section 1 focuses on language learning groups, which are specific environments where people engage in group activities and interactions. The level of general trust varies among groups. In an educational context, the impact of varying levels of group factors on WTC has been investigated. According to Chapter 4, trust led to positive attitudes towards language communication. Therefore, in a group-language learning

setting, it will be revealed that if a group has higher trust, the group shows higher WTC in English.

Section 2 focuses on areas, which are more vague environments where people may not have as much interaction, such as at a travel destination. The level of general trust also varies among areas. The level of general trust is influenced by the surrounding environment of individuals, specifically the extent of opportunities to form new interpersonal relationships. The opportunity to meet new people varies depending on prefectures (Iwatani & Muramoto, 2017), indicating that the level of general trust also varies depending on the prefecture. According to Chapter 4, trust led to positive attitudes towards language communication. Therefore, it will be revealed that individuals in prefectures with higher general trust are likely to communicate in English with others positively.

Section 1: The Effect of Group-level General Trust on WTC in English

This chapter investigated the positive impacts of trust at both the individual and group levels on WTC in English, focusing on Japanese university students within a group-language learning context. The study involved conducting a questionnaire survey three times during each semester.

The degree of general trust can differ across various groups. Within a cohesive group, members exhibit interdependence and mutual acceptance. Acceptance, involving the acknowledgment of each other's feelings, values, and problems, correlates positively with trust (Roark & Sharah, 1989). Consequently, strong connections among group members, indicative of group cohesiveness, demonstrate a positive correlation with trust (Roark & Sharah, 1989). On the other hand, lower group cohesiveness results in reduced trust.

In an educational context, the impact of varying levels of group factors on WTC has been investigated. Khajavy et al. (2018) demonstrated that a positive classroom

environment was associated with improvements in WTC and enjoyment, while simultaneously reducing anxiety. Their study targeted secondary school students in Iran. Additionally, the research indicated that enjoyment played a role in increasing WTC both at the individual student level and the classroom level, utilizing multilevel analysis. According to Chapter 4, trust led to positive attitudes towards language communication. Therefore, in a group-language learning setting, it will be revealed that if a group has higher trust, the group shows higher WTC in English, and as in Chapter 4, trust at the individual level among group members had a positive impact on individual-level WTC in English.

General trust, as defined by Yamagishi (1998), is a personal tendency regarding how much individuals trust others in general. However, in the context of group language work, trust takes on a different meaning. Specifically, it becomes a personal tendency indicating the level of trust individuals have in their classmates with whom they have continuous interaction. Therefore, the quality of trust in a group setting differs from general trust.

Previous studies, as highlighted by Yamagishi and Komiyama (1995), suggest that general trust includes trust in the group as a whole without specifying individuals, identifying instead the overall image of the group. This concept is not directly applicable in situations involving continuous interaction, as such interactions lead to the development of specific images for each group member.

The main survey in the present study focused on three points in time: the beginning, middle, and end of the group project. At the project's commencement, each group member was unfamiliar with the others, and their trust in fellow members was encompassed within the concept of general trust, as per its definition. However, as the project progressed, members interacted and became more acquainted with each other, leading to a shift in their trust dynamics. The trust they developed toward other members differed from the initial definition of general trust. The present study aims to compare the results of this evolving trust with its impact on WTC.

In the context of group language work, individuals are situated within groups (Nezlek, 2008). While the relationships between psychological factors are typically

assessed based on individual learners as independent entities, in group learning, they collectively experience the same learning group environment (Khajavy et al., 2018). Each group, within this setting, creates a unique atmosphere distinct from other groups. In essence, individual-level and group-level psychological factors are simultaneously shaped through group work within a classroom. This poses a challenge as the assumption of parametric statistical tests relies on the independence of individual observations, and this phenomenon violates that assumption (Hox, 2010). To address this issue, employing multilevel analysis becomes imperative, allowing for the examination of both individual-level and group-level factors in a group language learning setting.

Multilevel analysis was employed to investigate this hypothesis, employing a hierarchical approach that considers both individuals and groups (Shimizu, 2014). This analytical method can unveil the characteristics of not only individuals but also the groups to which they belong. For instance, it has the capacity to disclose that an individual with high trust may be part of a learning group characterized by low trust. The analysis concurrently estimated the fixed effects for each individual and the random

effects for each group (Shimizu, 2014).

The hypothesis of the current study was examined at Level 1 (individual) through the following model:

$$Y_{ij} = \beta_{0j} + \beta_{1j} * Trust_{ij} + e_{ij}.$$

The hypothesis of the current study was also assessed at Level 2 (group) using the following model:

$$\beta_{0j} = \gamma_{00} + \gamma_{01} * \text{Group-Level Trust} + u_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11} * \text{Group-Level Trust} + u_{1j},$$

Y_{ij} indicates the WTC score for member *i* in group *j*. β_{0j} indicates the intercept and β_{1j} the regression coefficient. β_{0j} and β_{1j} were estimated using γ_{00} and γ_{10} (fixed effects) and u_{0j} and u_{1j} (random effects). The formulas for the control variables are abbreviated in these models.

Pre-survey: Single Study

The pre-survey aimed to investigate the hypothesis that individual-level trust in

group members had a positive influence on individual-level WTC in English, while group-level trust in group members had a positive impact on group-level WTC in English. This study targeted Japanese university students learning English as a second language.

Methods

Participants. The participants consisted of 149 Japanese undergraduate students enrolled at a university in Tokyo (118 men, 30 women, 1 other; mean age = 18.99 years, *SD* = 0.92). They were enrolled in a one-semester course titled "Listening and Speaking Exercise," designed to enhance effective and practical English communication skills through a task-based project. Class assignments were determined based on their scores on the English ability (CASEC) test. During the semester, students were tasked with collaborating in groups to propose a new application aimed at assisting university students.

In the initial class, students within each class were randomly allocated to stable groups, each consisting of five students. These group assignments remained unchanged

throughout the entire semester. During the data analysis process, groups with only one participant or no participants responding to the survey questionnaire were excluded due to limitations in the multilevel analysis. Consequently, the dataset comprised 52 groups, consisting of 149 participants, with each group ranging from two to five students (average = 2.86).

Procedure. During the course, students engaged in various activities. They began by brainstorming and identifying problems faced by university students, along with proposing potential solutions. Subsequently, participants collected and analyzed data on these identified problems using questionnaires. They proceeded to outline the design of the application and formulated business and marketing plans. As part of the final stage, each group prepared for the presentation of their newly developed application, and the students engaged in peer-review sessions for the group presentations within the classroom. The semester comprised a total of twenty-eight lessons, with half conducted face-to-face and the remaining lessons offered on-demand.

In each face-to-face lesson, group members had the opportunity to select their

roles within the group, including positions such as discussion leader, speaker, writer, and editor. This practice of assigning distinct roles to each member is recognized as an effective strategy for facilitating successful group work (Dörnyei & Murphey, 2003). According to researchers like McCafferty et al. (2006), group efficiency is enhanced when each member has a specific task, such as requesting and providing information, note-taking, and summarization. Dörnyei and Murphey (2003) have suggested that clarifying roles for individual members not only enhances the learning experience but may also alleviate anxiety among group members, providing clarity on their expected contributions.

Before concluding their final presentation (12/15/2020–12/29/2020), participants were provided with questionnaires containing scales to assess WTC in English and trust in group members. Instructors distributed links to web-based questionnaires, and participants responded using their personal computers or smartphones. The questionnaire's first page, presented in Japanese, communicated that participation was voluntary and anonymous. Students gave their consent to participate and agreed to the

use of their data.

Questionnaires.

WTC in English. In the current study, WTC in English refers to the willingness to engage in English discussions and presentations with group members within a group language learning setting. The original WTC scale was derived from a scale created by McCroskey (1992). This study specifically centered on group learning activities in the classroom, with a primary focus on discussions and presentations. Therefore, the present study used two items: "I am willing to discuss in English with group members," and "I am willing to present in English to group members" (r = .82, p < .01). Participants provided responses to all statements using a scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Trust in Group Members. The participants' trust in group members was assessed using six items (α = .92). The trust scale was adapted from the scale developed by Yamagishi and Yamagishi (1994), with the Japanese version provided by Yamagishi (1998). The items were as follows: "My group members are basically honest," "My

group members will respond in kind when they are trusted by others," "My group members are trustworthy," "My group members are trustful of others," "I am trustful to my group members," and "My group members are basically good and kind." The participants used a scale with response options ranging from 1 (strongly disagree) to 5 (strongly agree) for all statements. In the case of individual-level trust, the scores were group-mean-centered. This approach ensures that the intercept reflects the expected value of an observation with a score at the mean for its groups. By subtracting intergroup fluctuations, the regression coefficient represented a pure individual estimate, unaffected by group effects (Enders & Tofighi, 2007).

Results

Table 5-1-1 displays the means and standard deviations of WTC and trust. The WTC (M = 3.20, SD = 1.06) and trust (M = 4.21, SD = 0.76) scores were significantly higher than the midpoint ($t(148) = 2.27$, $p < .05$; $t(145) = 19.28$, $p < .01$).

Table 5-1-1 also provides the intraclass correlation coefficient (ICC), indicating the proportion of total variance in scores that varies between groups. The ICC helps

assess the distribution of variability within and between groups for each random effect. This information aids in understanding the impact of Level 1 and Level 2 predictors on both within-group and between-group variances around each parameter (Yeo & Neal, 2004). The ICC was 8.9% for WTC in English and 22.5% for trust in group members, supporting the inclusion of Level-2 variables in subsequent analyses (Hox, 2002). Although the ICC for WTC was not significant, some researchers argue that multilevel models are appropriate even with a low ICC or 0 because the structure of the data, rather than the magnitude of the ICC, determines the suitability of multilevel modeling. Multilevel modeling is recommended when there is a meaningful nested hierarchy in the data (Nezlek, 2008).

Table 5-1-1. Means, standard deviations, ICC, and confidence intervals (95%)

	M	*SD*	*ICC*	Lower	Upper	*p valule*
WTC	3.20	1.06	.089	-.074	.280	.149
Trust	4.21	0.76	.225	.046	.416	.006

Table 5-1-2 displays the influence of trust in group members on WTC in English

as determined by a hierarchical linear model. After adjusting for sex and age, it was observed that individual-level trust positively affected individual-level WTC in English ($\beta = .37$, $p < .10$). Additionally, group-level trust showed a positive influence on group-level WTC in English ($\beta = .29$, $p < .10$). These effects were marginally significant, indicating a value close to significance (a significant tendency). Thus, students who placed trust in their group members tended to be more willing to engage in English discussions and presentations within the group, and groups with a higher level of trust among members demonstrated a greater willingness to engage in English discussions and presentations. These results highlight the influence of group-level factors in a group language learning setting.

Table 5-1-2. Effects of trust on WTC

	β	*SE*
Group Level		
Intercept	1.95 **	0.71
Trust	0.29 +	0.17
Individual Level		
Trust	0.37 +	0.19
Sex	0.17	0.23
Age	-0.09	0.11

** $p < .01$, + $p < .10$

Main Survey: Longitudinal Study

The preliminary survey supported the hypothesis, but the impacts of individual-level and group-level trust were marginally significant. To further investigate whether significant effects could be observed, the main survey targeted a larger number of participants. Unlike the pre-survey, which was conducted only once, the main survey was administered three times to assess potential changes in effects over the course of one semester.

Methods

Participants. The participants in the main survey included 284 Japanese

undergraduate students from the same university as the pre-survey (229 men, 55 women; mean age = 18.56 years, *SD* = 0.67). Enrolled in the "Listening and Speaking Exercise" class, the primary goal of the course was to cultivate effective and practical English communication skills through a task-based project. They were divided into their respective classes based on their scores on the English ability (CASEC) test, and throughout the semester, they were tasked with proposing enhancements to an existing English website catering to tourists in Japan, known as the website consulting project.

In each class, students were randomly assigned to fixed groups during the ninth lesson, with each group consisting of five students. Group membership remained unchanged throughout the semester. During data analysis, groups with only one student or those with missing responses in the second or third questionnaires were excluded (participants who answered all three questionnaires were considered). Consequently, the dataset comprised 83 groups, with 284 participants, and each group had two to five students (with an average of 4.39). The participants were drawn from all classes.

Procedure. During the project, participants selected websites for consultation

and analyzed the target audience, user needs, and business goals. Following the midterm group presentation, they detailed the design, usability, and functionality of their project websites. The final group presentations were peer-reviewed in the classroom. The semester comprised twenty-eight lessons, with half being face-to-face and the rest on-demand. In face-to-face lessons, participants assigned roles within their groups, such as discussion leader, speaker, writer, and editor.

The participants completed questionnaires assessing WTC in English and trust in group members three times: at the beginning (Lesson 9; 5/10/2021–5/14/2021), middle (Lesson 15; 5/31/2021–6/4/2021), and end (Lesson 25; 7/5/2021–7/9/2021) of the group project. The instructors distributed links to web-based questionnaires, and participants provided their responses using their personal computers or smartphones. Participants were informed, through information provided in Japanese on the first page of the questionnaire, that their participation was voluntary and anonymous. The students provided their consent to participate in the study and to allow the use of their data. Control variables included actual English proficiency (CASEC), the chance of

communicating with English speakers, and experience communicating with English speakers outside school.

Questionnaires.

WTC in English. The same two items as in the pre-survey were utilized to measure WTC in English (r = .81, p < .01 for 1st; r = .82, p < .01 for 2nd; r = .79, p < .01 for 3rd).

Trust in Group Members.

The same six items as in the pre-survey were employed to assess trust in group members (α = .91 for 1st; α = .93 for 2nd; α = .94 for 3rd). For individual-level trust, the score was group-mean-centered.

Computerized Assessment System for English Communication (CASEC). The participants took a computer-based English proficiency test, which included reading and listening sessions, yielding scores with a maximum of 1000. The participants took the English proficiency test before the semester commenced. The average score was 522.77 with a standard deviation of 84.17. For the conversion to TOEFL, the mean was 433.67,

and the standard deviation was 33.21.

Chance of Communicating with English Speakers. The participants answered the following question: “In daily life, including in the classroom, how often do you talk in English?” The participants were presented with response options ranging from 1 (not at all) to 5 (every day).

Experience Communicating with English Speakers Outside School. The participants answered the following question: “In the past, how much experience do you have communicating in English with English speakers outside the school (e.g., workplace, shop, park, and street)?” The response options were 1 = not at all, 2 = not much, 3 = sometimes, 4 = usually, and 5 = always.

Results

Table 5-1-3 presents the average values and standard deviations of WTC and trust for each survey. In the first survey, the scores of WTC (M = 3.43, SD = 0.95) and trust (M = 4.38, SD = 0.68) were significantly higher than the midpoint ($t(284) = 7.67$, $p < .01$; $t(284) = 34.40$, $p < .01$). In the second survey, WTC (M = 3.44, SD = 0.94) and

trust (M = 4.34, SD = 0.71) were significantly above the midpoint ($t(285) = 7.92$, $p < .01$; $t(283) = 31.78$, $p < .01$). In the third survey, WTC (M = 3.53, SD = 0.93) and trust (M = 4.35, SD = 0.71) were significantly above the midpoint ($t(286) = 9.55$, $p < .01$; $t(281) = 32.12$, $p < .01$).

Table 5-1-3 also displays the ICC, indicating the proportion of total variance in scores attributed to group differences. The ICC values were 9.9% for WTC in English and 11% for trust in group members in the first survey, 22.8% for WTC in English and 10.2% for trust in group members in the second survey, and 18.3% for WTC in English and 11.4% for trust in group members in the third survey, all of which were significant. These results support the inclusion of Level-2 variables in subsequent analyses (Hox, 2002).

Table 5-1-3. Means, standard deviations, ICC, and confidence intervals (95%) for three surveys

	M	*SD*	*ICC*	Lower	Upper	*p value*
WTC 1st	3.43	0.95	.099	-.008	.227	.036
Trust 1st	4.38	0.68	.110	.001	.239	.024
WTC 2nd	3.44	0.94	.228	.110	.361	.000
Trust 2nd	4.34	0.71	.102	-.006	.231	.032
WTC 3rd	3.53	0.93	.183	.068	.315	.001
Trust 3rd	4.35	0.71	.114	.004	.244	.021

Table 5-1-4 outlines the impact of trust in group members on WTC in English using a hierarchical linear model across the 1st, 2nd, and 3rd surveys. In the 1st survey, accounting for variables such as sex, age, CASEC, chance of interacting with English speakers, and experiences of communication with English speakers outside school, it was observed that individual-level trust positively influenced WTC in English ($\beta = .29$, $p < .01$). Additionally, group-level trust exhibited a positive influence on group-level WTC in English ($\beta = .58$, $p < .01$). Consequently, students who placed trust in their group members displayed a readiness to engage in English discussions and presentations within the group, while groups fostering trust among their members were inclined to

participate in English discussions and presentations during the 1st survey.

In the 2nd survey, adjusting for variables such as sex, age, CASEC, chance of interacting with English speakers, and experience of communicating with English speakers outside school, it was observed that individual-level trust had a positive impact on WTC in English ($\beta = .35$, $p < .01$). Additionally, group-level trust exhibited a positive influence on group-level WTC in English ($\beta = .76$, $p < .01$). Consequently, students who had trust in their group members demonstrated a willingness to engage in English discussions and presentations within the group, and groups fostering trust among their members were inclined to participate in English discussions and presentations during the 2nd survey.

In the 3rd survey, after adjusting for variables such as sex, age, CASEC, chance of interacting with English speakers, and experience of communicating with English speakers outside school, it was found that individual-level trust positively impacted WTC in English ($\beta = .47$, $p < .01$). Moreover, group-level trust had a positive effect on group-level WTC in English ($\beta = .61$, $p < .01$). Thus, students who placed trust in their

group members were inclined to engage in English discussions and presentations within the group, and groups fostering trust among their members were eager to participate in English discussions and presentations during the 3rd survey. These results underscore the significance of group-level factors in the context of group language learning throughout an entire semester, and all these effects were statistically significant.

Table 5-1-4. Effects of trust on WTC (1st, 2nd, & 3rd)

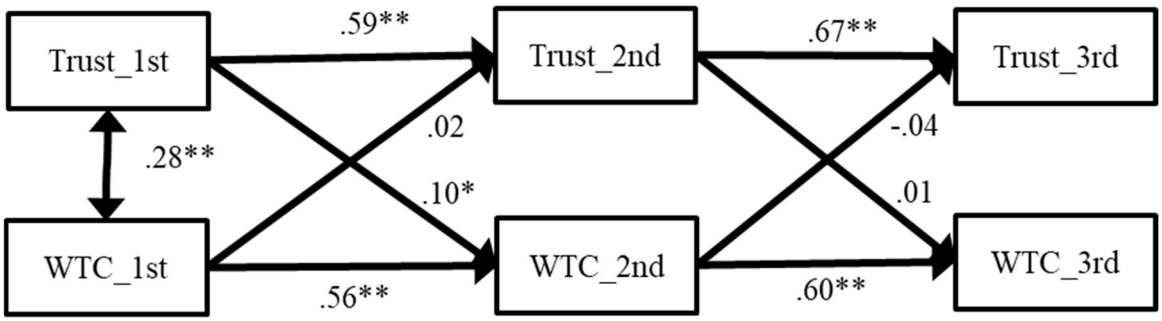
	1st		2nd		3rd	
	β	*SE*	β	*SE*	β	*SE*
Group Level						
Intercept	0.91	0.72	0.16	0.65	0.88	0.67
Trust	0.58 **	0.16	0.76 **	0.15	0.61 **	0.15
Individual Level						
Trust	0.29 **	0.10	0.35 **	0.10	0.47 **	0.09
Sex	-0.09	0.18	-0.07	0.16	-0.05	0.17
Age	0.06	0.11	0.00	0.09	0.14	0.09
CASEC	0.00	0.00	0.00	0.00	0.00	0.00
Chance	0.19 *	0.10	0.08	0.08	0.27 **	0.10
Experience	0.13 +	0.07	0.15 *	0.06	0.05	0.07

** $p < .01$, * $p < .05$, + $p < .10$

To examine the causal relationships, longitudinal data were analyzed using a cross-lagged model (Figure 5-1-1). If the path from 1st trust to 2nd WTC was significant,

and the path from 1st WTC to 2nd trust was not significant, the causal relationship could be estimated. In this analysis, three data points were utilized as it allows for a more stable and flexible estimation of causal relationships. As a result, the path from 1st trust to 2nd WTC was significant, and the path from 1st WTC to 2nd trust was not significant (Figure 5-1-1). However, this pattern was not replicated from the 2nd period to the 3rd period. Therefore, the causal relationships from trust to WTC were partially demonstrated.

Figure 5-1-1. The cross-lagged model with three data points



At the initiation of the project, when group members were unfamiliar with each other, their trust in fellow members fell within the scope of general trust. Therefore, the

trust at the outset positively influenced WTC at a later stage. However, as the project progressed, each member formed individual impressions of one another, and their trust in each other evolved, deviating from the initial definition of general trust.

Discussion

In the pre-survey, the ICC for trust in group members was found to be significant. A significant ICC for trust in group members indicates that each group exhibited its distinct level of trust among its members. In the context of a group project in the classroom, where participants were tasked with proposing a new application, discussions, and consensus-building were crucial. As they worked through disagreements and aimed for the best idea, the groups fostered cohesiveness and developed trust among themselves as needed. Consequently, unique trust dynamics emerged at the group level. Although the ICC for WTC was not statistically significant, the group project's data structure supported the use of multilevel modeling (Nezlek, 2008).

The hierarchical linear model revealed that students who had trust in their group

members exhibited a greater willingness to engage in discussions and presentations in English within their groups. Likewise, groups characterized by trust among their members showed a higher inclination to discuss and present in English collectively. These outcomes underscore the influence of group-level factors, as evidenced by the dynamics of a group project within the classroom. Trust plays a pivotal role in establishing robust connections between individuals. Consequently, elevated group-level trust translated into a heightened willingness of the group to engage in discussions and presentations in English.

In the main survey, the significant intraclass correlation coefficient (ICC) for both WTC in English and trust in group members indicate that each group developed its distinct levels of trust among members and willingness to communicate in English. The group project involved proposing enhancements to an existing English website, fostering discussions, and expressing opinions about various ideas. This collaborative process contributed to the cohesion of the groups, leading to the formation of unique trust dynamics among their members. Additionally, the formation of a distinct group-

level willingness to communicate in English is evident from the significant ICC for WTC in English. Given that the evaluation in the group project considered both individual and group performance, a distinct group-level WTC in English emerged as a crucial factor influencing their overall grades.

The findings from the hierarchical linear model revealed a positive impact of individual-level trust on individual-level WTC in English. Moreover, group-level trust consistently influenced group-level WTC in English over the course of the semester. These results suggest that over the duration of one semester, students who placed trust in their group members exhibited a readiness to engage in English discussions and presentations within their groups. Similarly, groups characterized by mutual trust among members demonstrated a collective willingness to communicate in English throughout the semester. Notably, the influence of group-level factors manifested early in the group projects, with participants establishing trust at the inception of group formation, and these effects persisted until the conclusion of the projects. Therefore, in a group-oriented setting, gaining trust, such as fulfilling group members' requests, is crucial for

effective communication.

The longitudinal data were subjected to analysis using a cross-lagged model. The findings revealed that the path from 1st trust to 2nd WTC was statistically significant. Conversely, the path from 1st WTC to 2nd trust did not reach statistical significance. However, it is noteworthy that this observed pattern did not replicate from the second period to the third period. Consequently, the demonstrated causal relationships from trust to WTC were only partially supported.

The quality of trust in a group setting differs from general trust. In the main survey of the present study, attention was given to three distinct points in time: the beginning, middle, and end of the group project. At the project's initiation, when group members were unfamiliar with each other, their trust in fellow members was encompassed within the definition of general trust. However, as the project progressed, and members interacted and became more acquainted, their trust in each other evolved and deviated from the initial definition of general trust.

The present study revealed that, at the beginning of the group project, a causal

relationship was observed from trust to WTC. This was attributed to the initial lack of familiarity among group members, and their trust in each other was encompassed within the definition of general trust, as discussed in Chapter 4, which had a positive effect on WTC. However, this pattern did not replicate from the second period to the third period, when members were more acquainted. At that point, trust in group members did not have a significant effect on WTC. The trust indicated individual trust because each member had individual impressions of the other members. The data indicated that WTC, when members were more acquainted, was positively influenced by other factors, such as the desire to avoid embarrassment or adherence to accuracy, reflecting Japanese social norms and cultural values.

Throughout the semester, groups with high levels of general trust tended to engage in positive English communication among their group members. Even after controlling for English ability, the effect of general trust remained evident. In essence, trust, such as fulfilling roles in classroom, proves to be important beyond just English proficiency. This study underscores the necessity of general trust for effective group English learning

within a classroom setting.

In the classroom setting, the assessment of grades was based on group performance, and there was a significant connection between group-level WTC and the overall group performance. The students were tasked with engaging in group discussions for the project, and each group had to present their ideas in front of the class. Teachers evaluated not only individual contributions but also the collective performance of the groups. Consequently, grades were contingent on both individual and group achievements. The association between group-level WTC and group performance could be inferred, as active and well-coordinated discussions, facilitated by higher group-level WTC, likely contributed to favorable group performance. Over the course of the semester, group-level trust consistently influenced group-level WTC. This underscores the crucial role of group-level trust in enhancing overall classroom performance by fostering active discussions and presentations in English. Consequently, it becomes imperative to investigate group-level trust in the context of group-language learning settings.

Section 2: The Effect of Area-level General Trust on WTC in English

This study delved into the effects of general trust at the area level on WTC in English among Japanese individuals living in 20 prefectural capitals. While Section 1 discussed the influence of individual-level and group-level general trust on WTC, the study has yet to investigate the effects at the area level.

The level of general trust also varies among areas. According to Yamagishi (1998), general trust is formed through interactions with new people. When people have the opportunity to meet new individuals, they also have the chance to evaluate the trustworthiness of others, potentially leading to an increase in their level of trust.

The opportunity to meet new people varies depending on prefectures (Iwatani & Muramoto, 2017), indicating that the level of general trust also varies depending on the prefecture. For instance, individuals in cities have higher trust in others due to the many opportunities to interact with foreigners, whereas people in rural areas have lower trust due to fewer such opportunities. Trust in a community enhances

interpersonal relationships with others, leading to behaviors such as helping one another (Putnam, 1993). This suggests that WTC varies depending on the prefectures, each having its own level of general trust. For instance, in areas with lower general trust, people may not tend to assist foreigners who are lost. On the other hand, in areas with higher general trust, people would be more likely to assist them.

Consequently, the hypothesis was formulated that general trust at the prefecture level would positively influence the willingness to communicate in English at the prefecture level. For example, individuals in prefectures with higher general trust are likely to communicate in English with others positively. However, individuals in prefectures with lower general trust may not communicate as positively. Additionally, as in Chapter 4, the hypothesis posited that individual-level general trust would positively influence the willingness to communicate in English.

The study employed multilevel analysis to investigate macro-level effects. This analytical approach simultaneously considers individuals and groups in a hierarchical manner, estimating both the fixed effects of individuals and the random effects of groups

(Shimizu, 2014). The analysis aimed to explore the association between prefectural capital-level general trust and WTC, while accounting for the influence of individual-level general trust on WTC. This methodology is analogous to multiple regression analysis. The study focused on Japanese individuals residing in each prefectural capital, controlling for the variability in general trust within each prefecture.

Methods

Participants. The study included a sample of 2,240 Japanese individuals aged 30–40 years (1,115 men and 1,125 women; M = 31.52, SD = 5.26). The study sample consisted of individuals residing in one of the 20 prefectural capitals. The individuals were registered with an online survey company and resided in the capital of each prefecture. The focus on individuals in prefectural capitals aimed to control for the variability in general trust within each prefecture.

Procedure.

An online survey was conducted from January 6 to 11, 2022. The participants

received survey links from the survey company and accessed the questionnaire through personal computers or smartphones. Monetary compensation was provided to participants upon completing the survey.

Questionnaire.

WTC in English. The WTC scale utilized in this study was originally developed by McCroskey (1992), and the Japanese version created by Yashima (2002) was employed. Participants were requested to indicate their willingness to communicate on a 5-point Likert scale, ranging from 1 (never) to 5 (strongly), across the 12 communication contexts (α = .97). The scale included items such as "Talk in a large meeting of friends," "Talk with an acquaintance," and "Talk in a small group of strangers."

General Trust. The general trust scale employed in this study was initially crafted by Yamagishi and Yamagishi (1994), with the Japanese version developed by Yamagishi (1998) being utilized. Participants were required to express their agreement level with six items related to general trust on a 5-point Likert scale, ranging from 1 (strongly

disagree) to 5 (strongly agree) ($\alpha = .84$). The scale included items such as “Most people are basically honest,” “Most people are trustworthy,” and “Most people are basically good and kind.”

Big Five Personality Traits. The “Ten Item Personality Inventory” scale, initially formulated by Gosling et al. (2003), was employed in this study using the Japanese version created by Oshio et al. (2012). The assessment covered the five personality factors, each represented by two items—extraversion ($r = .31$, $p < .01$), conscientiousness ($r = .27$, $p < .01$), neuroticism (reversed, $r = .24$, $p < .01$), openness ($r = .19$, $p < .01$), and agreeableness ($r = .19$, $p < .01$), with responses ranging from 1 (strongly disagree) to 5 (strongly agree).

Chance of Communicating with English Speakers. For the item “How often do you talk with English speakers in your daily life?”, answers were recorded on a five-point scale, where 1 indicated “not at all,” 2 represented “once a month,” 3 reflected “once a week,” 4 denoted “three times a week,” and 5 signified “every day.” The responses were coded as dummy variables, with 0 indicating participants who selected

1 and 1 indicating participants who selected a response between 2 and 5.

Results

Table 5-2-1 displays the mean, standard deviation, and correlation matrix. The findings reveal a positive correlation between general trust and WTC in English (r = .20, p < .01), aligning with the observations in Chapter 4 that highlighted the positive influence of individual-level general trust on WTC in English. Moreover, the Big Five personality traits, with the exception of agreeableness, exhibited positive correlations with WTC in English, replicating the outcomes of studies 2 and 3 from Chapter 4.

Table 5-2-1. Means, standard deviations, and correlation matrix

	M	*SD*	1	2	3	4	5	6	7	8	9
1. WTC in English	2.26	0.99	—								
2. General Trust	3.75	1.07	.20 **	—							
3. Sex (M=0, W=1)	0.50	0.50	-.13 **	.01	—						
4. Age	31.52	5.26	-.08 **	.00	-.06 **	—					
5. Communicating Chance	1.47	0.87	.33 **	.07 **	-.08 **	-.05 *	—				
6. Extraversion	3.53	1.26	.26 **	.13 **	-.01	-.01	.17 **	—			
7. Agreeableness	4.51	1.10	-.08 **	.22 **	.08 **	-.03	-.06 **	-.10 **	—		
8. Conscientiousness	3.66	1.15	.15 **	.09 **	-.04 *	.05 *	.10 **	.26 **	.14 **	—	
9. Neuroticism	3.58	1.15	.20 **	.18 **	-.19 **	.04 +	.10 **	.26 **	.17 **	.32 **	—
10. Openness	3.74	1.10	.27 **	.07 **	-.10 **	-.05 *	.17 **	.36 **	-.06 **	.18 **	.25 **

** p < .01, * p < .05, + p < .10

Table 5-2-2 presents the means, standard deviations, intraclass correlation coefficients (ICC), and 95% confidence intervals for WTC and general trust. The ICC, indicating the variance in scores between prefectural capitals (Yeo & Neal, 2004), was 2% ($p < .01$) for WTC in English, signifying variability between prefectural capitals. While the ICC for general trust was not significant (-0.1%, *n.s.*), the hierarchical structure of the data allowed for the application of multilevel analysis (Nezlek, 2008).

Table 5-2-2. Means, standard deviations, ICC, and confidence intervals (95%)

	M	*SD*	*ICC*	Lower	Upper	*p value*
WTC	2.26	0.99	.020	.008	.052	.000
General Trust	3.75	1.07	-.001	-.004	.008	.584

Having established the ICC, a multilevel analysis was conducted, utilizing grand-mean centering with general trust. According to Enders and Tofighi (2007), centering at the grand mean (CGM) is suitable when the primary emphasis is on a Level-2 predictor while controlling for Level-1 covariates. As our study focused on the impact of

prefectural capital-level (Level 2) general trust on WTC, the application of grand mean centering was deemed appropriate. Following the perspective of Diez Roux (2002), group differences arising from group-level variables were considered contextual effects.

Upon controlling for individual-level factors like sex, age, chance of communicating with English speakers, and the Big Five personality traits, it was evident that individual-level general trust had a positive impact on individual-level WTC in English (b = 0.15, p < .01; refer to Table 5-2-3). This aligns with the findings from Chapter 4, which established a positive association between individual-level general trust and WTC in English. Furthermore, even after accounting for individual-level factors, prefectural capital-level general trust exhibited a positive effect on prefectural capital-level WTC in English (b = 1.14, p < .01). The concept of prefectural capital-level general trust involves the aggregation of individuals' general trust within each prefectural capital. In contrast, individual-level general trust pertains to an individual's general trust regardless of the prefectural capital. These findings imply that the collective psychological tendencies prevalent among residents in each prefectural

capital had a more significant impact on WTC than individual-level general trust. This suggests that the degree of trust within a community has a substantial influence on the willingness of Japanese individuals to communicate in English.

Table 5-2-3. The impact of general trust at both the prefectural capital and individual levels on WTC.

	b	*SE*
Prefectural Capital Level		
Intercept	-1.99 +	1.11
General Trust	1.14 **	0.30
Individual Level		
General Trust	0.15 **	0.02
Sex (M=0, W=1)	-0.16 **	0.04
Age	-0.01 **	0.00
Chance of Communicating	0.28 **	0.02
Extraversion	0.09 **	0.02
Agreeableness	-0.09 **	0.02
Conscientiousness	0.04 *	0.02
Neuroticism (reversed)	0.06 **	0.02
Openness	0.11 **	0.02

** $p < .01$, * $p < .05$, + $p < .10$

b, unstandardized coefficients

After controlling for the Eiken English ability test, prefectural capital-level general trust had a positive impact on prefectural capital-level WTC in English (*b* =

1.42, $p < .01$; Table 5-2-4). Therefore, prefectural capital-level general trust had an independent influence on WTC regardless of English ability.

Table 5-2-4. The influence of general trust at both the prefectural capital and individual levels on WTC after accounting for Eiken.

	b	*SE*
Prefectural Capital Level		
Intercept	-3.02 *	1.11
General Trust	1.42 **	0.30
Individual Level		
General Trust	0.14 **	0.03
Sex (M=0, W=1)	-0.14 *	0.05
Age	-0.01 *	0.00
Chance of Communicating	0.25 **	0.03
Extraversion	0.09 **	0.02
Agreeableness	-0.06 *	0.03
Conscientiousness	0.03	0.02
Neuroticism (reversed)	0.05 *	0.02
Openness	0.12 **	0.03
Eiken	0.10 **	0.02

** $p < .01$, * $p < .05$, + $p < .10$; *b*, unstandardized coefficients

Discussion

The discovery mirrors the outcomes of Chapter 4, indicating that individual-level general trust positively influences WTC among the Japanese population. Notably, nearly

all the Big Five personality traits exhibit a favorable correlation with WTC. In line with MacIntyre et al.'s (1998) assertion, personality traits constitute the foundation for affective and cognitive variables in second language (L2) communication, exerting a direct influence on L2 WTC. The current study's results validate this psychological inclination.

The ICC in this study measured the extent of variation in factor scores between groups, specifically prefectural capitals. The significant ICC value for WTC suggests that attitudes toward second language communication differed across various regions, supporting the justification for employing multilevel analysis. However, the ICC for general trust did not reach significance. The data structure, featuring samples from each prefecture nested within the Japanese population, underscored the suitability of multilevel analysis due to the hierarchical nature of the data.

The outcomes of the multilevel analysis revealed that individual-level general trust exerted a positive impact on individual-level WTC in English, persisting even after adjusting for individual-level factors like sex, age, chance of communicating with

English speakers, and the Big Five personality traits. This result aligns with the findings in Chapter 4, illustrating the positive influence of individual-level general trust on WTC, even when accounting for the Big Five personality traits. These findings imply that individual general trust plays a foundational role in influencing WTC in this study.

Furthermore, the analysis demonstrated that general trust at the prefectural capital level had a positive effect on WTC in English at the same level, even after controlling for all individual-level factors. This implies that trust at the macro level had a role in fostering positive attitudes toward English communication. Notably, the results highlighted that macro-level general trust had a more substantial impact than individual-level trust. These findings suggest that regions with higher levels of general trust demonstrate more favorable behaviors toward second language speakers compared to regions with lower trust levels. This research delves into understanding how the social environment shapes human attitudes, aligning with insights from socio-ecological theory.

The current study centered on macro-level general psychological tendencies,

specifically examining the influence of general trust on the initiation of second language communication. When this factor is commonly shared within a particular environment, it has the potential to predict individuals' general language behaviors in that specific context. Areas with high levels of general trust tend to engage in positive English communication. This suggests that general trust is necessary for smooth English communication within a community.

Chapter 6: The Relationships between WTC, General Trust, Confidence in Second Language Communication, and International Posture

This chapter investigates the relationships between general trust and various psychological factors such as confidence in a second language and international posture to predict WTC in English. Chapter 4 investigated the positive impact of general trust on WTC in English and Chapter 5 investigated the positive impact of group-level and prefecture-level general trust on WTC in English. The studies examine the relationships between general trust and WTC in English at the micro-level and macro-level. However, they have not revealed the relationships between general trust and other psychological factors which predict WTC directly. As stated in Chapter 2, perception and emotion in a second language communication such as confidence in a second language communication and international posture directly influence the attitudes towards language communication. If the relationships between general trust and these factors are not examined, the actual effect of general trust on WTC in English is not revealed.

Furthermore, this chapter tries to reconstruct the items of the WTC scale with 74 detailed communication situations and to examine the impact of general trust on each situation of WTC. Previous studies have focused on ambiguous situations of WTC, such as “Talking in a small group of acquaintances,” but it was not easy for participants to imagine the situation and it is not revealed whether general trust influences various detailed communication situations. The research outlines specific communication scenarios from three angles: whether the conversation would develop or not, whether it was an active or passive interaction, and whether the conversation partner was a native or non-native speaker.

Methods

Participants. The study sample consisted of 500 Japanese individuals aged 20–60 years (250 men and 250 women; 100 from each era; M = 44.63, SD = 14.03). The individuals involved in the study were those who had registered with the online survey company.

Procedure. A web-based survey was administered from February 1 to 3, 2023. Survey links were provided to participants by the survey company, Cross Marketing, and they accessed the questionnaire using personal computers or smartphones. Monetary compensation was given to participants upon completing the survey.

Based on the previous WTC items, this study introduced new items. The situations were defined based on three perspectives: whether the conversation would develop or not, whether it was an active or passive interaction, and whether the conversation partner was a native or non-native speaker. For instance, if the conversation was developing and active, the item would be “Asking a question in English about their hobby to a person who attended a party.” If the conversation was developing and passive, the item would be “Answering a question in English about my hobby to a person who attended a party if they ask me.” If the conversation was not developing and active, the item would be “Asking a question in English about the menu to a waiter at a restaurant.” If the conversation was not developing and passive, the item would be “Answering a passenger who asked how to transfer in English at a station.” The conversation partner

(native or non-native speakers) was specified for each situation. Ultimately, 74 items were created for the WTC scale.

Questionnaire.

WTC in English. The willingness to communicate scale, originally devised by McCroskey (1992), was utilized in its Japanese version created by the present study (Appendices). Participants were required to assess their willingness to communicate across 74 communication contexts using a 5-point Likert scale, ranging from 1 (never) to 5 (strongly) ($\alpha = .96$).

General Trust. The general trust scale, initially crafted by Yamagishi and Yamagishi (1994), and its Japanese version by Yamagishi (1998), was employed in this study. Participants were tasked with assessing their agreement level with six items pertaining to general trust on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) ($\alpha = .91$). The scale included items such as “Most people are basically honest,” “Most people are trustworthy,” and “Most people are basically good and kind.”

Second Language Anxiety. The second language anxiety scale was originally developed by MacIntyre and Charos (1996), and some of its items were utilized in this study (Appendices). Participants were asked to rate the extent to which they feel anxiety when using English on a 5-point Likert scale ranging from 1 (never) to 5 (strongly). The scale included three items, such as "I feel anxiety when I speak English." The scale exhibited strong internal consistency, as evidenced by a Cronbach's alpha coefficient of .73.

Second Language Learning Motivation. The second language learning motivation scale was originally developed by Yashima (2002), and some of its items were utilized in this study (Appendices). Participants were asked to rate their level of motivation to learn English on a 5-point Likert scale ranging from 1 (never) to 5 (strongly) (α = .94). The scale included six items, such as "I am motivated to learn English."

Confidence in Second Language Communication. The confidence in second language communication scale was originally developed by McCroskey (1992), and the

Japanese version of the scale was developed by the present study. Participants were asked to rate their confidence in second language communication on a 5-point Likert scale ranging from 1 (never) to 5 (strongly) across the 74 communication contexts, which are identical to those in the WTC scale (α = .95).

International Posture. The international posture scale was originally developed by Yashima (2002), and the Japanese version of the scale (Yashima, 2002; Appendices) was used in this study. Participants were requested to express their level of agreement with twenty-two items pertaining to international posture on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) (α = .90). International posture was defined based on four perspectives: intergroup approach-avoidance tendency (e.g., "I want to make friends with international students studying in Japan."), interest in international vocation or activities (e.g., "I want to work in a foreign country."), interest in international news (e.g., "I often read and watch news about foreign countries."), and ethnocentrism (e.g., "I sometimes feel discomfort with the behavior of people from other countries.").

Big Five Personality Traits. The "Ten Item Personality Inventory" scale, initially formulated by Gosling et al. (2003), was employed in its Japanese version, as developed by Oshio et al. (2012), in this study. It measured the five personality factors with two items each—extraversion (e.g. "Extraverted, enthusiastic"; $r = .38$, $p < .01$), conscientiousness (e.g. "Dependable, self-disciplined"; $r = .27$, $p < .01$), neuroticism (e.g. "Anxious, easily upset"; reversed, $r = .34$, $p < .01$), openness (e.g. "Open to new experiences, complex"; $r = .25$, $p < .01$), and agreeableness (e.g. "Sympathetic, warm"; $r = .16$, $p < .01$) —with responses ranging from 1 (strongly disagree) to 5 (strongly agree).

Chance of Communicating with English Speakers. For the item "How often do you talk with English speakers in your daily life?" responses were recorded on a five-point scale ranging from 1 (none) to 5 (much).

Past Experience of Communicating with English Speaker. For the item "How much did you communicate in English with English speaker outside of school such as workplace, shop, park, and street" responses were recorded on a five-point scale ranging

from 1 (none) to 5 (much).

Results

The means, standard deviations, and correlation matrices are provided in Table 6-1. The scores for WTC in English (M = 2.04, SD = 1.10) and general trust (M = 2.83, SD = 0.82) were significantly below the midpoint ($t(499) = 19.47$, $p < .01$; $t(499) = 4.57$, $p < .01$). There was a positive correlation between general trust and willingness to communicate in English ($r = .14$, $p < .01$).

Table 6-1. Means, standard deviations, and correlations matrix

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. WTC	2.04	1.10	—											
2. General Trust	2.83	0.82	.14 **	—										
3. Second Language Anxiety	3.11	0.96	-.32 **	.03	—									
4. Second Language Learning Motivation	2.15	1.03	.70 **	.16 **	-.24 **	—								
5. International Posture	2.77	0.61	.63 **	.21 **	-.32 **	.66 **	—							
6. Confidence in Second Language Communication	1.91	1.05	.90 **	.12 **	-.33 **	.76 **	.60 **	—						
7. Extraversion	2.71	0.90	.28 **	.20 **	-.18 **	.26 **	.38 **	.28 **	—					
8. Agreeableness	3.50	0.73	.02	.20 **	-.06	-.04	.02	.02	-.03	—				
9. Conscientiousness	2.95	0.78	.09 *	.08 +	-.06	.13 **	.10 *	.14 **	.20 **	.27 **	—			
10. Neuroticism	2.90	0.83	.17 **	.11 *	-.21 **	.14 **	.19 **	.21 **	.34 **	.25 **	.39 **	—		
11. Openness	2.78	0.81	.28 **	.07	-.13 **	.30 **	.41 **	.32 **	.48 **	.03	.23 **	.27 **	—	
12. Communicating Chance	1.59	1.05	.55 **	.07	-.24 **	.47 **	.42 **	.60 **	.23 **	-.03	.05	.13 **	.24 **	—
13. Experience of Communicating	2.00	1.13	.61 **	.06	-.26 **	.53 **	.50 **	.62 **	.25 **	.02	.07	.13 **	.26 **	.62 **

** $p < .01$, * $p < .05$, + $p < .10$

Regression analysis of general trust and other second language-related factors, which were considered direct predicting factors, on WTC in English revealed a

significant positive effect of confidence in second language communication and international posture (β = 0.81, $p < .01$, β = 0.15, $p < 0.01$; see Table 6-2). Confidence in second language communication had the strongest impact on WTC, consistent with the findings of Elahi Shirvan et al. (2019). On the other hand, general trust had no impact on WTC (β = 0.01, *n.s.*). These trends were consistent even when the communication partner for WTC was an English native or non-native.

Table 6-2. Effect of general trust and other second language-related factors on WTC

	β
General Trust	.01
Second Language Anxiety	-.01
Second Language Learning Motivation	-.01
International Posture	.15 **
Confidence in Second Language Communication	.81 **
R^2	.81 **

** $p < .01$, * $p < .05$, + $p < .10$; standardized coefficient

After controlling for the Eiken English ability test, general trust had a marginally positive effect on WTC in English (β = .05, $p = .07$; Table 6-3). Interestingly, if English proficiency was controlled, the impact of general trust would manifest.

Table 6-3. Effect of general trust and other second language-related factors on WTC after controlling for Eiken

	β
General Trust	.05 +
Second Language Anxiety	-.03
Second Language Learning Motivation	-.05
International Posture	.12 **
Confidence in Second Language Communication	.86 **
Eiken	-.02
R^2	.84 **

** $p < .01$, * $p < .05$, + $p < .10$; standardized coefficient

The regression analysis, including general trust, the Big Five personality traits, sex, age, chance of communicating with English speakers, and past experience of communicating with English speakers, indicated a noteworthy positive impact of general trust on WTC in English. ($\beta = 0.08$, $p < .01$; see Table 6-4). Even after controlling for personality factors like the Big Five and social environment variables such as the chance of communicating with English speakers, general trust still had an

impact on positive attitudes towards English communication. These trends were consistent even when the communication partner for WTC was an English native or non-native.

Table 6-4. Effect of general trust on WTC in English controlling for personality and social environment

	β
General Trust	.08 *
Extraversion	.05
Agreeableness	-.01
Conscientiousness	.00
Neuroticism	.04
Openness	.07 +
Sex (M=1, W=2)	-.01
Age	-.02
Communicating Chance	.25 **
Experience of Communicating	.42 **
R^2	.45 **

** $p < .01$, * $p < .05$, + $p < .10$; standardized coefficient

After controlling for the Eiken English ability test, general trust still had a positive effect on WTC in English ($\beta = .13$, $p < .05$; Table 6-5). Therefore, general trust had an independent influence on WTC regardless of English ability.

Table 6-5. Effect of general trust on WTC in English controlling for personality and social environment after controlling for Eiken

	β
General Trust	.13 *
Extraversion	.06
Agreeableness	.06
Conscientiousness	-.01
Neuroticism	-.01
Openness	.02
Sex (M=1, W=2)	-.04
Age	.00
Communicating Chance	.26 **
Experience of Communicating	.40 **
Eiken	.15 **
R^2	.52 **

** $p < .01$, * $p < .05$, + $p < .10$; standardized coefficient

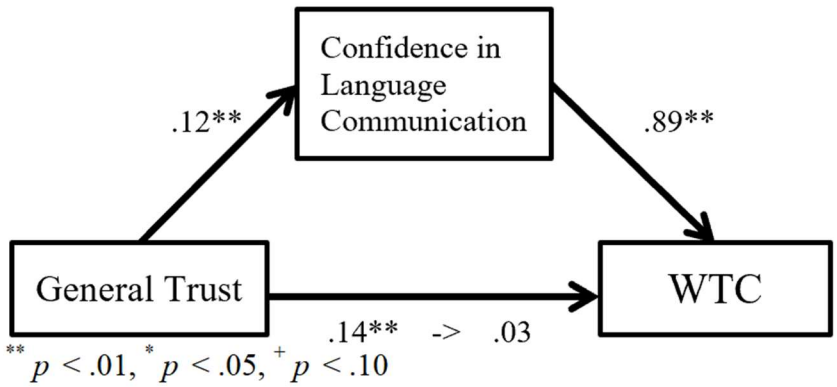
In the results of the regression analyses, it was found that general trust did not have a significant impact on WTC compared to other second language-related factors. However, it still demonstrated a positive impact after controlling for personality and social environment. Therefore, general trust was suggested to indirectly influence WTC through cognitive and affective aspects of communication.

The survey revealed that confidence in second language communication was

significantly lower than the midpoint. Additionally, general trust would be found to have a positive influence on confidence. It is important to note that this positive effect doesn't imply that general trust directly increases confidence. Instead, it suggests that general trust may help restore suppressed confidence, as individuals with higher trust are motivated to expand their social networks.

In the mediation analysis, the indirect effect was found to be significant using the bootstrap method, indicating that general trust positively influenced WTC in English via confidence in second language communication ($Z = 2.41$, $p < .05$, $b = .14$, $SE = .06$, BC method, 99% confidence interval: -.02 - .28; see Figure 6-1). These patterns were consistent even when the communication partner for WTC was an English native or non-native.

Figure 6-1. The effect of general trust on WTC in English via confidence in second language communication

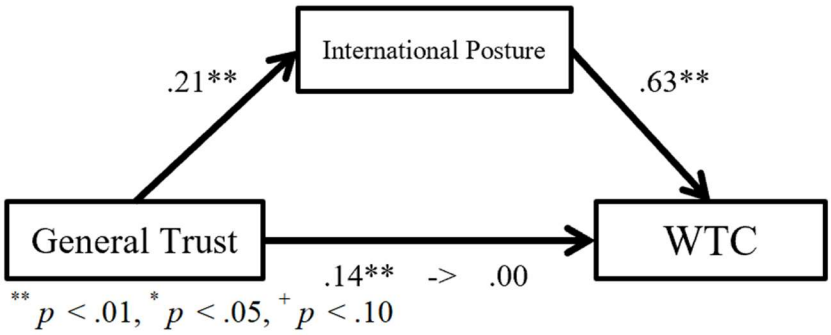


Moreover, general trust would be found to positively influence international posture, reflecting an interest in international society or foreigners. General trust fosters motivation to communicate with strangers, especially those with diverse cultural backgrounds. Foreigners often bring distinct cultural perspectives, and general trust serves to enhance the motivation to engage in communication with them.

The indirect effect was found to be significant using the bootstrap method, confirming that general trust had a positive influence on WTC in English via international posture ($Z = 4.20$, $p < .01$, $b = .13$, $SE = .04$, BC method, 99% confidence

interval: .06 - .28; see Figure 6-2). These trends were consistent even when the communication partner for WTC was an English native or non-native.

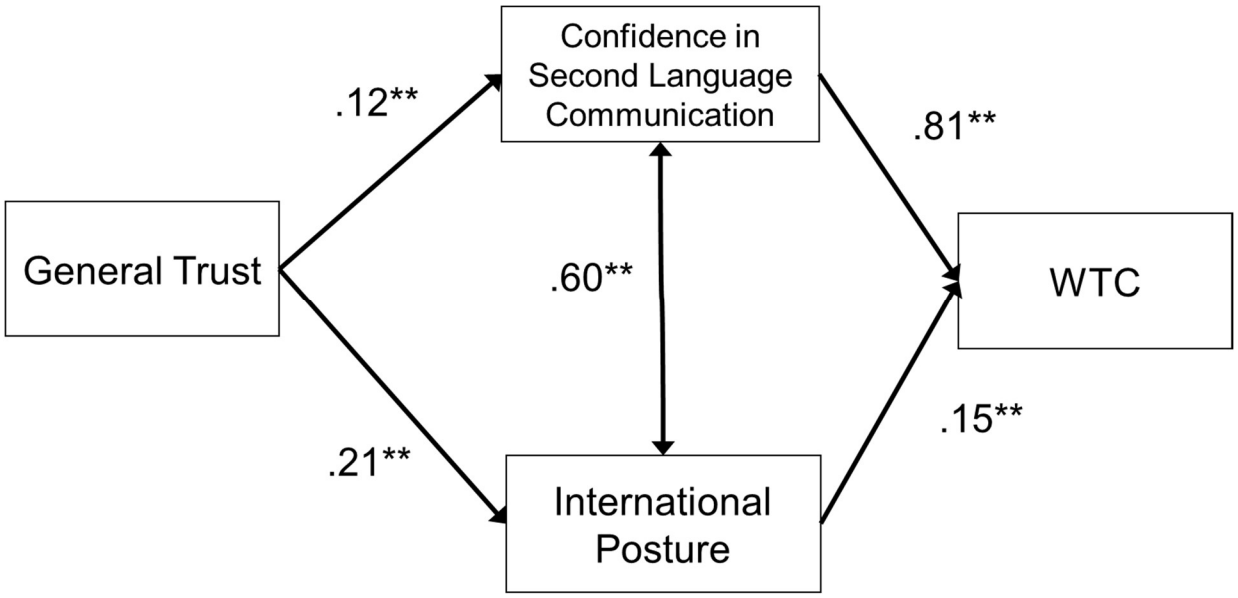
Figure 6-2. The effect of general trust on WTC in English via international posture



Based on these results, structural equation modeling was conducted to examine the influence of general trust on WTC in English through international posture and confidence in second language communication. The SEM results showed a high goodness of fit ($x^2(1) = .36$, $p = .55$, $GFI = 1.00$, $AGFI = .99$, $CFI = 1.00$, $RMSEA = .00$; Figure 6-3). General trust had a positive influence on WTC in English via confidence in second language communication and international posture. These patterns were consistent even when the communication partner for WTC was an English native or non-

native.

Figure 6-3. WTC model based on general trust

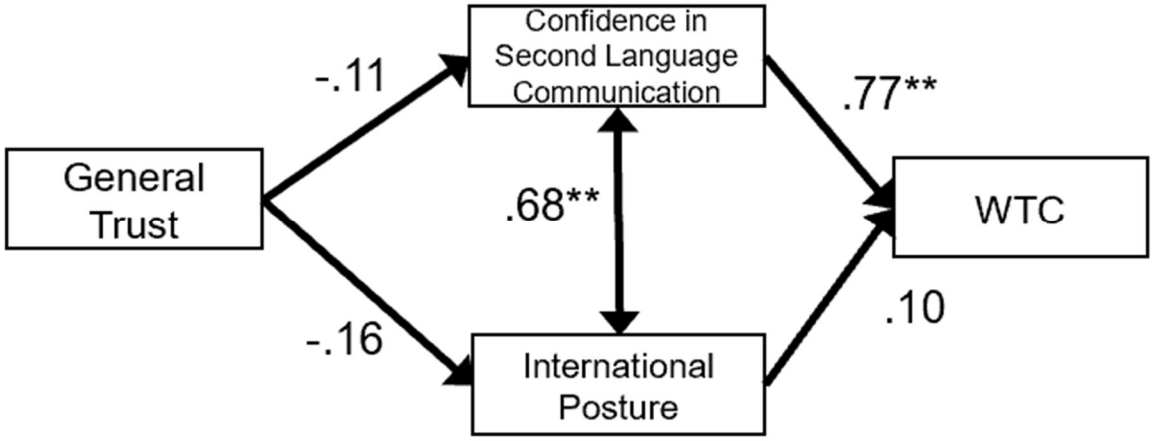


Eiken (English proficiency) was utilized as a controlled variable, revealing variations in the levels of English ability. Furthermore, grades were indicative of a positive correlation with the motivation to communicate in English. Notably, grades 1 and pre-1 exhibited big differences from grades 2 and below. The former group, comprising 15 participants, demonstrated a high level, while the latter group, consisting of 198 participants, exhibited a low level of proficiency. Structural equation modeling

was separately conducted for participants with high and low English proficiency levels.

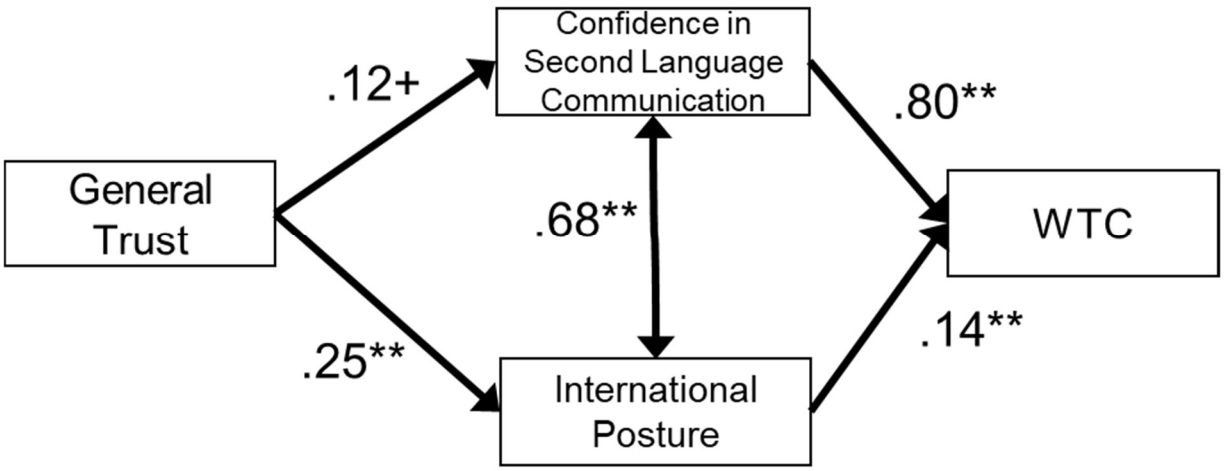
For participants with high proficiency levels, structural equation modeling was employed to investigate the impact of general trust on WTC in English, mediated by confidence in second language communication and international posture. The SEM results revealed a strong goodness of fit ($\chi^2(1) = .18$, $p = .67$, GFI = .99, AGFI = .94, CFI = 1.00, RMSEA = .00; Figure 6-4). Consequently, the influence of general trust on confidence in second language communication and international posture was found to be non-significant. Additionally, the effect of international posture on WTC was also non-significant. Therefore, the WTC model would be not applied to the model of high proficiency. The mean confidence in second language communication was high (M = 3.79, SD = 0.70). A ceiling effect could occur due to the high scores, potentially influencing the results.

Figure 6-4. WTC model based on general trust for participants with high proficiency



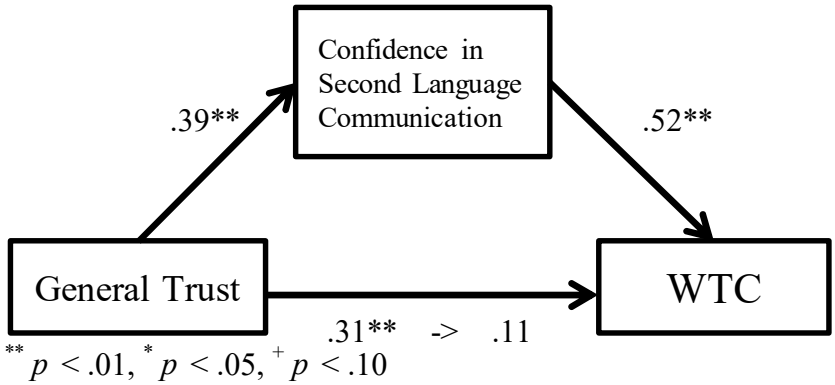
For participants with low proficiency levels, structural equation modeling was employed to explore the impact of general trust on WTC in English, mediated by confidence in second language communication and international posture. The SEM results indicated a reasonably good fit ($\chi^2(1) = 4.00$, $p = .05$, GFI = .99, AGFI = .90, CFI = .99, RMSEA = .12; Figure 6-5). General trust was found to positively influence WTC in English through international posture and confidence in second language communication. However, it is worth noting that the χ^2 was significant, suggesting a relatively lower goodness of fit.

Figure 6-5. WTC model based on general trust for participants with low proficiency



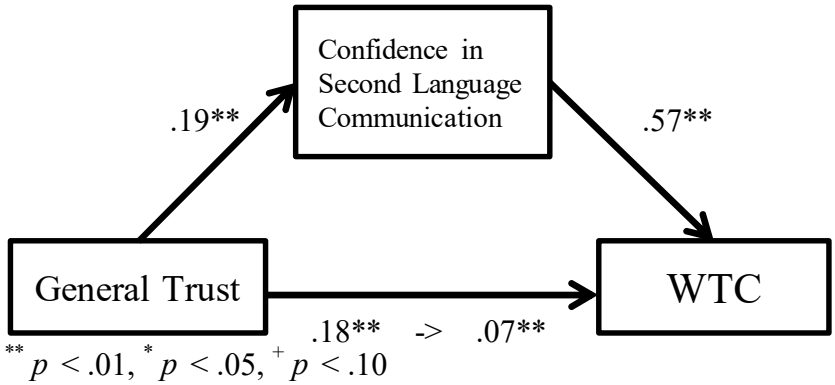
The mediation analysis has demonstrated that at the individual level, general trust positively influences WTC in English through confidence in second language communication. However, previous studies have not demonstrated the group-level effect of trust on WTC in English via confidence in second language communication. As a result of the multilevel mediation analysis (Time 1 data of Section 1, Chapter 5), group-level trust was found to positively influence group-level English WTC via group-level confidence in second language communication ($Z = 3.80$, $p < .01$, $b = .20$, $SE = .05$, BC method, 99% confidence interval: .08 - .35; see Figure 6-6).

Figure 6-6. The group-level effect of trust on WTC via confidence in second language communication



Furthermore, previous studies have not demonstrated the area-level effect of trust on English WTC via confidence in second language communication. As a result of the multilevel mediation analysis (The data of Section 2, Chapter 5), area-level trust was found to positively influence area-level English WTC via area-level confidence in second language communication (Z = 9.36, p < .01, b = .11, SE = .01, BC method, 99% confidence interval: .08 - .14; see Figure 6-7).

Figure 6-7. The area-level effect of trust on WTC via confidence in second language communication



Here, a correlation test was conducted to analyze the relationship between general trust and each WTC situation. The table 6-6 demonstrates that each WTC situation had a positive relationship with general trust. Furthermore, each 74 WTC situation had the positive correlations with general trust. Irrespective of the variation in the English communication situations, general trust had a positive influence on willingness to communicate in each scenario.

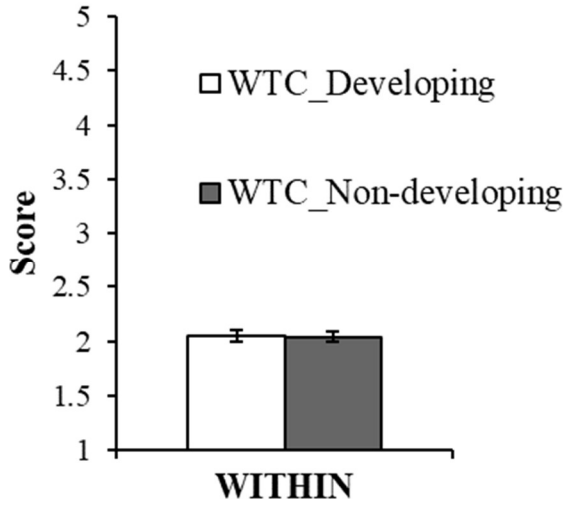
Table 6-6. Correlation test between general trust and each WTC situation

	General Trust
WTC_Native	.12 **
WTC_Non-native	.15 **
WTC_Developing	.13 **
WTC_Non-developing	.14 **
WTC_Active	.13 **
WTC_Passive	.13 **
WTCNative_Developing_Active	.11 *
WTCNative_Developing_Passive	.12 **
WTCNative_Non-developing_Active	.13 **
WTCNative_Non-developing_Passive	.13 **
WTCNon-native_Developing_Active	.14 **
WTCNon-native_Developing_Passive	.15 **
WTCNon-native_Non-developing_Active	.15 **
WTCNon-native_Non-developing_Passive	.14 **

** $p < .01$, * $p < .05$, + $p < .10$

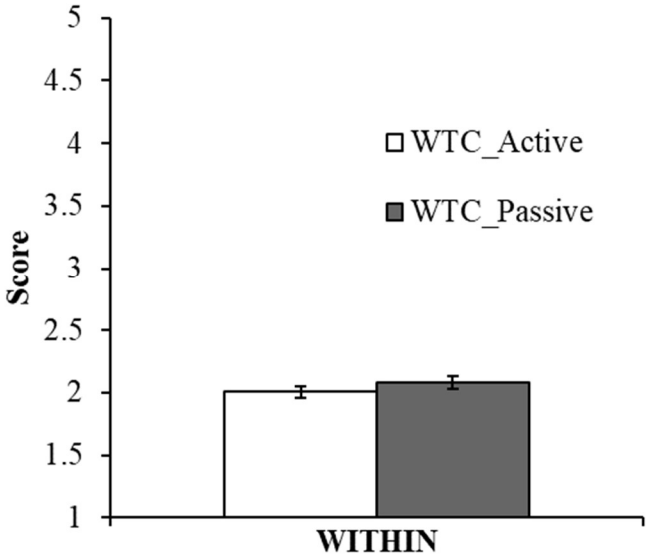
The following results provide a detailed analysis of various WTC situations. Initially, a t-test showed that there was no difference between the developing situation, where the conversation was ongoing, and the non-developing situation in WTC in English ($t(499) = 0.91$, *n.s.*, $d = .01$; see Figure 6-8). In both the developing and non-developing situations, individuals did not display varying degrees of attitudes toward English communication.

Figure 6-8. t test of WTC between developing and non-developing situation



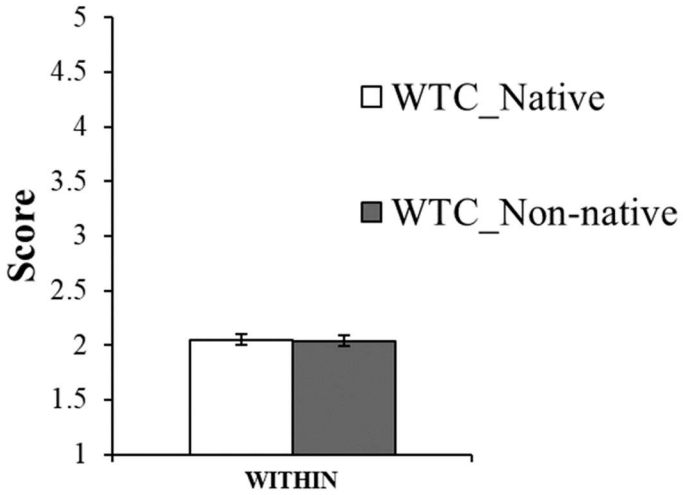
Secondly, a t-test revealed that in the passive situation, where individuals were spoken to by someone, WTC in English was higher compared to the active situation ($t(499) = 5.41$, $p < .01$, $d = .07$; see Figure 6-9). Those in the passive situation demonstrated a more positive attitude toward English communication compared to individuals in the active situation.

Figure 6-9. t test of WTC between active and passive situation



Thirdly, a t-test revealed that there was no difference between the native speaker and non-native speaker situation. ($t(499) = 1.04$, *n.s.*, $d = .01$; see Figure 6-10). Individuals did not display differing attitudes toward English communication with either native or non-native speakers.

Figure 6-10. t test of WTC between native speaker and non-native speaker



Discussion

An examination of various situations involving WTC indicated that, irrespective of the variations in 74 English communication scenarios, general trust had a positive influence on each WTC situation. Individuals with higher general trust exhibited positive attitudes toward second language communication in various situations, considering three perspectives: whether the conversation would develop or not, whether it was an active or passive interaction, and whether the conversation partner was a native or non-native speaker.

In the results of the regression analyses, it was found that general trust did not have a significant impact on WTC compared to other second language-related factors. However, it still demonstrated a positive impact after controlling for personality and social environment. Therefore, general trust was suggested to indirectly influence WTC through cognitive and affective aspects of communication. As a result, general trust indirectly influenced WTC in English. Individuals with higher levels of general trust exhibited greater confidence in second language communication and international posture, leading to higher levels of WTC in English. Therefore, the assessment of trust in others was foundational to WTC in English.

Chapter 4 demonstrated positive correlations between WTC and extraversion as well as openness. In Chapter 6, simple correlations between WTC and extraversion were found to be significant (.28, $p < .01$), as were correlations between WTC and openness (.28, $p < .01$). In the regression analysis, a previously (Chapter 4) uncontrolled variable, "past experience to communicate with English speakers," showed a positive effect on WTC (.40, $p < .01$). This factor exerted a substantial influence on WTC, reducing the

impact of extraversion and openness. Consequently, WTC appeared to be more influenced by environmental factors than personality factors.

During the survey, confidence in second language communication was significantly lower than the midpoint. Moreover, general trust was observed to positively influence confidence. It is important to clarify that this positive effect does not imply that general trust directly increased confidence; rather, general trust appeared to restore suppressed confidence, as individuals with higher trust were motivated to expand their social networks. Additionally, general trust positively influenced international posture, representing an interest in international society or foreigners. General trust motivated individuals to communicate with strangers, who might possess diverse cultural backgrounds. Foreigners often bring unique cultural perspectives, and general trust enhanced the motivation to communicate with them.

Eiken (English proficiency) was included as a controlled variable; however, there is a notable distinction between grade 1 and grade pre-1 compared to grade 2 and below in terms of positive motivation to communicate in English. Structural equation modeling

was conducted separately for participants with high and low English proficiency levels. The results indicated that for high-level participants, some paths in the model were not statistically significant, suggesting that the model may not be well-fitted for individuals with high-level English qualifications. It is essential to acknowledge that the sample size for high-level participants was only 15, and further replications with a larger sample should be examined. For low-level participants, it is important to highlight that the $\chi 2$ was significant, indicating a relatively lower goodness of fit in the model.

In addition, the present study revealed the group-level and area-level effect of trust on English WTC via confidence in second language communication. Therefore, groups and areas with higher trust will exhibit greater confidence in second language communication, resulting in elevated WTC.

Of course, other social and cultural factors will affect general trust and WTC. For example, it is embarrassing for Japanese people if they fail to speak English well. Furthermore, the fear of embarrassment and an obsession with accuracy, such as the concern of appearing foolish, could be factors that hinder English learning for Japanese

people. In the present study, second language anxiety did not have an effect on WTC; however, it is still possible to say that the cultural sense of value would affect WTC.

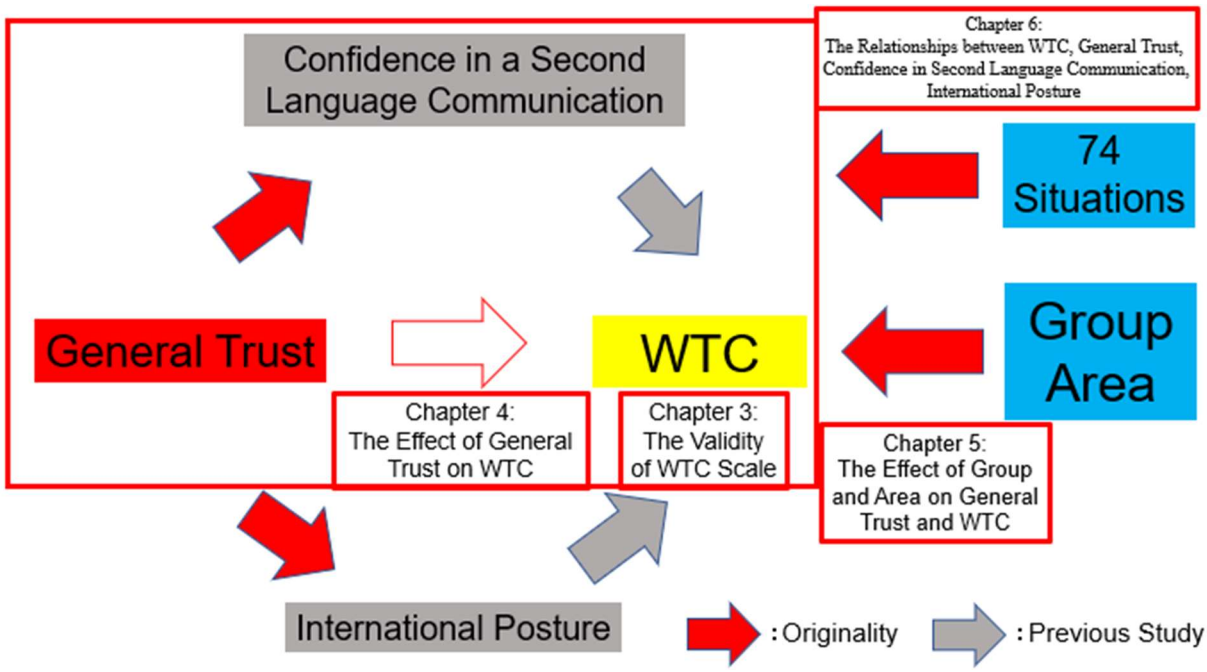
Chapter 7: The New Proposed WTC Model based on General Trust

Chapter 6 suggested that general trust indirectly influenced WTC in English through cognitive and affective aspects of communication. As a result, general trust indirectly influenced WTC in English. Individuals with higher levels of general trust exhibited greater confidence in second language communication and international posture, leading to higher levels of WTC in English. General trust appeared to restore suppressed confidence, as individuals with higher trust were motivated to expand their social networks. General trust also motivated individuals to communicate with strangers, who might possess diverse cultural backgrounds. Foreigners often bring unique cultural perspectives, and general trust enhanced the motivation to communicate with them.

In addition, Chapter 6 revealed the group-level and area-level effect of trust on English WTC via confidence in second language communication. Therefore, environments such as group leanings and prefectures influenced the indirect effects of general trust on WTC via perception and emotion in a second language communication

Figure 7-1 shows the new proposed WTC model based on general trust. At Chapter 3, the validity of WTC scale was confirmed. At Chapter 4, the path from general trust to WTC was confirmed and the effects was positive. At Section 1 and 2 of Chapter 5, the path from environments such as group leanings and prefectures to the positive effects of general trust on WTC was confirmed. At Chapter 6, using 74 communication situations, the path from general trust to confidence in second language communication and the path from confidence in second language communication to WTC was confirmed, and the effects was positive. In addition, the path from general trust to international posture and the path from international posture to WTC was confirmed, and the effects was positive. At the same time, the direct effect of general trust on WTC disappeared. Therefore, general trust positively influenced WTC positively via confidence in English and international posture. General trust, environments, and situations are the unique factors compared to the previous model.

Figure 7-1. The conceptual diagram of the present studies



Chapter 4 presented the direct impact of general trust on WTC. However, in Chapter 6, this direct effect vanished after accounting for perception and emotion in second language communication. Consequently, in Figure 7-1, the red arrow has been altered to a red-bordered white arrow to signify the indirect effect of general trust.

These are the whole explanation of the new proposed WTC model based on general trust. Previous studies have only examined the effects of second language perception and emotion on WTC. For example, if people highly estimate how well they

can communicate with others, they are willing to communicate in a second language. In addition, if people are interested in international society or foreigners, they are willing to communicate in a second language. However, these studies lack the understanding of how individuals perceive others, even though communication inherently involves the dynamics of partners. In short, they only focus on the internal state related to language and international things.

This model focuses on the effects of general trust. According to Yamagishi (1998), people evaluate the trustworthiness of others to form interpersonal networks. If a partner breaks a promise, it can have significant implications. Therefore, evaluating the trustworthiness of others is a crucial factor in interpersonal communication. The present study revealed the importance of evaluating others for psychological factors related to second language communication.

Furthermore, the model focuses on the effects of environments such as groups and prefectures. The level of general trust varies not only among individuals, but also among groups and areas, and the effects on WTC also varies. Even if individuals have a high

level of general trust, they may not be positive to English communication because their groups or areas do not share the same level of trust, leading to a less conducive communication environment. The present study revealed the importance of the effects of environments for psychological factors related to second language communication.

Chapter 8: General Discussion and Future Studies

General Discussion

Chapter 3 revealed a positive correlation between the scale of communication behavior in English and WTC in English. Furthermore, the sub-scale (five communication purposes) of communication behavior in English and WTC in English also exhibited a positive correlation. Based on the results, despite the abstract situations presented in the WTC scale, it is valid for measuring positive attitudes toward second language communication. Furthermore, the results demonstrated that despite the differences in daily necessity between languages, the WTC scale developed in Canada was found to be applicable in the Japanese language context. Consequently, starting from Chapter 4, the WTC scale was employed to measure positive attitudes.

Chapter 4 demonstrated that general trust positively influenced WTC in English, even after accounting for the Big Five personality traits. Across the three studies, it was consistently revealed that general trust played a crucial role in WTC in English. In Study

1, focusing on university students in Tokyo, hierarchical regression analysis indicated that, after controlling for various factors, including the Big Five personality traits, general trust had a positive impact on WTC in English. The results of Study 2, involving the general population in Tokyo, echoed the trends observed in Study 1. Similarly, Study 3, encompassing the general population in seven prefectures from north to south Japan, showed a similar tendency as the findings in Studies 1 and 2.

Chapter 5, Section 1 investigated the impacts of individual-level and group-level trust on WTC in a second language, focusing on Japanese university students engaged in a group-language learning setting. The study revealed significant effects at both individual and group levels over the course of one semester. Furthermore, the causal relationship from general trust to WTC was observed at the beginning but was not evident in subsequent periods. This lack of persistence can be attributed to the distinct nature of trust in a group setting, which differs from general trust.

Chapter 5, Section 2 explored the influences of general trust on English WTC for Japanese individuals at both the individual and prefectural capital levels. The analysis

revealed robust predictive power at the macro-level, emphasizing the capacity of general trust to foster positive interactions among individuals from diverse cultural backgrounds.

Chapter 6 showed that general trust indirectly influenced WTC in English. Individuals with higher levels of general trust exhibited greater confidence in second language communication and international posture and, leading to higher levels of WTC in English. Furthermore, an in-depth analysis of diverse WTC situations unveiled that, regardless of the fluctuations in the context of English communication, general trust consistently exerted a positive impact on each WTC situation, considering three perspectives: whether the conversation would develop or not, whether it was an active or passive interaction, and whether the conversation partner was a native or non-native speaker.

Chapter 7 shows the new proposed WTC model based on general trust. Previous studies have only examined the effects of second language perception and emotion on WTC. However, in this dissertation, the effects of general trust, environments, and situations were revealed.

Through the studies, the extent of English communication for Japanese people was uncovered. The research indicated that general trust had a positive impact on attitudes toward English communication, including daily conversations or small talk at parties, homestays, or school. Additionally, trust positively influenced attitudes toward English communication in more complex situations, such as discussing work concerns with colleagues at the workplace or expressing health concerns in English at the hospital. Therefore, the scope of English communication in the present studies encompassed not only simple interactions such as small talk but also more intricate communication, such as expressing personal concerns.

General trust also pertains to the choice of communication partners. We must consider ourselves as recipients of communication; this involves interactivity. As recipients of communication, it is essential for individuals and the community to be perceived as trustworthy. From an individual's standpoint, it is not only about promoting positivity (Ministry of Education, Culture, Sports, Science and Technology, 2023) but also cultivating attitudes that inspire trust. It is important to cultivate a classroom

environment where students trust each other. For instance, teachers can advise their students not to mock or make fun of others when they are speaking English. From a community perspective, creating an environment where people can converse not only in their mother tongue but also in other languages (e.g., using foreign languages on directional signs) will be necessary. The ultimate goal will be to construct a trusting society. It is imperative to build a community where people trust each other, regardless of whether the recipients are native English speakers or not.

General trust is not only a fundamental factor in English communication but also enhances human interaction, resulting in individual and societal benefits. Specifically, if general trust among Japanese people increases, WTC in English also increases. The enhanced WTC will activate interactions with others and increase social presence, creating a significant connection with others. This process will expand social capital, thereby enhancing social efficiency.

Practical Implications

General trust represents an individual's inclination to foster beneficial

interpersonal connections, and it is influenced by the social context. According to Yamagishi (1998), interpersonal networks in Japan are less flexible compared to American society, leading to fewer opportunities for Japanese individuals to establish new relationships and, consequently, a tendency to be less trusting in general. In countries where English is a foreign language, such as Japan, the chances for interaction with English speakers are limited. These circumstances imply that general trust is shaped by the immediate interpersonal conditions of individuals, often referred to as social environments. If general trust is influenced by people's surroundings, this inclination can vary depending on their educational institution, workplace, or neighborhood.

General trust has the potential to be influenced by people's interpersonal relationships, indicating a potential avenue for intervention in second language education, given that general trust positively impacted WTC in English in the present studies. As an example, schools could provide students with opportunities to engage with individuals who speak a second language, as the level of exposure to such

opportunities can shape general trust by facilitating new interpersonal relationships. Furthermore, online conversation and writing are a good way to meet new people. These days, many companies offer the service of online conversation and writing with a second language speakers. If Japanese people meet new individuals through these platforms, their level of general trust is likely to be higher.

Furthermore, this study unveiled the macro-level impact of general trust on WTC. By fostering a classroom environment with elevated levels of trust, educators can potentially cultivate more favorable attitudes towards English communication among its members. Presently, educators employ group and cooperative learning strategies in the classroom, as indicated by the Ministry of Education, Culture, Sports, Science and Technology (2023), aiming to enhance the effectiveness of language education.

The findings of this study suggest that when group-level trust is high among students, group-level WTC in English tends to be elevated as well. The level of group-level WTC in English was found to be linked to group performance, which contributed to students' overall grades. In this context, even if certain students lacked personal

motivation to engage in English discussions and presentations within their groups, they could still achieve higher grades through group performance. Conversely, when group-level trust was low, group-level WTC in English also tended to be low, and this lower level of group-level WTC was associated with subpar group performance. In such instances, students who were individually motivated to participate in English discussions within their groups might not have sufficient opportunities to use the target language, resulting in lower grades due to the group's overall poor performance. Consequently, their satisfaction with the learning experience was diminished. Therefore, in a group language learning setting, educators need to be attentive not only to individual student characteristics but also to the dynamics within each group to enhance overall group performance.

In the future, individuals may utilize Artificial Intelligence (AI) software while communicating in a second language. This technology can assist in overcoming limitations in second language proficiency by translating their thoughts into the desired language. Consequently, psychological factors are anticipated to become more crucial

for communication than language proficiency. General trust is expected to play a significant role in shaping future interpersonal communication.

Future Studies

Discrepancies exist between the research, particularly in the modeling phase. In proposing future directions, I have emphasized the importance of addressing these discrepancies, such as distinguishing between direct and indirect effects. It is crucial to identify factors that can account for these discrepancies. For instance, while general trust may directly influence WTC in specific situations, in other contexts, its influence may be indirect. In such cases, conducting a detailed analysis of WTC situations becomes necessary to uncover the factors that explain the observed discrepancies.

Chapter 5, Section 1 suggests that the quality of trust in a group setting differs from general trust. At the initiation of the project, when group members were unfamiliar with each other, their trust in fellow members fell within the definition of general trust. However, as the project advanced and members interacted and became more acquainted, their trust in each other evolved and deviated from the initial definition of general trust,

shifting towards individual trust. Future studies will investigate the dynamic process of how the meaning of trust changes in a group setting.

Chapter 6 demonstrated the group-level and area-level effects of trust on WTC in English through confidence in second language communication. However, it did not explore the group-level and area-level effects of trust on WTC in English through international posture. A future study will investigate the group-level and area-level impact of international posture to comprehensively understand the new WTC model.

Compared to confidence in second language communication, general trust is more primitive. The present studies showed a stronger effect of general trust on WTC compared to other primitive factors such as the Big Five personality traits. Future studies need to investigate the effect of other primitive factors such as social skills further.

Furthermore, it is necessary to examine whether the effects of general trust are also evident in other situations such as business communication. In addition, the present study focused on the verbal communication. In a daily life, people write English through

email or SNS. It is also important to examine whether the effects of general trust are also evident in writing communication.

The definition of “second language communication” will be scrutinized. There arises a question of whether it qualifies as second language communication when a person without any second language proficiency communicates with a second language speaker. By clarifying the definition of second language communication, such as determining whether a minimum language proficiency is necessary, the extent of the impact of general trust will be unveiled.

It is also crucial to uncover how general trust operates within the network of a specific group or area. Individuals maintain interpersonal networks within society, creating various connections. General trust is likely to influence both the quantity and strength of these networks. Future studies, employing network analysis, should investigate the impact of general trust on interpersonal networks.

As previously discussed, general trust is shaped by the social environment surrounding individuals. Consequently, it is crucial to study diverse populations with

varying social environments to investigate the impact of general trust on WTC in second language communication. As mentioned earlier, people are inclined to have higher levels of trust in environments where interpersonal relationships are more flexible, as opposed to less flexible settings (Yamagishi, 1998). Future research endeavors will extend to other nations, such as the United States, where interpersonal relationships are known to be more flexible than in Japan. This broader exploration aims to generalize and expand upon the findings of the current study.

The present investigations did not investigate the interactive effects between general trust and social environments, such as relational mobility, on WTC. Given that general trust is potentially shaped by social environments, its impact may also be modulated by these environments. Consequently, future research should delve into the interaction effects between general trust and social environments to gain a more comprehensive understanding of their joint influence on WTC.

Social and cultural factors play a significant role in influencing general trust and WTC. For instance, Japanese individuals may find it embarrassing if they struggle to

speak English proficiently. Additionally, the fear of embarrassment and a preoccupation with accuracy, including concerns about appearing foolish, may act as barriers to English learning for Japanese people. A future study will investigate how social norms and cultural values impact WTC in English for Japanese individuals, aiming to inform effective language education and policy.

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Appendices

WTC in English (Yashima, 2002):

知らない人の一団にスピーチ（プレゼンテーション）をする

知り合いと会話する

友人の大きな集まり（会議）で発言する

知らない人の小グループで会話をする

友人と会話をする

知り合いの小グループで会話をする

知り合いの大きな集まり（会議）で発言する

知らない人と会話をする

友人の一団にスピーチ（プレゼンテーション）をする

知らない人の大きな集まり（会議）で発言する

友人の小グループで会話する

知り合いの一団にスピーチ（プレゼンテーション）をする

General Trust (Yamagishi, 1998):

ほとんどの人は信用できる

たいていの人は、人から信頼された場合、同じようにその相手を信頼する

ほとんどの人は他人を信頼している

ほとんどの人は基本的に正直である

私は、人を信頼するほうである

ほとんどの人は基本的に善良で親切である

Big Five Personality Traits (Oshio, Abe, & Cutrone, 2012):

活発で、外向的だと思う

他人に不満をもち、もめごとを起こしやすいと思う

しっかりしていて、自分に厳しいと思う

心配性で、うろたえやすいと思う

新しいことが好きで、変わった考えをもつと思う

ひかえめで、おとなしいと思う

人に気をつかう、やさしい人間だと思う

だらしなく、うっかりしていると思う

冷静で、気分が安定していると思う

発想力に欠けた、平凡な人間だと思う

Second Language Anxiety:

私は、英語を話すことに不安を感じる

私は、英語を話すことで他者から否定的な評価を受けるのではないかと心配している

私が英語を話すことが下手な場合、周囲からの評判が悪くなると思う

Second Language Learning Motivation:

英語学習のやる気がある

他の人に比べて自分は英語を勉強している方だ

英語の単語や語法について普段から考えている

英語をかなり長い間勉強してきた

英語を常に学ぼうとしている

学校を卒業した後も英語を勉強し続け、進歩している

International Posture (Yashima, 2002):

日本に来ている留学生など外国人と（もっと）友達になりたい

外国の人と話すのを避けられれば避ける方だ

日本の学校で留学生がいれば気軽に声をかけようと思う

留学生や外国人の学生と寮やアパートなどでルームメートになってもよいと思う

日本で地域の外国人を世話するような活動に参加してみたい

もし、日本で隣に外国の人が越してきたら困ったなと思う

日本で、レストランや駅で困っている外国人がいれば進んで助けると思う

故郷の街からあまり出たくない

外国で仕事をしてみたい

国連など国際機関で働いてみたい

国際的な仕事に興味がある

日本の外の出来事は私たちの日常生活にあまり関係ないと思う

海外出張の多い仕事は避けたい

外国の人の言動に違和感を感じることがある

自分と習慣や価値観の異なる人より似た人とつきあう方が好きだ

習慣や価値観の異なる人と協力して物事をすることは楽しい

自分に似た考え方、価値観をもった人と一緒に仕事をしたい

習慣や価値観の異なる人は苦手だ

外国に関するニュースをよく見たり、読んだりする

外国の情勢や出来事について家族や友人とよく話し合うほうだ

国際的な問題に強い関心をもっている

海外のニュースにはあまり興味がない

Revised Version of WTC in English (Chapter 6):

[展開あり×能動的]

パーティーで、同席した人に、趣味について英語で質問する

パーティーで、同席した人に、身の回りの出来事を英語で伝える

パーティーで、同席した人に、その場の話題についての意見を英語で言う

ホームステイ先で、ホストファミリーに、趣味について英語で質問する

ホームステイ先で、ホストファミリーに、身の回りの出来事を英語で伝える

ホームステイ先で、ホストファミリーに、その場の話題についての意見を英語で言う

学校で、知り合いに、趣味について英語で質問する

学校で、知り合いに、身の回りの出来事を英語で伝える

学校で、知り合いに、その場の話題についての意見を英語で言う

[展開あり×受け身]

パーティーで、同席した人に、趣味について英語で質問されたら答える

パーティーで、同席した人に、身の回りの出来事を英語で聞かれたら答える

パーティーで、同席した人に、その場の話題についての意見を英語で求められたら答える

ホームステイ先で、ホストファミリーに、趣味について英語で質問されたら答える

ホームステイ先で、ホストファミリーに、身の回りの出来事を英語で聞かれたら答える

ホームステイ先で、ホストファミリーに、その場の話題についての意見を英語で求められたら答える

ホームステイ先で、ホストファミリーに、家の手伝いを英語で頼まれたら応じる

学校で、知り合いに、趣味について英語で質問されたら答える

学校で、知り合いに、身の回りの出来事を英語で聞かれたら答える

学校で、知り合いに、その場の話題についての意見を英語で求められたら答える

学校で、知り合いに、勉強の手伝いを英語で頼まれたら応じる

[展開なし×能動的]

レストランで、ウェイターに、メニューについて英語で質問する

スーパーで、店員に、商品について英語で質問する

スーパーで、店員に、商品の交換を英語で主張する

バスで、運転手に、自分の行きたい場所について英語で質問する

駅で、駅員に、乗り換えについて英語で尋ねる

道端で、通行人に、分からない道を英語で尋ねる

図書館で、司書に、探している本について英語で尋ねる

病院で、医者に、分からないことについて英語で尋ねる

病院で、医者に、病気の不安について英語で言う

職場で、同僚に、分からないことについて英語で尋ねる

職場で、同僚に、仕事の不安について英語で言う

[展開なし×受け身]

駅で、乗客に、乗り換えについて英語で尋ねられたら答える

道端で、通行人に、分からない道を英語で尋ねられたら答える

病院で、医者に、病気の不安について英語で尋ねられたら答える

職場で、同僚に、分からないことについて英語で尋ねられたら答える

職場で、同僚に、仕事の不安について英語で相談されたら答える

職場で、同僚に、仕事を英語で頼まれたら応じる