令和 4 年度

The Effects of Synchronous and Asynchronous ICT-based International Interactions on the Affective Variables and Speaking Skills of Japanese English Learners

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論文要旨　(概要)

2017 年告示の小学校学習指導要領、2017 年告示の中学校学習指導要領、2018 年告示の高等学校学習指導要領の外国語の目標には、小中高一貫して、実際のコミュニケーションにおいて活用できる技能を身に付け、自分の考えや気持ちなどを伝え合い、主体的に外国語を用いてコミュニケーションを図ろうとする態度の育成が求められている。また、その場で相手に質問をしたり質問に答えたりする等、伝え合うやり取りや、即興性のあるスピーキング力の向上が求められている。さらに、文部科学省は、日本人の英語コミュニケーション能力を向上させるために、学校の Information and Communication Technology (以下、ICT) 環境の整備を後押しし、ICT を活用したスピーキング力の向上を目指してきた (文部科学省, 2017)。

しかしながら、高校の英語授業において、表面的なやり取りが多く、内容に深まりがなく、本当に得たい情報を得たり、伝えたいと思う情報を伝えたりすることが十分にできていない (田中, 2022) ことや、これまでの中学校や高等学校のスピーキング活動では、教師側で会話文を統制して、練習の後に会話活動を行うことが多く、スピーキングテストを行う場合、あらかじめ原稿を準備させ、練習させてから行うスピーチテストの形態をとることが多い (茅野・峯島, 2016) ことが指摘されており、英語の学習場面では、やり取りや即興性を意識した言語活動が十分提供されているとは言えない。その結果、今でも、話すことに対する不安が要因となって、やり取りや即興性を意識した言語活動が不足している状況 (British Council, 2020; 茅野, 2018; Kawashima, 2019; 小林, 2020a) のままである。学習不安といった情意要因は個人要因の 1 つで、言語習得に大きな影響があることが指摘されている (Ellis, 1994)。しかし、学習者がクラスメートの前で個人のパフォーマンスを行う必要のない、脅威のない環境であれば、リラックスし、不安が軽減され (Crookall & Oxford, 1991)、適度なリスクや、あいまいさに耐えさせたりする (Oxford, 1999) ことや、活動に精通し、課題を達成すればするほど学習者はスピーキングに対してリラックスし、その成功体験が学習者の不安に大きな影響を与えることが示されている (Yalçın & İnceçay, 2014)。不安と発話の積極性に関連した情意面の 1 つであるコミュニケーションをしようとする意思 (以下、WTC) に影響を与える要因は、コミュニケーション不安、目標言語を使用したコミュニケーションに対する自信、コミュニケーション能力の認知であることが報告されており、実際のコミュニケーションに密接に結びつくものとして期待されている (Yashima, 2002 ; Yashima, Zenuk-Nishide, & Shimizu, 2004 など)。さらに、日本人 (English as a Foreign Language) (以下、EFL) 学習者が持つ広範囲な国際社会に対する態度を表す国際的志向性 (国際的な仕事への興味、日本以外の世界との関わりを持とうとする態度、異文化や外国人への態度など) (以下、IP) という概念も WTC に直接影響する要因であると考えられている。

このような現状を踏まえ、本博士論文では、即興的な要素を取り入れた同期型の ICT に着目し、情意面 (不安、WTC、IP) を主観的な変数として捉えてその改善を目指し、客観的な変数としてスピーキング力の向上を目指し、1 対 1 のオンライン英会話と、一斉指導の状

況下におけるビデオ通話の効果を検証することを目的とした。さらに非同期型の ICT においては、相手の意見を理解して十分な時間を取って返信できる (Sasaki, 2015) ことや、同期型に比べ不安を引き起こしにくく、文化に関する関心を高める傾向がある (山内, 2019) ことを踏まえ、安心してリスクを取れるという心理的に安全な学習環境下 (Turner and Harder, 2018) を担保された非同期型の ICT にも着目する。そこで、その場で人に見られる不安がなく、自分の発話をモニタリングした後に共有が可能である動画ベースの共有学習アプリ Flipgrid を同期型の ICT と併用することで情意面の改善が期待できるか検証し、同期型と非同期型の活用が有効に機能するための効果的な ICT のアプローチ方法を考察・提案することを目的とした。Flipgrid とは、ビデオを撮影、編集、共有が 1 つのアプリ内で完結できる無償の video discussion platform のことである。

本論文は 6 つの実証研究を含む、全 11 章から構成されている。なお、本論文は、小学生、高校生、大学生を対象に、リアルタイムの同期型・時間差を許容する非同期型の ICT を用いて様々な角度から調査し、公刊してきた研究を、あらためてひとつの一貫した形にまとめたものである。ICT を活用した同期型 (外国人講師との 1 対 1 のオンライン英会話、海外の教室や児童生徒との一斉授業の環境下におけるビデオ通話) と非同期型 (海外の教室や児童生徒との一斉授業の環境下におけるビデオ共有) の実践を行い、情意面 (不安、WTC、IP) と、スピーキング (やり取り) の観点から調査し、効果を促進させるための条件を明らかにすることという目的を持つ。しかし、それぞれの研究における参加者の数や熟達度は違うため、それぞれの 6 つの研究結果を広く一般化する意図を持たないことが明記されている。

第 1 章の前半では、今回の研究を始めるに至った経緯と本研究の意義について述べ、後半では、やり取りや即興性を意識した言語活動の現状と問題点、ICT の可能性、各章の概要について詳述する。

第 2 章の前半では、SLA の理論的背景と Sociocultural theory、Transactional theory について述べた後に、言語学習における不安、WTC、IP について先行研究のレビューを行う。後半では、ICT の歴史的背景と Computer-Mediated Communication (以下、CMC) について述べた後に、Synchronous CMC と Asynchronous CMC について先行研究のレビューを行い、これまでの先行研究を纏める。

第 3 章の前半では、これまでの先行研究の問題点を指摘し、本研究の必要性とその理由を詳述する。後半では、本博士論文における全体の研究課題について述べた後、6 つの実証研究におけるそれぞれの研究課題について詳述する。

第 4 章では、英語を得意とする日本人高校生 34 名のスピーキング不安がどの程度あるのかを調査し、フィリピン人講師との 10 カ月間の 1 対 1 のオンライン英会話の環境において、使用する英語教材の原稿を準備しない即興型の方法 (即興群) と原稿を準備する準備型の方法 (準備群) に分けて、指導前後の効果を比較検証し、その方法の違いがスピーキング不安に及ぼす影響について検証した研究を報告する (Study 1)。検証の結果、優れた英語能力を有している生徒でもスピーキング不安が高いことがわかり、1 対 1 のオンライン英会話の

形態で長期的に話すことの練習を続けることにより、スピーキング不安の軽減に役に立つことが明らかになった。しかしながら、即興群と準備群の不安の軽減に差は見られなかった。

第 5 章では、前章の議論を踏まえ、英語を得意とする大学生を対象に、英語のネイティブ講師と 1 対 1 のオンライン英会話を実施し、短期間のオンライン英会話がスピーキング不安とスピーキング力に及ぼす影響について調査した (Study 2)。ここでは、大学生 4 名を準備型 2 名と即興型 2 名に分け、1 か月という短期間で 1 対 1 のオンライン英会話を実施し、スピーキング不安とスピーキング力に与える効果とその要因を調べた。検証の結果、短期間における 1 対 1 のオンライン英会話の取り組みでも、即興的に取り組むことで不安を軽減でき、スピーキングにおける流暢さ、複雑さ、正確さの観点から、スピーキング力の向上にも有効であることがわかった。振り返りレポートを分析した結果、1 対 1 の状況だと不安が下がると感じており、講師に自分の英語が伝わった経験が自信につながることがわかった。チャット機能の便利さについても、講師のフィードバックが文字として残るので復習できてよかったと感じていることがわかった。また、1 対 1 の半構造化インタビューを分析した結果、事前に話す内容を原稿に書いて準備すると原稿に依存してしまうため、即興で練習するほうがスピーキング力の向上に効果的であると認識していることが明らかになった。

第 6 章では、Study 1 と Study 2 の議論にもとづき、英語を苦手とする大学生 1 名を対象に、フィリピン人講師と即興的な要素を取り込んだ 1 対 1 のオンライン英会話を 1 カ月間実施し、どのようなやり取りやフィードバックがスピーキング不安、スピーキング力に影響を及ぼしているのかを質的に検証した研究を報告する (Study 3)。1 対 1 の半構造化インタビューを分析した結果、実際にコミュニケーションを繰り返すことによる慣れ、ゆっくりとした発話スピードや講師の優しい雰囲気、短いフィードバックや講師の発話例、強制アウトプットが参加者の発話を促し、チャットボックスの文字情報によるインプット修正が意味理解を促進させ、スピーキング不安を軽減することがわかった。さらに、刺激回想法を分析した結果、講師からのフィードバックが参加者の発話や意味理解を促進させ、講師の発話例を足場掛けにし、意味交渉を通したアウトプットに繋がり、やり取りの自信に影響を与え、オンライン英会話に慣れていくにつれて、仮説検証の機会が生まれ、修正されたアウトプットが相手に伝わった成功体験が不安の軽減、スピーキング力の向上につながることが確認された。

第 7 章では、小学生 34 名を対象に、一斉指導の状況下において日本の教室と海外の教室を繋いだ即興的な要素を取り込んだ同期型のビデオ通話 (Mystery Skype) をそれぞれ 2 回実施し、グループでの取り組みがどのように参加児童の WTC とスピーキング力に影響を与えたかを検証した研究を報告する (Study 4)。本研究の同期型のビデオ通話 (Mystery Skype) は、ビデオ通話を使用して海外の教室とつながり、お互いがどこの国にいるか質問を通して、推測し合うコミュニケーション活動である。質問紙とスピーキングテストを分析した結果、同期型のビデオ通話を通して繰り返し英語でやり取りすることで、熟達度に関わらず

WTC とスピーキング力を向上させることに有効であることがわかった。さらに、自由記述の回答を用いて計量テキスト分析を行った結果、英語で相手と話し合う楽しさや相手を意識したコミュニケーションの大切さに気づき、異文化に対する理解を深め、英語学習への意欲を高めることが示された。

第 8 章では、適切なタイミングに応じてクラス間で共有でき、準備してから発信する機会も担保できるいつでもアクセスが可能な非同期型の利点を組み合わせた Flipgrid の活用を検証した研究を報告する (Study 5)。この研究では、大学生 17 名を対象に、一斉指導の状況下において、日本の教室と海外の教室を繋いだ即興的な要素を取り込んだ同期型のビデオ通話 1 回と、その後に非同期型の Flipgrid を 1 週間継続し、スピーキング不安の軽減に及ぼす影響やその要因を検証した。検証の結果、英語を得意とする多くの学習者はスピーキング不安を軽減させ、英語学習に対する意欲を高め、意識を変容することが明らかになった。しかしながら、英語に苦手意識のある 4 名の学習者のスピーキング不安については変化がなく不安が高いままであることも確認された。

第 9 章では、英語に対して苦手意識を持っている 4 クラスの高校生 158 名を対象に、一斉指導の状況下において日本の教室と海外の教室を繋いだ即興的な要素を取り込んだ同期型のビデオ通話とその後に続けて非同期型の Flipgrid を組み合わせた SCMC+ACMC 群 (2 クラス) と、海外の教室と同期型のビデオ通話のみを実施した SCMC 群 (2 クラス) に分けて、方法の違いが IP に及ぼす影響に違いがあるかを比較検証した研究を報告する (Study 6)。検証の結果、同期型と非同期型の併用により、IP の向上が見られ、学習意欲の向上に繋がることがわかった。しかしながら、同期型を 1 回実施しただけでは、IP を高めることが認められなかった。

第 10 章では、それぞれ 6 つの実証研究結果を基に、本論文における全体の研究課題から得られた結果について詳述する。それによると、ICT を活用した実践は、本研究で対象とした教育現場においては、SCMC の即興的な要素を含めた 1 対 1 のオンライン英会話や、一斉授業の状況下におけるビデオ通話を施すことにより、スピ―キング不安の軽減、WTC とスピーキング力の向上に寄与し、さらに、ACMC の Flipgrid を組み合わせて行うことで、スピ―キング不安の改善と IP の向上に有効に機能し得る、という結果であった。

本論文の最終章である第 11 章では、最初に 6 つの実証研究が持つ限界点を提示している。それによると、研究によって参加者数にばらつきがあり、統計的に有意差を確認していない事例研究もあるため、本研究の対象者にとっては効果があるといえるかもしれないが、その結果を一般化することは難しい。その後、研究結果を要約し、これらの知見から導かれる主な教育的示唆が記述されている。それによると、情意面に関しては、ICT を活用した同期型の環境下において、同様のタスクを繰り返すことで、即興的に英語でやり取りすることに慣れさせ、意思疎通ができたという成功体験を積み重ね、少しずつ英語でやり取りできる自信をつけることで、スピーキング不安の軽減と WTC の向上が期待できるので、1 対 1 のオンライン英会話を取り入れるのは望ましいことが示唆されている。ま

た、1 対 1 のオンライン英会話と一斉授業の状況下におけるビデオ通話の特徴を生かした指導法は、小学生から大学生まで様々な校種の英語学習者に適用可能であり、非同期型の Flipgrid を継続して行うことで、英語を得意とする学習者のスピーキング不安の軽減と、英語を苦手とする学習者の IP の向上を促進させることが期待できるため、ビデオ通話と Flipgrid を併用することが望ましいことが示唆されている。スピーキング力については、講師からのフィードバックや英語が伝わる成功体験がさらに英語学習意欲の向上につながり、繰り返し練習を積み重ねることで自信をつけ、スピーキング力の向上も期待できるため、同期型の 1 対 1 のオンライン英会話やビデオ通話を取り入れることが望ましいことが示唆されている。最後に、今後の研究の方向性として、長期間調査することの必要性や、英語に苦手意識を持っている参加者への具体的支援の方法の提案、スピーキング力（やり取り）の検証、一斉授業のビデオ通話におけるスピーキング力の調査、非同期型の Flipgrid の実践を質的に調査し、これらが及ぼす影響を検証することを述べている。さらに、現在の知識創造社会に必要な協調学習に必要な教育モデルを構築すること、そのために、本論文では扱わなかった教育実践における同期型と非同期型の理想的な組み合わせパターンを検証することが示唆されている。

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Sydney

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Major Abbreviations and Acronyms

ACMC	Asynchronous Computer-Mediated Communication
ANOVA	Analysis of Variance
ALT	Assistant Language Teacher
CAI	Computer-Assisted Instruction
CALL	Computer-Assisted Language Learning
CEFR 4+1	Common European Framework of Reference for Languages 4+1
CMC	Computer-Mediated Communication
CSCL	Computer-Supported Collaborative Learning
EFL	English as a Foreign Language
Eiken	Practical English Proficiency Test
FLCAS	Foreign Language Classroom Anxiety Scale
FLE	Foreign Language Enjoyment
F2F	Face-to-Face
GIGA	Global and Innovation Gateway for All
HTC	Having Things to Communicate
IBA	Institution-based Assessment
IC	Integrated Circuit
ICT	Information and Communication Technology
JLAS	Japanese Language Anxiety Scale
IP	International Posture
L2	Second Language
L2WTC	Willingness to Communicate in a Second Language
MEXT	Ministry of Education, Culture, Sports, Science, and Technology
MALL	Mobile-Assisted Language Learning
NS	Native Speaker
OGL	Online Group Learning
Q&A	Questions and Answers
SCMC	Synchronous Computer-Mediated Communication
SCT	Sociocultural Theory
SLA	Second-Language Acquisition
TOEIC	Test of English for International Communication
WPM	Words Per Minute
WTC	Willingness to Communicate
ZPD	Zone of Proximal Development

Publications and Presentations

This doctoral dissertation covers multiple experimental studies reported by the publications and presentations listed below:

Kobayashi, S. (2021a). Effects of the difference between unscripted and scripted methods on speaking anxiety: Comparative examination of video conversations. *The Japan Association for Language Education & Technology Kanto Chapter, 5*, 17–38. (Chapter 4)

Kobayashi, S. (2020b). A practical report of Skype-based video chat to improve speaking skills and reduce anxiety in scripted and unscripted lesson groups. *KATE: Kantokoshinetsu Association of Teachers of English, 34*, 45–58. (Chapter 5)

Kobayashi, S., Furuya, Y., & Nakagawa, Y. (2021). A practical report of Skype-based video chat to improve speaking skills and nurture willingness to communicate. *JES: The Japan Association of English Teaching in Elementary Schools Chapter, 21*, 4–19. (Chapter 7)

Kobayashi, S. (2021b). A change in EFL learners' unwillingness to speak English: Focusing on collaborative international exchange using ICT. *ARELE: Annual Review of English Language Education in Japan, 32,* 161–176. (Chapter 8)

Kobayashi, S., Tabuchi, K., Fukuda, T. S., & Chino, J. (2022). Synchronous and asynchronous computer-mediated communication on international posture. *KATE: Kantokoshinetsu Association of Teachers of English, 36*, 45–58. (Chapter 9)

Kobayashi, S. (2019, August 6). *The effects of Skype-based video chat on students' unwillingness to speak English in scripted and unscripted lesson groups* [Conference presentation]. FLEAT 7: International Conference on Foreign Language Education & Technology, Waseda University, Tokyo, Japan. (Chapter 4)

Kobayashi, S. (2020, December 8). *Comparison of a videoconferencing intervention's effects on students' English-speaking anxiety* [Conference presentation]. 2020 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE), virtual conference. (Chapter 4)

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Chapter 1. Introduction

1.1 Inspiration From the Classroom

"Starting next school year, we will introduce online English conversations into our classes." These were the first words the principal spoke at a staff meeting in 2016 when the researcher was working as an English teacher at an integrated junior and senior high school that had been designated as an English education promotion school. After 2011, the school implemented courses of study that enhanced the use of information and communication technology (ICT) in information education and subject instruction. However, in 2016, few teachers used ICTs in their classrooms, and many English teachers panicked about how to apply ICT in the classroom. The researcher was excited about the introduction of online English conversation in the classroom because of previous experiences of teaching English using ICT equipment. However, the researcher had never taken online English conversation classes and had never taught online English conversation in a classroom with multiple students simultaneously. In the staff meeting, the principal said, "Each student will be lent an iPad and headphones." From the expressions on the teachers' faces, it was clear that these words made them anxious.

Economies, industries, and cultures have embraced globalization to foster global human resources. Thus, diversity, harmonious coexistence, and international cooperation are growing in importance. However, English education in Japan has long been criticized for failing to equip students with strong competencies in communication. English-as-a-foreign-language (EFL) learners in Japan have few opportunities to use English daily. Accordingly, they are not compelled by real-world situations to develop a strong ability to function in this second language (L2). Instead, learners in Japan tend to study English to obtain high scores on school tests or entrance examinations (e.g., for higher education). For example, high school English classes focus on "reading" and interpreting English texts and are often taught using a teacher-centered, knowledge transfer style of pedagogy. Classes rarely provide opportunities for listening to and speaking English (which comprise two of the four language skills) and, thus, do not offer opportunities to communicate in English. Hence, many students are very anxious about speaking English.

Therefore, to improve Japanese people's communication skills in English, the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) initiated several major educational reforms. For example, the "Five-Year Plan for Environmental Improvement for ICT in Education" (FY 2018–2022) was introduced in 2018 to advance ICT use in schools; in part, this plan sought to use ICT to improve students' speaking abilities (MEXT, 2017). The Course of Study for Elementary Schools announced in 2017 (the current Course of Study for Elementary Schools), the Course of Study for Junior High Schools announced in 2017 (the current Course of Study for Junior High Schools), and the Course of Study for Senior High Schools announced in 2018 (the current Course of Study for Senior High Schools) also seek to expand opportunities for individualized learning using personal computers and

developmental language activities using ICT（MEXT, 2018a; MEXT, 2018b; MEXT, 2019a). Given these measures, schools have started to focus more on strengthening students' listening and speaking abilities in English to develop detailed instruction for individual students and improve their English proficiency. The Tokyo Metropolitan Board of Education introduced online English conversation activities that could be completed with tablets at designated English education promotion schools in FY2016 to ensure that English classes actively use ICT.

Before conducting an online English conversation class, the researcher was fortunate to observe several online English conversation classes conducted by an instructor of another grade. Notably, the instructor asked students to prepare and read out a draft of the presentation to be used in the online English conversation class in advance. Unfortunately, the results of the students' post-survey one year later showed that their speaking abilities did not improve. The students also expressed negative impressions of the course, such as "I felt like I was reading aloud rather than communicating because I was just reading out what I had written in advance" and "Is this kind of study really going to help me improve my English?" Such feedback suggests that having students prepare manuscripts before engaging in online English conversations may not encourage them to communicate in foreign languages proactively and may not improve their speaking abilities. Despite the opportunity to communicate in English, the focus was on reading a manuscript aloud, which did not lead to a sense of accomplishment.

Despite these difficult circumstances, online English conversation is, arguably, important and necessary in the Japanese EFL environment, as it compels students to use English to communicate with people overseas and in remote areas. However, the current Course of Study for Senior High Schools requires students to demonstrate language skills in impromptu English interactions. Hence, when students are asked to prepare a manuscript for an online English conversation, whether they are improving in their impromptu English conversation abilities cannot be verified. Therefore, studying whether impromptu online English conversations may effectively test and strengthen student language skills is warranted. This approach may provide L2 learners an opportunity for real communication with people in other regions. Such activities could strengthen students' English-speaking abilities and their confidence in using and learning English, changes that may notably gradually alleviate their anxieties around speaking English. Accordingly, this doctoral dissertation attempts to explore these ideas.

Specifically, the doctoral dissertation aims to (a) examine prior issues on the implementation of impromptu English interactions, (b) propose a better ICT-based approach for Japanese EFL learners of varying proficiency levels, and (c) identify conditions that promote effective English language learning.

All studies in this doctoral dissertation were conducted with a limited number of Japanese EFL learners. Given that the studies were exploratory and focused on a specific population in a local setting,

this doctoral dissertation does not intend to generalize the findings to other L2 teaching issues unless they are characterized by similar populations and contexts.

The rest of this chapter is structured as follows. Sections 1.2 and 1.3 detail the current courses of study and issues related to the implementation of impromptu English interaction in the Japanese EFL classroom to establish the practical background of this research. Sections 1.4 and 1.5 discuss the applications of ICT for impromptu English interactions and explain the significance of this doctoral dissertation. Section 1.6 summarizes the study and outlines the structure of the doctoral dissertation.

1.2 Courses of Study

1.2.1 Common Objectives for Foreign Languages in the Courses of Study for Elementary, Junior, and Senior High Schools

The foreign language objectives of the current Courses of Study for Elementary, Junior High, and Senior High Schools require students to acquire actual communication skills to communicate their thoughts and feelings to each other and proactively communicate in foreign languages. Moreover, students are expected to improve their impromptu English interaction skills by communicating with each other; for example, they are expected to ask and answer questions.

1.2.2 Qualities and Abilities in the Course of Study for Elementary Schools (Foreign Languages)

The current Course of Study for Elementary Schools sets detailed goals for foreign languages per the three pillars of qualities and abilities: (1) knowledge and skills; (2) thinking, judgment, and expression; and (3) the ability toward learning and humanity. The "knowledge and skills" section emphasizes the abilities to (a) "notice the differences between the Japanese language and foreign languages, such as sounds and letters, vocabulary, expressions, sentence structures, and functions of foreign languages"; (b) "understand this knowledge"; (c) "become familiar with reading and writing"; and (d) "acquire basic skills that can be used in communication when listening, reading, speaking, and writing" (MEXT, 2022, p. 1). The "thinking, judgment, and expression" qualities require that students should (a) "cultivate the base for the ability to communicate their own thoughts and feelings by listening to and speaking about simple and familiar topics [per] the purpose, scene, and situation in which the communication is taking place"; (b) demonstrate "reading while guessing the meaning"; and (c) practice "writing with an awareness of word order for vocabulary and basic expressions of foreign languages which the pupils are sufficiently familiar with the sounds of" (MEXT, 2022, p. 1). The "ability toward learning and humanity" quality requires that teachers should "deepen the pupils' understanding of the underlying cultures of foreign languages and foster an attitude of attempting to proactively communicate in foreign languages while [consideration] the people they are communicating with" (MEXT, 2022, p. 1).

The summary points of the deliberations to date for the next courses of study (MEXT, 2016a) advise

that language activities should be enhanced to strengthen communication skills, especially those with which students continue to struggle, such as speaking and writing. Thus, foreign language education in middle school and beyond should focus on listening and speaking to deepen students' experiential understanding of language and culture through foreign languages from the elementary school level and familiarize them with the sounds and expressions of foreign languages based on their awareness of Japanese and L2 sounds and word orders. In higher grades, such knowledge and skills should be connected to subject-based learning.

1.2.3 Achievement Goals for Speaking Skills (Interaction)

Speaking (interaction) in the current Course of Study for Elementary Schools aims to enable pupils to "give instruction, make requests, and respond using basic expressions"; "exchange their own thoughts and feelings regarding simple and familiar topics in everyday life by using simple words and phrases and basic expressions"; and "communicate through asking and answering questions about themselves, the person they are communicating with, and their surroundings by using simple words and phrases and basic expressions on the spot" (MEXT, 2022, p. 2).

Furthermore, the current Course of Study for Junior High Schools added "interaction" to existing curricular expectations for the "speaking" component of foreign language learning. Notably, interactions include impromptu communications. Meanwhile, the current Course of Study for Senior High Schools aims to deepen students' understandings of the underlying cultures of foreign languages and encourage them to develop positive attitudes toward trying to proactively and independently communicate in foreign languages.

1.3 Current Issues with Teaching Impromptu Interactions

1.3.1 Lack of Language Activities for Impromptu Interactions

Tanaka (2022) notes that high school English classes have many superficial English interactions, in that the content is not adequately meaningful or deep for students to obtain the information they want or to convey the information they want to communicate. Accordingly, he is concerned that while students who think about or write their ideas may express themselves, most students unwillingly engage in impromptu English interactions. Therefore, Tanaka suggests that lessons can be improved by (a) enabling students to ask an assistant language teacher (ALT) questions and (b) having the ALT and Japanese teacher of English model exchanges for students using these questions. Tanaka advised that such model interactions may improve how much students enjoy expressing their own opinions and, accordingly, their motivation to speak.

However, Japanese students get few opportunities to practice such improvisation in their English classes. Chino and Mineshima (2016) highlight this problem as follows. For speaking exercises in junior high and senior high schools, teachers set a script for speaking practice and get the students to

rehearse it. For speaking tests in junior high and senior high schools, the teachers often instruct students to prepare a script in advance and rehearse it before they take the test. Thus, to achieve curricular goals, it is essential to address the lack of language activities that focus on impromptu English interactions (British Council, 2020; Chino, 2018; Kawashima, 2019; Kobayashi, 2020a), which, as noted above, causes anxiety about speaking.

The British Council's (2020) anonymous questionnaire survey (using four-point scales) of 173 public junior high school English teachers from October to November 2019, revealed that 64% of respondents stated that they "often" or "sometimes" used improvisational speaking in their classes before the transition to the current Course of Study for Junior High Schools in Japan. Meanwhile, when asked how often their students engaged in "impromptu English interactions with each other on a theme given by the teacher," 71% chose "always," "often," or "sometimes," while 28% chose "not often" or "not at all." When the teachers were asked whether they advised students to "prepare the content of a speech before presenting it," 13% responded that they "do not do this very often" or "do not do this at all." Thus, many teachers are reluctant to get their students to engage in impromptu English interactions.

1.3.2 Planning

Pre-task planning, as described by Ellis (1994), allows students adequate time to prepare for the English class. Planning also gives students a chance to decide what they will say and in what order, choose vocabulary words thoroughly and carefully, and select sentence structure. Ellis indicates that, consequently, pre-planning increases the accuracy, fluency, and complexity of speech. Moreover, pre-task planning may help reduce Japanese EFL learners' speaking anxiety (Kawashima, 2019). Therefore, it is not surprising that many teachers encourage students to take some time to think about what they will say before speaking. However, speaking accurate and complex English in classroom language activities is not the same as using English in real communicative situations (Sannomiya, 2019). Delivering pre-prepared content does not challenge learners to use new language materials or knowledge; language acquisition occurs when attempting to express new meanings (Tin, 2013). Therefore, it is important to create opportunities for students to interact in English in an impromptu style.

1.3.3 A Great Sense of Anxiety

According to Kawashima (2019), many teachers of English in Japan would ideally like to provide their students with more opportunities to speak English; however, they are wary of doing so because they worry that students who are anxious about speaking English may find such activities demoralizing. According to Kawauchi (2016), students are anxious about language activities that involve speaking independently, without preparation, and in front of others. Furthermore, Kawauchi specifies that

students are anxious about making mistakes and embarrassing themselves—they do not want their classmates to think that they cannot speak English and do not want to speak English in front of everyone without a reason.

However, interviews with college students with low English proficiency revealed that they were interested in speaking English and strongly felt they needed opportunities to use English (Adachi & Makino, 2015). Meanwhile, the *Daigaku eigokyoiku jittai chousa* (Survey of the Actual Condition of English Education at Universities) showed that most students (68%) want to learn how to speak English at university (The Japan Association of College English Teachers Classology Research Committee, 2007). However, as noted, they are worried about embarrassing themselves and speaking in public. Moreover, although teachers recognize the need for impromptu English interaction, they tend to shy away from using it in the classroom because their students are anxious about speaking in English; accordingly, as established above, most teachers have students prepare scripts for speaking, which is a poor approach to teaching speaking. Therefore, it is essential to develop solutions to fears of improvisation (Chino, 2018) in English classes that can help teachers move away from relying on prepared manuscripts.

1.4 Perspectives on Impromptu Interaction Activities

1.4.1 Successful Experiences

Some existing studies offer insights into effective impromptu approaches to L2 teaching. In one study, 87% of learners stated that they had experienced speaking anxiety, and about half reported that positive speaking experiences had increased their confidence; thus, successful experiences may reduce learner anxiety and increase confidence by helping them recognize that they are proficient language learners (MacIntyre & Gardner, 1991). Notably, emotional factors, such as learning anxiety, can significantly impact language acquisition (Ellis, 1994).

Students' speaking anxiety may be rooted in a lack of practice with using English in impromptu interactions. Given that Japanese EFL classes tend to be large and lecture-based, it is not easy to ensure that students have opportunities to speak English without preparation, practice individual interactions, and interact with people from different cultures. Meanwhile, foreign language classes in Europe and the United States tend to involve small-group communicative activities (Yashima, 2004). Given these differences, student anxiety about foreign language learning emerges differently for Japanese English learners in an EFL environment than for European or American L2 learners. Hence, Japanese EFL classes can be improved by including opportunities for small groups to practice impromptu English interactions and enable students to enhance their English skills. As noted above, successful interactions can enhance student confidence, decreasing their speaking anxiety and motivating them to continue learning. However, exactly what factors facilitate successful learning through impromptu English interactions?

1.4.2 Learner-Centered Teaching

Learner-centered teaching methods have been found to effectively enhance communication skills, presentation skills, and classroom attitudes, and small class sizes significantly enhance their effectiveness (Murakami et al., 2016). Notably, learner-centered English teaching is rooted in tasks that encourage learners to communicate their opinions and ideas that are relevant to the context. To be sure, successful communication in English requires the ability to express oneself in English and knowledge of the content one wants to convey (Watanabe, 2017). The more relevant the class is to the learners, the more they will be motivated to learn and show their learning through communication exercises (Oshita, 2009). Yamada (2009) reported that tasks that compel learners to communicate their opinions and ideas and that require them to negotiate many meanings can increase their motivation to communicate, activate their efforts, yield a sense of accomplishment, and deepen confidence. Dörnyei (2001) also noted that asking learners their opinions and ideas promotes personalization and immersion in communication. In real-world situations, two-way communication often occurs on the spot without preparation. Effective English communication requires language activities with purposes that are relevant to the situations in which communications take place. Further, it is important to motivate participants by preparing meaning-oriented tasks; for example, learners should be instructed to think about what they want to convey, ask questions of others, exchange opinions, and use expressions relevant to the situation (Kobayashi, 2019).

1.5 Use of ICT Networks

1.5.1 The Potential of ICT

This study focused on the use of ICT networks to facilitate successful interactive English communications in ways that improve students' impromptu speaking skills, stimulate their confidence, and reduce their anxiety about learning English. ICT can help students practice their English and develop an understanding of different cultures through cooperative learning experiences with others in foreign countries; notably, such experiences are difficult to create in regular classes (MEXT, 2011). According to the current Courses of Study for Elementary, Junior High, and Senior High schools, the effective use of computers, the Internet, and other information and communication networks is expected to be essential in foreign language teaching, as these tools can motivate students to learn and communicate in English and encourage them to proactively engage with the world. Therefore, ICT use can support the current courses of study by creating excellent opportunities for students to communicate their thoughts and feelings.

All the current courses of study (i.e., for elementary, junior high, and senior high schools) position the ability to handle information as a fundamental skill for language learning and emphasize the need to develop ICT use in schools to enrich learning. However, effective ICT use in instruction and activities for language learning requires students to be interested in using computers and information

communication networks; accordingly, it is important to encourage students to develop a positive attitude toward these technologies. The ability to use information constitutes the qualities and abilities required to perceive and grasp various events worldwide and their connections and to use information technology appropriately and effectively to discover and solve problems and form ideas (MEXT, 2016b). In other words, to survive in an information society, it is important to acquire the ability to handle information, including the ability to identify problems and collect, organize, and convey information to solve them. Hotta (2017) describes the ability to handle information as a skill acquired through a series of experiences and argues that schools should accordingly guarantee good ICT use experiences.

1.5.2 Practical Examples of ICT Use

To date, examples of ICT practices, including the use of digital teaching materials that take advantage of affinities for ICT and its characteristics, have been reported in a wide range of school types—from elementary and junior high schools to senior high and special needs schools (Niigata University Faculty of Education-affiliated Niigata Elementary School, 2017; Koike & Kamiya, 2018). In the future, examples of ICT practices are likely to be increasingly reported. Indeed, MEXT (2020) reports that ICT is already being increasingly applied in foreign language teaching. As noted, ICT use can allow foreign language teaching to stretch beyond the classroom by enabling students to connect with people abroad and in remote areas; notably, this strengthens learning and promotes English education using ICT. Accordingly, senior high school students are increasingly using ICT to connect with schools overseas and practice impromptu English interactions (e.g., Maibara High School in Shiga Prefecture and Nichinan Shintoku High School in Miyazaki Prefecture, which conduct overseas exchanges) or form project teams with overseas high school students using a web conference system for interactive exploration learning (e.g., Hokkaido Sapporo International High School for Information Technology). However, there are few examples of ICT use for impromptu English interactions with overseas partners in elementary and junior high schools—to date, elementary and junior high schools have used ICT to facilitate remote collaborative learning (e.g., Kamitaira Elementary School, Iguchi Elementary School, and Taira Junior High School—all in Nanto), but not impromptu English interactions with schools overseas.

Makino (2014) reported that integrating ICT equipment in speech training improved self-efficacy, willingness to learn, motivation to speak, and speech skills among students with poor English skills; specifically, Makino employed the video recording function of cell phones and learning record sheets. Other studies have reported the educational effects of having groups of Japanese university students with different levels of English proficiency (upper and lower groups) watch videos of other learners as models; these studies noted the importance of presenting models that match learners' English levels (Okada et al., 2014). Additionally, presenting videos of models can help learners perform tasks;

meanwhile, this approach may also encourage the learners, transform them into confident learners (Adams, 2004), and reduce their anxiety about learning a foreign language (Okada et al., 2018).

1.5.3 The Global and Innovation Gateway for All School Program

MEXT (2019b) offers guidelines for the use of big data and advanced technologies, such as artificial intelligence, the Internet of things, virtual reality, and augmented reality, in education to develop human resources for Society 5.0 (a new, highly information-oriented or super-smart society). Furthermore, to eliminate disparities in opportunities for daily exposure to English because of regional characteristics and family environments, MEXT is now promoting the Global and Innovation Gateway for All (GIGA) School Program. The GIGA School Program seeks to give students access to computers. Therfore, one ICT terminal has been distributed to each student in all public elementary and junior high schools to establish learning environments that allow daily ICT use and easy access to the cloud. In response to this program, ICT-based education centered on online learning has garnered attention (MEXT, 2019c). As ICT-based instruction becomes more widespread, various learning activities will be developed, and instructional skills in the use of ICT will be accordingly required. However, ICT-based pedagogies have not yet been established—there are few reports on how effective they may be, what specific measures are needed to make them meaningful in classrooms, and what proactive participation activities they should include.

According to MEXT's annual survey on the actual status of the informatization of education in schools, teachers' abilities to use ICT in classrooms and teach students to use ICT have not grown much relative to other abilities, such as the ability to use ICT for researching teaching materials, preparing and evaluating schoolwork, and teaching the knowledge and attitudes that form the basis of information use. Therefore, skills for teaching best practices for ICT use must be strengthened (MEXT, 2021); accordingly, specific examples of instruction on ICT use and their effectiveness are required.

Computer learning networks have the potential to give learners confidence (Warschauer et al., 1996), and new forms of learning, such as computer-mediated communication (CMC), synchronous CMC (SCMC), and asynchronous CMC (ACMC) are becoming increasingly popular in English language education. ICT makes it easier to connect with the world and increases opportunities to communicate in English, which contributes to the motivation to learn (MEXT, 2016b). As already mentioned, there are currently few opportunities for impromptu English interactions or one-on-one interactions with foreign teachers inside Japanese school classrooms. However, integrating CMC can bring impromptu English interactions into the classroom. Specifically, CMC can connect students with native English speakers and other foreign and remote people and classrooms, which notably creates opportunities for cross-cultural experiences. In other words, CMC can enable students to communicate with others in English, engage in successful experiences, grow their confidence, and reduce their anxiety in English communication by exposing them to English conversations and different cultures per particular

purposes, scenes, and situations.

1.6 Topic and Structure of the Doctoral Dissertation

This doctoral dissertation investigates and summarizes ICT-based SCMC and ACMC practices across different school types in Japan by studying how they impact the affective aspects—anxiety, willingness to communicate (WTC), and international posture (IP)—and speaking (interaction) skills of students, ranging from elementary school to university students. Regarding SCMC, this study focuses on one-on-one online English conversations with a foreign teacher and lecture-based video calls between a Japanese classroom and foreign classrooms and students. Regarding ACMC, it concentrates on lecture-based video sharing between a Japanese classroom and foreign classrooms and students.

This doctoral dissertation comprises 11 chapters. Chapter 2 surveys existing literature on the topic. Chapter 3 outlines the study at large. Meanwhile, Chapters 4 to 9 report the specific case studies that comprise the overall project. In the first case study, reported in Chapter 4 (Study 1), 34 high school students proficient in English were divided into two groups: a group of 17 students who improvised without preparing a script (improvisation group) and a group of 17 students who prepared a script before speaking (script group). Both groups engaged in one-on-one online English conversations with a Filipino teacher for five months, the purpose of which was to examine the effect of using a manuscript on the reduction of speaking anxiety. The teaching methods of the improvisation and script groups were then switched and implemented for three months to probe changes in speaking anxiety. However, due to the long duration of the program, it was not possible for its effectiveness to be discerned in a short period of time, nor for its factors and impact on speaking ability to be identified.

This limitation was addressed by the second study, reported in Chapter 5 (Study 2), where four university students proficient in English were divided into two groups: a script group of two students and an improvisation group of two students. The two groups participated in one-on-one online English conversation sessions for one month, the purpose of which was to examine the effect of using a manuscript on the reduction of speaking anxiety and ability. Specifically, the students engaged in short online English conversations with native English-speaking teachers from the US, Canada, Australia, and the UK. However, the content of the conversations and feedback from the instructor were not clear, preventing this study from revealing whether this method would be effective for learners who have difficulty with English.

Therefore, in the third study, reported in Chapter 6 (Study 3), one university student with low English proficiency completed a month of impromptu one-on-one online English conversations with a Filipino teacher. This research employed a qualitative method to determine the kinds of interactions and feedback that affected their speaking anxiety and ability. While Studies 1–3 offered insights into one-on-one online English conversations, the impact of lecture-based video calls incorporating

impromptu English interactions, such as group or class-to-class interactions, remained unclear.

In the fourth study, reported in Chapter 7 (Study 4), lecture-based video calls incorporating impromptu English interactions were, thus, conducted twice with 34 elementary school students in two classes. The study examined how the video calls, which connected classrooms in Japan and overseas (Malaysia, Australia, Russia, and India), affected the students' WTC and speaking skills. However, it is not easy to make such classroom connections via video calls in a synchronous manner given time differences and the Internet communication environment. Furthermore, individual speech opportunities were an issue.

In response, the fifth study, reported in Chapter 8 (Study 5), examined the use of Flipgrid. Flipgrid combines the advantages of anytime access to ACMC, which allows information to be shared between classes during times that work well for the students and guarantees the opportunity to disseminate opinions after preparation. In this study, 17 university students participated in one lecture-based video call that incorporated impromptu English interactions between a Japanese and an Australian classroom, followed by one week of Flipgrid use to examine whether this method reduced speaking anxiety and, if so, what factors proved influential. However, the number of participants who had difficulty with English was small and could have been an interfering variable.

Therefore, in the last study reported in Chapter 9 (Study 6), 158 high school students in four classes who had difficulty with English were divided into two groups: the SCMC+ACMC group (two classes), which used both video calls and Flipgrid to interact with a classroom in Japan and classrooms in Thailand and Australia, and the SCMC group (two classes), which only participated in video calls with classrooms in the Philippines and Australia. The study compared the effects of the different CMC methods on IP.

Chapter 10 summarizes the findings and synthesizes them to offer insights into best practices for effective ICT-based language pedagogies. Specifically, it discusses what the studies reveal about effective approaches to ICT use in the classroom that contribute to improving students' affective aspects—anxiety, WTC, and IP—and speaking skills.

Chapter 11 first addresses the problems and limitations of Studies 1–6. Next, it summarizes the study's conclusions in response to the research questions, focusing on their practical pedagogical implications for teachers. Last, this chapter provides directions for future research.

Chapter 2. Literature Review

The first half of this chapter reviews the literature on the theoretical pillars of this doctoral dissertation—the interaction (Long, 1996) and output (Swain, 2005) hypotheses of the second language acquisition (SLA) theory—and contextualizes communication in the online environment. It also discusses the sociocultural theory (SCT; Vygotsky, 1978), scaffolding (Wood et al., 1976), Computer-Supported Collaborative Learning (CSCL), and the transactional distance theory (M. G.

Moore, 1993) to flesh out the theoretical foundation. Further, it reviews prior research on anxiety, measures to reduce speaking anxiety, and WTC and IP (the other affective aspects in this study) in the context of anxiety.

The second half of the chapter outlines the historical background of ICT, including SCMC and ACMC. It discusses the benefits and risks of SCMC, reviews existing papers on SCMC use, and discusses the need for ACMC. Next, it summarizes the benefits and risks of ACMC and reviews existing literature on ACMC use. Finally, it summarizes and discusses previous studies on the expected educational benefits of SCMC and ACMC.

2.1 Second Language Acquisition

2.1.1 The Interaction Hypothesis and the Output Hypothesis

When learners who have difficulty with English communicate with their counterparts in English, they may feel anxious because they do not know how to express themselves in English, or they may become silent because they do not understand their counterparts' English. Meanwhile, Japanese speakers may avoid using English and instead use Japanese among themselves, abandoning the opportunities to use English and preventing themselves from feeling the need to use English. In this situation, language skills are unlikely to develop. Hence, SLA can offer an important perspective on improving speaking skills and considers the affective aspects of language learning.

SLA is the study of how languages other than one's native language are acquired; it is the scientific study of the mechanisms by which an L2 is acquired (Shirai, 2012). This study used the interaction (Long, 1996) and output (Swain, 2005) hypotheses of SLA as theoretical pillars and incorporated a combination of the following effects. Interaction facilitates language acquisition by transforming incomprehensible input into comprehensible input (Krashen, 1985). Moreover, interaction inevitably provides an opportunity for pushed output. When a pushed output approach incorporates corrective feedback from the instructor, it can deepen understanding, increase output, and create opportunities for hypothesis testing. Further, repeated negotiations of meaning promote interlanguage development. Additionally, efforts to produce comprehensible output develop language competence (Swain, 1995) and an enhanced ability to negotiate meaning, such as asking an interlocutor to repeat themselves to communicate effectively (clarification request) or confirm that one has understood an idea correctly (comprehension check), which facilitates SLA (Long). Moreover, syntactic processing and grammatical consciousness-raising are useful; in particular, writing may enhance the abilities to notice and reflect—indeed, continuous practice of producing an output can lead to the automatization of linguistic knowledge. In other words, learners must interact with other learners—this situation is considered a "fertile environment for SLA to occur" (Blake, 2000, p. 121).

However, Klapper (1991) warns that students memorize by rote when given time to prepare, arguing that eliminating opportunities for rote memorization will force students to focus more on meaning (as

opposed to form) and will also reveal their interlanguages. Invoking Schmidt's "notice the gap principle," Swain (1995) asserts that when L2 learners encounter a situation where they cannot express what they want to express in the target language, they begin to focus on the relevant input and acquire new language knowledge. Meanwhile, Yashima (2009a) reports that Japanese participants were often pushed aside by their European counterparts in discussions during international volunteer activities, which triggered a desire to learn more English for revenge. In other words, the experience of getting frustrated from not being able to say what they feel and want to express may drive participants' WTC. Therefore, it is necessary to carefully design tasks that incorporate the combined effects of negotiation of meaning and awareness such that learners engaging in impromptu English interactions not only have positive experiences and do not feel anxious but also experience the frustration of not being able to say what they want to say and become aware of their challenges.

2.1.2 Communication in an Online Environment

In the SLA context, CMC is vital in facilitating advanced interaction (Ing et al., 2020). Scholars suggest that using technology to provide opportunities for more communicative practices can fulfill the principles of communicative language teaching (Dos Santos, 2020). Communication in online environments is worth it because CMC environments facilitate content integration, dissemination, and meaning negotiation (Bekar & Christiansen, 2018). Smith (2003) also investigates online real-time chats in task-based CMC, which is related to the interaction hypothesis of SLA and meaning negotiation. Smith finds that learners better negotiate meaning when they encounter problems with communication; moreover, decision-making tasks encourage meaning negotiation more than jigsaw tasks, which suggests that task type affects the level of meaning negotiation. According to Mofareh (2019), more than 90% of students are more engaged and interactive when learning English with modern technology; moreover, these methods yield higher English language achievement levels than traditional methods, and they have significantly improved teacher interaction and overall student responsiveness. Additionally, Yu et al. (2010) conclude that computer-assisted environments are more effective for learning and knowledge retention than lecture-discussion environments; they find that network-based communication, which emphasizes meaning negotiation, is beneficial for SLA. Meanwhile, CMC can offer students who are uncomfortable in face-to-face (F2F) classes a more suitable environment and opportunity for discussion (Berge & Collins, 1995; Harasim, 1990)—generally, learners are comfortable expressing themselves in an online environment (Freiermuth, 2001; Roed, 2010). Furthermore, computers can mediate social interactions by increasing enthusiasm, task time, student satisfaction, and collaborative learning (Shotsberger, 1996). In this regard, this study focuses on the zone of proximal development (ZPD) and scaffolding, which is a method of assisting the interlocutor. Both have important implications for continuing interaction and ICT, which can help the interlocutor.

2.2 Sociocultural Theory

2.2.1 The Zone of Proximal Development

Appropriate help from teachers and interlocutors is necessary to help English language learners negotiate meaning with as little anxiety as possible when interacting in English. A learning approach involving communicative exchanges is effective in SLA (Gass & Mackey, 2007), and the effectiveness of oral corrective feedback is supported by the interaction hypothesis (Long, 1996) and SCT (Vygotsky, 2001). Lyster et al. (2013) empirically verified this effect. SCT, which posits that children develop various abilities through social interactions with others, is wholly applied to SLA. Rooted in Vygotsky's (1978) idea that cognition cannot exist without a social context, SCT has attracted attention for its usefulness in examining individual and collective L2 use and development in public education and other settings; notably, regarding the ZPD concept, SCT emphasizes mediation (Lantolf, 2000). More specifically, Vygotsky's (1978) theory of the ZPD, based on SCT, refers to gaps between abilities that learners can demonstrate independently and abilities that they can demonstrate with the help of others. Children are said to develop through mediated social interactions with more competent individuals, such as parents and elders. The ZPD, therefore, is an area where education can have an impact. The ZPD concept describes the importance of an environment in which learners develop various skills through collaboration with teachers and classmates. According to Lantolf and Poehner (2014), when SCT is applied in language learning, the ZPD can be approached from three perspectives: when the focus is on learner skills, when the focus is primarily on the teacher's work, and when the scaffolding is aimed at individual cognitive development where collaborative mediation is seen as the foundation for learning. Accordingly, Takeuchi (2012) states that peer help contributes to a successful experience.

2.2.2 Scaffolding

The concept of scaffolding (Wood et al., 1976), which is linked to the ZPD, is also considered important in interactional activities. Scaffolding regards the support a teacher provides to a learner or the support learners offer each other, such as feedback, and it takes place during interactions (Lantolf, 2000). For scaffolding to be successful, the teacher should be one step ahead in the problem-solving process; the teacher should allow learners to work on tasks appropriate for their current ability levels and guide them to the next step (Vygotsky, 1978). To examine what aspects of scaffolding sustain interactions, Tojo et al. (2018) analyzed classroom discourse from the fifth grade in elementary school to the second grade in junior high school. Their study of how speech functions and characteristics work as scaffolding shows that language teaching, language use in the learning process, materials, and teacher speech may serve as scaffolding mediators in understanding content. Thus, the teacher provides scaffolding in both English and the students' native language, while the students spontaneously use scaffolding in English and their native language. While most studies on scaffolding

mediators in language learning focused on teacher‐student interactions, collaborative scaffolding also occurs between students (Donato, 2000).

Based on these concepts of the ZPD and scaffolding, Nishida and Yashima (2010) describe a process in which elementary school students with little or no English learning experience transitioned from imitating a teacher's model to performing a play without assistance as part of an English drama activity. The study finds that teacher‐learner interactions facilitate learning, and even challenging tasks can be accomplished if sufficient scaffolding is provided. Y. Sato (2006) presented an interpretation of the ZPD using three categories: (1) dialogue between students, such as group work, that complements social interaction and socialization in the classroom; (2) scaffolding offered by adults that support children; and (3) collaborative dialogue and interactions in which learners and teachers change together.

2.2.3 Computer-Supported Collaborative Learning

CSCL provides an opportunity to enhance the EFL environment (Abe, 2013). It is based on constructivist principles, with an emphasis on Vygotsky's (1978) theory of collaboration and interaction. This approach holds that an individual's cognitive development occurs through collaboration and discourse during interactions (Chapelle, 1998), especially when meaning is authentically negotiated and constructed (Warschauer & Kern, 2000).

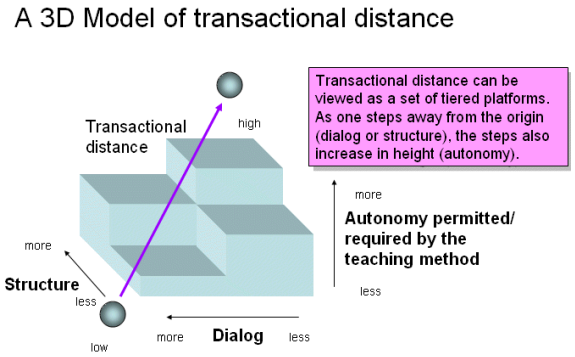
Contextualized within the concept of the ZPD, insights relevant to the current study may be derived from studies of CSCL involving an online discussion forum and autonomous and collaborative learning (Kushima et al., 2016), studies focusing on changes in interactions within learning communities (Yang & Tang, 2003), and studies involving the use of online forums for language teaching (Krish, 2011). Darhower (2002) states that an SCMC chat initiative creates a learner-centered discourse community, consistent with the SCT, which emphasizes the social aspects of L2 learning. Therefore, the next section introduces the theory of transactional distance, which emphasizes teacher support and interaction in an ICT-based online setting.

2.3 The Theory of Transactional Distance

M. G. Moore (1993) argues for a transactional distance theory of teacher-learner relationships applicable to distance education. For Moore, "distance" is not only the geographical space between the learner and the teacher, but also the gaps defining the interactions between learners and the instructional content, learners and teachers, and learners themselves. Moore's theory posits that, in distance classes, the psychological distance between the teacher and learner is more important than the physical distance between them; further, Moore advises that three factors shape psychological distance: "interaction (or dialogue)," "structure," and "autonomy" (M. G. Moore, 1972, 1973). Figure 2.1 depicts M. G. Moore's (1972, 1973) theory of transactional distance.

Figure 2.1

A 3D Model of Transactional Distance (M. G. Moore, 1972, 1973)



An interaction (or dialogue) is an exchange between a teacher and a learner. In M. G. Moore's theory, transactional distance decreases as dialogue increases. Here, *"interaction"* (or *"dialogue"*) signifies not only direct synchronous interaction but also asynchronous interaction (e.g., an e-mail). Accordingly, the transactional distance can be affected by the immediacy and frequency of the interaction. Cases that involve a lot of interaction, such as immediate feedback and synchronous video calls, will involve a lower transactional distance between the teacher and the learner, while cases of less immediate interactions, such as e-mail exchanges, will involve a higher transactional distance.

Meanwhile, structure regards elements such as subject goals, teaching methods, and evaluation methods. The more flexible the structure, the lower the transactional distance. For example, a distance course program with a pre-determined structure, such as a format in which the learning content is recorded in advance and played back by the learner, is not very flexible; thus, the psychological distance is higher.

Regarding autonomy, the higher the transactional distance, the less direct instruction the learner receives, and the more autonomy the learner has. Scholars suggest that under such circumstances, the learner must have sufficient autonomy to complete the program (Tei & Kubota, 2006). The higher the transactional distance, the more challenging it is to conduct interactions, and the less individualized learning support is available.

Transactional distance scores refer to distance learners' satisfaction with distance education (Weidlich & Bastiaens, 2018). Y. Yamauchi (2021) investigated satisfaction in synchronous online classes for university students and reported that group activities (interactions) among learners have the strongest impact; accordingly, Yamauchi suggested that *"interaction,"* one of the three factors in transactional distance theory, is vital in online English class satisfaction. Moreover, while transactional distance theory situates teacher–learner interactions as dialogue (M. G. Moore, 1993), Yamauchi indicated that the importance of learner–learner interactions must also be recognized. Suzuki et al. (2020) revisited transactional distance theory, which comprises three factors—interaction (or

dialogue), structure, and autonomy—and proposed reinterpreting interaction (or dialogue) and structure as different kinds of scaffolding. By considering structure as a kind of scaffolding prepared in advance and interaction (or dialogue) as scaffolding during learning, the total amount of scaffolding can be adjusted to create a transactional distance suitable for the learner's capabilities; for example, a more independent learner may require less scaffolding (structure).

In other words, effective distance education requires determining the appropriate quantity and quality of teaching materials, accounting for learner autonomy and teacher–learner and learner–learner interactions. Teleconferencing programs, such as those that involve real-time videoconferencing with alternating dialogue, create a sense of social proximity because there is a less pre-determined structure; therefore, learning content can be changed as needed by the individual, there is more dialogue, and direct instruction is possible.

2.4 Anxiety in Language Learning

2.4.1 Anxiety Related to Foreign Language Communication and Foreign Language Learning

Existing research approaches anxiety from three perspectives: trait, state, and situation-specific anxiety (MacIntyre & Gardner, 1991). Trait anxiety regards individual differences in the frequency of anxious states or anxiety as a relatively stable personality trait (Spielberger, 1983). People with high levels of trait anxiety are generally nervous and lack emotional stability (Goldberg, 1993). State anxiety, however, is a subjective sense of tension characterized by the activation of the autonomic nervous system and regards anxiety at a given point in time (emotional tension fluctuates). It refers to anxiety as a temporary state of tension; for example, a feeling of unease before taking a test (Spielberger). Situation-specific anxiety regards anxiety that occurs in a specific situation, such as public speaking or foreign language anxiety.

According to Gardner and MacIntyre (1993), foreign language anxiety is a feeling that occurs when learners are expected to do something in an L2 or foreign language. Yashima (2004) focuses more on L2 use and learning, defining L2 use anxiety as the anxiety experienced when a speaker uses or learns a language that is not the language they can most freely manipulate (often, this language is still being acquired).

2.4.2 The Impact of Anxiety on Language Learning

While anxiety can negatively affect learning, some scholars suggest that it does not necessarily negatively affect foreign language learning (Scovel, 1978). In fact, anxiety can support learning, and this is termed facilitating anxiety. However, the impact of facilitating anxiety on language learning remains unclear (Young, 1990). There is an inverse U-shaped relationship between anxiety and performance (Yerkes & Dodson, 1908). Indeed, some argue that anxiety is facilitatory and inhibitory (MacIntyre, 1995); it is better to have moderate than simply less anxiety to enhance learning

performance.

However, in the field of foreign language learning, anxiety has generally been considered a problem because it can interfere with language acquisition, memory retention, and production (Bashori et al., 2020; Saranraj & Meenakshi, 2016). Accordingly, research on anxiety related to foreign language learning reveals a negative relationship between anxiety and foreign language acquisition (Horwitz et al., 1986; MacIntyre, 1999; MacIntyre & Gardner, 1991; Yan & Horwitz, 2008). Moreover, recent studies showed that language anxiety causes poor language performance (MacIntyre, 2017) and significantly reduces cognitive performance (Kondo & Yang, 2004). Hence, there is a general belief that education should not work to increase anxiety.

According to Suenaga (1987), performance declines when one is working on complex tasks under the watchful eyes of others. In the context of education, this suggests that attempting complex tasks under the gaze of others can greatly lower a student's performance. Yashima (2004) noted that the impact of being monitored on a learner's anxiety may depend on the difficulty of the learner's task. Specifically, Yashima advised that when learners perceive a given task as complex and challenging, being monitored may increase their anxiety and yield poor performance; meanwhile, if a task is perceived as simple and easy, then being monitored or watched by others does not adversely impact performance but can improve it. Additionally, Bailey (1983) stated that, based on competitiveness, anxiety arises or is exacerbated when learners feel inferior to others. However, when they feel competent, their anxiety decreases. In other words, learners who are confident in their speaking abilities are considered to be in states of low anxiety.

2.4.3 Anxiety About Speaking English in Public

Many learners have difficulty speaking a foreign language in public. When communicating in front of a large group of people, learners who lack confidence, are introverted, and have poor language skills feel nervous, worried, awkward, and afraid to contribute to discussions (Chen, 2019; Chew & Ng, 2021; Hashemi, 2011). A survey of Japanese university students (n = 217) showed that learners tend to avoid situations in which they may be embarrassed or that may cause others to underestimate their English skills (Kawauchi, 2016). Meanwhile, Awan et al. (2010) noted that some learners are anxious about speaking in front of unfamiliar classmates. Koch and Terrell (1991) indicated that presentations and performances of oral skits in front of classmates are the most anxiety-provoking activities for most learners.

Falk et al. (2009) suggested that East Asians tend to have lower levels of self-worth than Westerners and, accordingly, tend to restrain their behavior to avoid failure for fear of being negatively evaluated by others. Elsewhere, Gkonou (2017) identified speaking and in-class interactions, the gaze of others, teachers' attitudes, past failures, and negative self-beliefs as factors of anxiety, indicating that in-class language anxiety significantly relates to feedback and external evaluation. In other words, anxiety

relates to an awareness of external evaluations (Yashima, 2019), such as negative audience reactions.

Speaking anxiety is a form of shyness when communicating with others (Gaibani & Elemenfi, 2016); students with high anxiety may worry about speaking in class and believe they must only speak correct English (Horwitz et al., 1986). Price (1991) found that major factors of anxiety include the fear of speaking the target language, being laughed at by classmates, being made fun of, mispronouncing English expressions, and communicating poorly. Price also noted that the fear of speaking a target language in public and perfectionism are the most significant factors of anxiety; accordingly, individuals are anxious about speaking a foreign language in front of others and are unable to communicate well because they are perfectionists. In general, there is a negative correlation between speaking tests and anxiety (Young, 1986), also referred to as stage fright or test anxiety (Şimşek & Dörnyei, 2017). Meanwhile, Araki (2014) suggested that a negative correlation may exist between elementary school students' anxiety about learning a foreign language and their perspectives on the "Common European Framework of Reference for Languages 4+1" (CEFR 4+1) skills in English: listening, reading, interaction, and expression. Speaking anxiety in foreign language learning is said to involve complex psychological constructs, such as communication anxiety, self-esteem, and social anxiety (Young, 1990). Low-proficient Chinese EFL learners are averse to speaking in class because of anxiety (Liu & Jackson, 2008). Matsumiya (2006) found that children with high anxiety tend to dislike activities that involve speaking independently. Shachter (2018) stated that for Japanese learners of English, speaking in English can be frightening, and related anxiety (specifically, foreign language anxiety) can inhibit the acquisition of oral communicative competence in foreign language learning. Additionally, Hojo (1996) surveyed new college students on their anxiety regarding learning English and found that they felt more anxious when they were suddenly designated to speak in English. Notably, Ay (2010) found that speaking anxiety is particularly conspicuous at the beginner level and most frequently occurs when students are required to speak without advance preparation. Such anxiety appears to be related to a paucity of opportunities for improvisation in the classroom.

2.4.4 Anxiety Scales

Various psychological scales have been developed to quantitatively measure learning psychology, such as the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986) and its Japanese version (Yashima et al., 2009). It comprises 33 five-point scale items, with a minimum score of 33 and a maximum score of 165; these reflect the respondent's approximate level of anxiety. Existing measures of anxiety indicate that foreign language learning anxiety centers on listening and speaking, with speaking, especially free conversation, responsible for most anxiety among English language learners; this, in turn, makes it difficult for them to demonstrate their competence (Horwitz et al.; Yashima et al.). Alrabai (2014) distinguished five degrees of anxiety based on the FLCAS scores: very low, moderately low, moderate, moderately high, and high anxiety. Meanwhile, Fujii (2020)

classified learners with an overall anxiety score of 120 or higher as having particularly high anxiety, and those with 70 or lower as having low anxiety.

According to the concept of the FLCAS, foreign language anxiety is defined as anxiety that is associated with learning a foreign language (Horwitz et al., 1986). The three components of foreign language anxiety are communication apprehension, test anxiety, and fear of negative evaluation. Communication apprehension relates to fear about or shyness from communicating with others. Test anxiety is performance anxiety associated with a fear of failure. Fear of negative evaluation is anxiety about being unfavorably judged by others. The FLCAS scale measures learners' foreign language anxiety in the classroom based on these three constructs, which notably emphasize the communicative and social aspects of language learning in the classroom context, where students are likely to be aware of external evaluations.

Another example is the Japanese Language Anxiety Scale (JLAS), developed by Motoda (2000) for learners of Japanese as a foreign language. This scale measures two types of anxiety: in-classroom and out-of-classroom anxiety. It is based on the recognition that factors that contribute to anxiety for Japanese language learners when they study in the classroom differ from when they use Japanese in various situations outside the classroom. The questionnaire comprises 45 items: 23 for in-classroom anxiety and 22 for out-of-classroom anxiety. In-classroom anxiety is classified into three categories: nervousness in speaking Japanese, uncertainty in understanding a situation, and worry about low Japanese language ability. Out-of-classroom anxiety is classified into three categories: anxiety about communicating with Japanese people, anxiety about low Japanese language proficiency, and nervousness in public situations.

Regarding in-classroom anxiety, nervousness in speaking Japanese is representative of typical conventional L2 anxiety, such as that which may occur during classroom activities centered on speech (e.g., anxiety when a student realizes they are about to be nominated) and confusion in language processing. The characteristics of anxiety that emerge from uncertainty in understanding a situation correspond to the learner's tolerance for ambiguity. For example, learners may become anxious when they have trouble comprehending the content of a Japanese class because it is difficult to understand. Meanwhile, a learner's worry about having low Japanese language abilities corresponds to their level of confidence with Japanese. For example, such students may worry that other students will laugh at them when they speak Japanese.

Regarding out-of-classroom anxiety, anxiety about communicating with Japanese people is characterized by anxiety about interacting with Japanese speakers (teachers and foreigners) and can include anxiety about uncertainty in understanding a situation, which, as established above, also occurs in in-classroom anxiety. While learners are often only required to demonstrate speaking and listening skills separately in the classroom, they typically must employ these skills simultaneously outside the classroom—notably, this situation may be one source of anxiety about communicating with Japanese

people out of the classroom. For example, one may get upset when Japanese people do not understand the Japanese one speaks despite many repetitions. Meanwhile, anxiety about low Japanese language proficiency out of the classroom is similar to in-classroom anxiety about low Japanese language proficiency. For example, one may worry that Japanese people will laugh at one's Japanese. Finally, nervousness in public situations involves anxiety about communicating in specific situations outside the classroom. For example, one may feel nervous when one uses English at the bank or post office.

Toyama et al. (2017) modified the JLAS (Motoda, 2000) for EFL learners and excluded five items on nervousness in public situations unlikely to apply to beginner-level learners, such as "I experience nervousness when I have to speak using English honorific expressions" and "I feel nervous when a Japanese person speaks a lot of Japanese I don't know." In total, their version comprises 39 items.

2.4.5 Factors That Produce Anxiety

Research shows that language anxiety has increased dramatically around the world over the last few years (Şimşek & Dörnyei, 2017). Accordingly, the importance of considering language anxiety in foreign language learning has also grown. As noted, with the revision of the current Courses of Study for Elementary, Junior High, and High Schools (Foreign Languages) in Japan, more attention is being paid to speaking (interaction) and impromptu English interaction in language classes. More than ever, there is a need now to focus on learners' language activities to develop their English communication skills. However, some thinkers worry that classrooms focused on fostering communication may increase learner anxiety (Yashima et al., 2009). Learners are expected to communicate frequently in English to develop communicative competence, which may make the classroom a threatening and anxious environment for learners who fear poor self-presentation, have bad self-esteem, or are very aware of external evaluations (Phillips, 1991; Yashima, 2004).

Therefore, as speaking (interaction) and impromptu speaking instruction are potentially anxiety-provoking activities for learners, consideration should be given to make them as anxiety-free as possible. Steps should be taken to reduce the anxiety caused by speaking activities (Phillips, 1999). Hence, teachers should determine the factors that cause anxiety in their learners and design opportunities for them to interact through speech, especially in impromptu ways, that respond to and reduce their anxiety. Emotions such as learner anxiety and foreign language enjoyment (FLE) influence the learning process and learning outcomes (Oyama, 2022), and several studies found a negative correlation between FLE and foreign language classroom anxiety (Dewaele & MacIntyre, 2016; Shirvan et al., 2020). Additionally, Ely (1986) found that other factors also influence foreign language learning, such as language class risk-taking, language class sociability, and language class discomfort. Identifying trends in English language learner anxiety can help teachers identify the impact of student anxiety and determine how to address it (Fujii, 2018). Therefore, Fujii (2020) investigated the factors contributing to in-class language anxiety among Japanese learners of English;

ultimately, Fujii reported three main factors: (1) fear of negative evaluation by others, (2) low self-evaluated English ability, and (3) anxiety about interacting with classmates. Furthermore, Fujii showed that incorporating anxiety-reducing strategies can alleviate learner anxiety when learners feel they have poor English skills, lack confidence, and are extremely afraid of being embarrassed in front of others.

2.5 Factors That Reduce Anxiety

2.5.1 Anxiety-Reducing Strategies

Existing strategies to reduce language anxiety comprise student- and teacher-led strategies and include cooperation with others, confidence building, teacher assistance, and low-stress teaching (Fujii, 2015). Kondo and Yang (2004) also highlighted five strategies for coping with anxiety: preparation, relaxation, positive thinking, finding friends who also experience anxiety, and giving up.

2.5.2 Cooperation

Regarding cooperation with others, Woodrow (2006) found that student group discussions decrease anxiety, and Yalçın and İnceçay (2014) confirmed that pair and group work can reduce learners' speaking anxiety. Regarding finding friends who also experience anxiety, Yan and Horwitz (2008) reported that grouping learners with comparable language abilities and providing them with appropriate materials suited to their levels reduced anxiety related to comparing oneself with others.

2.5.3 Confidence and Positive Thinking

Regarding confidence building and positive thinking, Thornbury (2005) argued that a lack of speaking practice prevents students from acquiring speaking skills, leaving them underconfident and anxious. Meanwhile, Oxford (1999) claimed that such anxiety can be eased by giving students tasks that involve an appropriate level of risk, thereby building their ambiguity tolerance. While this situation may be accomplished through impromptu interactions, it is rarely facilitated in classrooms. For example, Kobayashi (2020a) asked 48 junior high school teachers whether they incorporate opportunities for impromptu English interactions in their lessons, using four-point scales. Thirty-one participants (64.6%) responded negatively, saying they "rarely" or "never" provide such opportunities; only two teachers (4.2%) answered that they "frequently" facilitated impromptu English interactions. Kobayashi also analyzed the teachers' responses to open-ended questions and found that they did not encourage impromptu English interactions because they tended to perceive them as challenging for students; accordingly, they worried that students may not keep up with the activities or that the activities may make them too anxious about speaking English and, thus, too shy to speak. Relatedly, Usukura (2011) noted that a lack of successful English learning experiences can cause low self-confidence. Clément and Kruidenier (1983) proposed a model in which foreign language anxiety is

influenced by the degree of contact; in their model,—extended contact with the target language leads to less anxiety. In addition, Aida (1994) suggested that anxiety decreases with an increase in contact with the people and culture of the target language. Meanwhile, Beatty and Andriate (1985) noted that positive communication experiences reduce communication anxiety, while anxious communication experiences reinforce it. What learners need most to reduce their anxiety in learning a foreign language is more positive learning experiences (Okada et al., 2018). Hence, scholars have highlighted the importance of providing opportunities for learners to experience senses of accomplishment (Matsuda & Goble, 2004) and mastery (Dörnyei, 2001).

2.5.4 Assistance From Teachers, Less Stressful Teaching, and Relaxation

Regarding teacher assistance, low-stress teaching, and relaxation, Phillips (1999) advised that creating a classroom environment or community in which learners cooperate and relax while engaging in activities can reduce anxiety. Foreign language classes in which learners can learn without standing out are typically more effective (Hojo, 1996). Furthermore, in a threat-free environment where learners do not have to perform in front of their classmates, they can relax and experience less anxiety; thus, facilitating communications centered on meaning transfers between learners improves the learning environment (Crookall & Oxford, 1991). Furthermore, aspects of the teacher's personality impact learner language anxiety. Specifically, teachers who are friendly, patient, and have a sense of humor make learners feel comfortable, encourage them to talk, and reduce their language anxiety (Young, 1991). Moreover, teachers who create a friendly and supportive classroom atmosphere can alleviate learners' fears of being embarrassed and making mistakes in front of their classmates (Aida, 1994). Mejías (2014) showed that two-way communication activities that are humorous, engage the learner, and make them feel they are experiencing something can reduce anxiety. Nishida and Yashima (2009) noted that when children perceive their classroom atmosphere as good, they are more motivated to learn a foreign language, which can nurture their interest in foreign languages and cultures. Furthermore, they advised that a good classroom atmosphere will strengthen learners' perceived competence, which affects their WTC.

2.5.5 Preparation Before Presentations

Regarding the "preparation" of anxiety reduction strategies to reduce language anxiety, studies have demonstrated that repetition (Iimura, 2016; Iimura & Nomura, 2014; Yalçın & İnceçay, 2014) and planning are helpful (Kawashima, 2019). Yalçın and İnceçay showed that the more familiar students are with activities and the more frequently they accomplish tasks, the more relaxed they are with speaking; that is, learner success significantly impacts anxiety. Meanwhile, Iimura and Nomura noted that repeated practice improves participants' self-evaluations of their speech. Specifically, they reported that learners who performed four presentations tended to give themselves higher scores for

the Spoken Interaction and Spoken Production items in self-evaluations. Further, Iimura showed that the experience of repeatedly practicing presentations in preparation for a speech contest was a successful experience for learners; specifically, it increased their levels of self-esteem and confidence. They also reported that as learners gained confidence in giving presentations, they felt less anxious about presenting in front of people they did not know well. Kawashima suggested that 2 minutes of preparation time before a presentation may reduce speaking anxiety. However, the impact of pre-task planning on performance remains poorly understood. For example, Nitta and Nakatsuhara (2014) probed the effects of pre-task planning in a paired format and found that planning exerts only a limited impact on performance, raising concerns that planning may instead deprive participants of opportunities to show collaborative interaction skills. Further, as noted, English students have historically often been given opportunities to prepare before engaging in speaking activities, which has been proven to hinder their improvisation skills.

Overall, studies have shown that language anxiety causes poor language performance (MacIntyre, 2017) and that foreign language anxiety, specific to foreign language learning, inhibits the acquisition of oral communication skills (Shachter, 2018). Hence, to reduce speaking anxiety, it is important to engage students in smaller group discussions that are focused on student interaction so that they do not have to speak in front of a large audience by themselves (Woodrow, 2006). Additionally, two-way communication activities (Mejías, 2014) engage students in a way that involves a moderate amount of risk to build their ambiguity tolerance (Oxford, 1999); to expose them more frequently to fluent speakers of the target language and the culture of the target language (Aida, 1994); and to provide them with opportunities to experience a sense of accomplishment (Matsuda & Goble, 2004), positive communication (Beatty & Andriate, 1985), and a sense of mastery (Dörnyei, 2001).

2.6 WTC

2.6.1 Conceptualizing WTC

Studies on communication anxiety, defined as anxiety from interacting with others (McCroskey & Richmond, 1977), have been conducted within the framework of social psychology. Regarding anxiety and the positivity of speech, studies have employed the concept of WTC, which functions as an affective plane. Being willing to communicate with others in one's first language garnered early attention, from which emerged the concept of WTC (McCroskey, 1992). Today, WTC is an important component of daily learning that promotes concrete language activities, positively influencing language acquisition (MacIntyre et al., 1998). WTC was first proposed in studies of first language acquisition but has also been studied in the field of L2.

2.6.2 Factors Affecting WTC

According to MacIntyre (1994), the emotional factor of anxiety and the cognitive factor of the

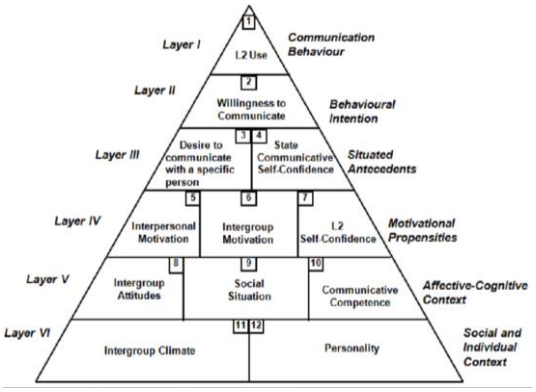
perception of one's language ability directly relate to WTC. Yousef et al. (2013) conducted an empirical study of Malaysian university students and found that English WTC was affected by communication anxiety and perceived English communication skills and communication strategies, such as speaking as simply as possible, speaking loudly and clearly, and using gestures. Peng and Woodrow's (2010) study on Chinese university students showed that confidence in English communication and classroom environmental factors such as teacher support, student cohesion, and task orientation, directly affect English WTC. Additionally, communication anxiety, confidence in communicating in the target language, recognition of communication ability, and IP also impact WTC; notably, these factors are closely linked to motivation for learning and actual communication (see e.g., Yashima, 2002; Yashima et al., 2004).

2.6.3 L2WTC

Willingness to Communicate in a Second Language (L2WTC) is the "readiness to enter into discourse at a particular time with a specific person or persons, using a L2" (MacIntyre et al., 1998, p. 547); that is, L2WTC is the WTC using an L2 in a particular situation and with a particular speaker. Accordingly, L2WTC is an affective concept that is related to the communicative act (Clément et al., 2003; MacIntyre & Doucette, 2010) and is always changing per the situation and the speaker. The pyramidal model (Figure 2.2) has been proposed to represent the factors that influence L2 communication behavior. The L2WTC model shows that L2 use is affected by a complex combination of factors influenced by ethnic relationships and social conditions (e.g., cross-cultural attitudes and contact behavior) and individual factors such as personality, L2 ability, and confidence. Notably, learner L2WTC is associated with anxiety (Lightbown & Spada, 2013), and perceived L2 communicative competence is central to improving L2WTC (Baker & MacIntyre, 2000). Moreover, a positive correlation between L2WTC and actual L2 communication frequency has been observed (Hashimoto, 2002; Yashima et al., 2004).

Figure 2.2

Heuristic Model of Variables Influencing WTC (MacIntyre et al., 1998, p. 547)



The pyramidal model comprises 12 elements arranged in six layers, with "L2 Use," which represents communication in an L2, as the topmost layer. Yashima (2003) notes that the top three layers are likely to change per situation, while the bottom three layers are relatively stable. *WTC* is the second layer and is, thus, considered to be the stage just before using an L2 to communicate. Meanwhile, this pyramidal model situates the "Desire to Communicate with a Specific Person" (Box 3) as one of the factors that directly affect WTC. However, this box may be a little confusing to Japanese learners in an EFL environment—Japanese learners assume that they will communicate in English with people from other cultures (Yashima, 2000) rather than particular people; they approach potential interlocutors as a vague group rather "a specific person." Of the other 10 factors in Layers 3–6 that are thought to influence WTC, five (Boxes 3, 5, 6, 8, and 11; i.e., about half) are related to learner attitudes toward the target language group and culture. However, as Dörnyei (1990) notes, in contexts where learners have little or no daily contact with native speakers (NSs), their specific feelings and attitudes are less likely to emerge and correspond with EFL.

2.6.4 Ideal L2 Self

Research on L2WTC shows that the ideal L2 self, which is the self-image an individual sincerely wants to realize, is a factor that induces heightened L2WTC (Teimouri, 2017; Yashima, 2009b). Kormos and Csizér (2014) show the relationship between the domain of the ideal L2 self and "autonomous learning behavior" based on the self-regulation skills addressed by Tseng et al. (2006). Furthermore, they suggest that intentional learning efforts from the ideal L2 self may promote "metacognitive abilities" that can help learners better sustain their interests and manage their time to accomplish specific tasks; relatedly, these abilities may induce habits that enable self-initiated engagement in L2 learning. Rooted in metacognitive abilities, metacognitive strategies are behaviors that help an individual independently plan, execute, and evaluate their learning and play an important role in facilitating language learning and success (Oxford, 1990).

2.6.5 Confidence in L2 Communication

Yashima (2019) defined WTC as the willingness to voluntarily communicate in an L2 in certain situations. Yashima (2009b) has notably examined WTC among Japanese learners of English. Further, Yashima (2004) noted that an individual's perception of their communication skills and anxiety directly affects their WTC. However, Japanese learners' self-perceptions of their levels of English proficiency more strongly influence their WTC than their levels of anxiety (Yashima et al., 2002). Furthermore, both concepts—learners' self-perceptions of their communication skills and their anxiety levels—speak to another factor that greatly impacts WTC: "confidence in second language communication" (Yashima, 2002).

2.6.6 Unwillingness to Communicate

Unwillingness to speak English is a learner factor that can be considered using the framework of WTC (Isoda, 2007). High unwillingness to speak English translates into low WTC, where the learner avoids speaking in the target language. Isoda (2009) noted that a sense of accomplishment is an important factor in reducing the unwillingness to speak English. Meanwhile, Fujita (2017) conducted a study with high school students who had difficulty with English; notably, the study involved a class centered on communicative activities that referenced Nunan's (2004) framework, where tasks are given after sufficient support to reduce unwillingness to speak English and to develop English operational skills. The results showed a reduction in anxiety and avoidance tendencies and an improvement in fluency and syntactic complexity regarding English language performance. Together, these studies suggest that WTC and English operational skills may be positively affected by factors such as multifaceted support regarding form and content, repetition of the same type of activity, good rapport between learners and teachers, relationship building among learners, and a sense of accomplishment and relief after a presentation.

2.6.7 Research on L2WTC in Japan

L2WTC is the mental readiness to converse with a particular person (or group) in a particular situation where the individual is given the freedom to make communication choices in L2 (Monoi, 2015). Originally, L2WTC was known as an affective concept applicable to college and high school students (Peng & Woodrow, 2010; Yashima, 2002; Yashima et al., 2004). However, an increasing number of studies have been examining L2WTC among elementary school students in Japan. For example, Monoi (2018) suggested that WTC characterizes the goal of designing foreign language activities that encourage students to proactively engage in communications in foreign languages established by the current Course of Study for Elementary Schools. Additionally, Kunimoto (2004) showed that children who like English tend to have higher levels of communicative motivation and more favorable self-evaluations. Kunimoto (2007) also examined whether L2WTC is a valid concept possessed by children in the fourth and fifth grades. Meanwhile, Nishida and Yashima (2009) conducted a questionnaire survey with 493 participants in the third to sixth grades and constructed a WTC model. Further, Monoi (2015, 2016) developed the L2WTC model for older children and found relationships between L2WTC and five peripheral factors (IP, motivation, perception of L2 communication skills, anxiety in L2 communication skills, and extraversion). Nishida (2012) administered a weekly foreign language activity class to 106 fifth-grade students, taking 35 lessons per year, and conducted a questionnaire survey four times in one year to investigate transformations in the students' levels of motivation for learning, interest in the subject matter, interest in the language of study, perception of communicative competence, and WTC. The analysis of variance (ANOVA) showed statistically significant decreases after July. However, Monoi (2020), focusing on how

L2WTC and five peripheral factors changed with age among third- through ninth-graders in segregated facilities, did not find statistically significant numerical increases or decreases with increasing age. Yashima (2002) used structural equation modeling to clarify the relationship between L2WTC and peripheral factors among Japanese university students and constructed an L2WTC model; the results confirmed that IP is the core of the model, which comprises four sub-structures (L2WTC, L2 motivation, L2 confidence in communication, and L2 operational ability).

In summary, WTC is influenced by communication anxiety, confidence in communicating in the target language, recognition of communication ability, and IP (Yashima, 2002; Yashima et al., 2004). Notably, learner L2WTC has been associated with anxiety (Lightbown & Spada, 2013), a positive correlation has been found between L2WTC and L2 communication frequency (Hashimoto, 2002; Yashima et al., 2004), and consideration of an ideal L2 self has been found to enhance L2WTC (Teimouri, 2017; Yashima, 2009b).

2.7 International Posture

2.7.1 Conceptualizing International Posture

Another factor affecting WTC is IP. In the context of the current study, IP encompasses an interest in international work, attitudes toward engaging with the world outside of Japan, and attitudes toward different cultures and foreigners (Yashima, 2019). Yashima (2002) proposes that IP may directly affect WTC in English among Japanese learners. Thus, to comprehensively capture the "internationality" of the vague English skills possessed by Japanese learners, the current approach to measuring IP is based on four elements, as discussed below.

2.7.2 Elements of International Posture

IP includes the intercultural approach and avoidance tendency, interest in international vocation, ethnocentrism, and interest in foreign affairs. An intercultural approach and avoidance tendency is a tendency to relate to people from different cultural backgrounds. An interest in international vocation is an interest in the activities of other countries and indicates the extent to which respondents are interested in international work and life. Ethnocentrism (a reaction to different customs, values, and behaviors) involves discomfort with different and novel things and a tendency to approach different cultures with suspicion. Interest in foreign affairs means interest in international events and international issues and often involves reviewing news about other countries (Yashima, 2019). Moreover, Yashima (2009b) added a fifth subcategory: having things to communicate (HTC), an indicator of whether learners have content to convey.

2.7.3 Relevance of International Posture, Anxiety, and Willingness to Communicate

Ryan (2009) noted that IP is the most important concept in the Japanese context. Specifically, IP

crucially underscores the importance of connecting learners to the L2 community in the Japanese EFL environment. In English education, studies of university students reported that IP, such as interest in foreign countries and international occupations and attitudes toward other cultures, can induce higher levels of motivation to learn and WTC and stronger English proficiency (Yashima, 2001, 2002). Similarly, Nishimura (2013) showed that IP is positively related to motivation to learn, which leads to English proficiency, even among elementary and junior high school students. Furthermore, a positive experience in communicating in English with a person from a different culture increases IP and learning motivation and alleviates anxiety (Yashima, 2004).

Additionally, the OECD Center for Education and Research Innovation (2015) reported that education conducted with a nonjudgmental and tolerant mindset likely induces a better understanding of other cultures' perspectives, an awareness of cultural differences, and a stronger international consciousness. Teachers must encourage learners to look for opportunities to communicate in the language of instruction (Cao & Philip, 2006) and foster intercultural tolerance and communication to enable students to successfully interact with foreigners in English.

2.7.4 Research on International Posture in Japan

Elwood and Monoi (2015) analyzed the structure of IP among fifth and sixth-grade elementary school students. Their study identified two sub-structures: an intercultural approach and avoidance tendency, and an interest in foreign affairs. Meanwhile, Yashima et al. (2004) examined the relationship between WTC in English and psychological factors among high school students who had studied abroad or who had had many opportunities to communicate in a foreign language. Accordingly, WTC in English is influenced by English communication confidence and IP. Furthermore, IP, along with the frequency of self-initiated communication inside and outside the classroom, is linked to motivation for learning and L2WTC. Yashima (2009b) surveyed 191 high school students on IP and found that it is correlated with the ideal self and strongly correlated with extrinsic motivation and high levels of self-determination. IP reflects the possible self as a future English user in the international community, and individuals with higher levels of IP have stronger ideal self-images.

Additionally, Yashima (2009a) investigated the relationship between HTC and WTC among English learners who participated in international volunteer work and observed a high correlation, indicating that having content to communicate is an important factor in the motivation to communicate. Watanabe (2017) probed the impact of message-level communicative activities, where learners communicate their opinions and ideas in speaking classes, on learner WTC among university students, focusing on the HTC proposed by Yashima (2009b). Accordingly, message-level communicative activities, where learners often feel very involved, increased HTC and WTC, and, among the five subcategories that make up IP, HTC had the greatest impact on learner WTC in the EFL environment. The results suggest that learners must acquire the content they want to convey to communicate effectively in English.

One study examined the IP of 65 sixth-grade elementary school students receiving immersion education and found that it was relatively high (Hirose & Tsuchiya, 2019). Meanwhile, first-year college students who were not English majors havd low IP (Hirose, 2020). Monoi and Elwood (2021) investigated the relationship between IP and the amount of time spent studying English per week among 124 first-year Japanese university students studying English and reported that there is not necessarily a direct relationship between IP and English study inside and outside of class; notably, high IP does not affect the length of time participants spend studying English outside of class.

In summary, existing studies have established that higher IP translates to a higher motivation to learn English and a higher WTC (Yashima, 2001, 2002); moreover, IP is correlated with the ideal self (Yashima, 2009b). Further, studies have also revealed that IP is positively related to motivation to learn and yields English proficiency (Nishimura, 2013), positive communication experiences with cross-cultural partners are associated with IP and alleviate anxiety (Yashima, 2004), and having content to communicate is an important factor in the motivation to communicate (Watanabe, 2017).

2.8 Information and Communication Technology

2.8.1 Information and Communication Technology in the Past

As noted, existing studies have shown that positive communicative experiences with cross-cultural counterparts that increase confidence in communication can affect anxiety, WTC, and IP. However, it remains unclear how learners should be connected to the L2 community and interact in English in the Japanese EFL environment to reduce anxiety and increase WTC, IP, and speaking ability. Based on previous studies, it is understood that ICT and CMC may offer a possible solution: CMC can provide students with opportunities to communicate with foreigners in English, which has the potential to improve their affective aspects and speaking skills.

This subsection provides a brief history of ICT use in education in Japan to contextualize this study in terms of its potential to enhance English language learning. This history is notably rooted in the introduction of the Computer-Assisted Instruction (CAI) system, which was developed as part of a research project funded by a Grant-in-Aid for Scientific Research from the Ministry of Education between 1967 and 1976 (Kimura, 2006). In CAI, learners answer the questions presented, and the system branches off to a subsequent question appropriate for the learner based on whether they answered the first question correctly; thus, the system offers individualized learning experiences. Following CAI, computer-assisted language learning (CALL) was developed; it offers grammar and vocabulary tutorials, drill and practice programs, and language testing instruments. Warschauer and Healey (1998) described the early 1960s era in CALL as the “structural CALL” era. In the 1970s, CALL was developed to enhance communication among students; Warschauer and Healey term this phase the “communicative CALL” period. In the 1980s, CALL shifted from learner interactions with computers to learner interactions with other humans via computers by harnessing the Internet and

emerging communication technologies—this period was described as the "integrative CALL" era (Warschauer & Healey, 1998).

The use of the Internet and CMC in L2 education has enabled learners to access authentic language and communicate with people worldwide. Since its emergence in the 1980s, CMC has been introduced into several institutions to enhance L2 learning. In the 1990s, CSCL was based on a constructivist view of learning. The integration of technological tools and the Internet in the classroom has been studied since the early 1990s (Howard & Mozejko, 2015). Over time, CMC approaches to learning have become increasingly popular in English language education. Since the 2000s, the concept of computer use, emergent from the 1990s, has been concretized, popularized, and advanced. Thus, the March 1999 Course of Study for Senior High Schools included information communication networks as a medium for communication. For many people, the Courses of Study announced in 2008 and implemented since 2011 have further enhanced ICT use in information education and subject guidance. While the 1990s saw many studies on text-based tools, scholars have since investigated how videoconferencing and e-learning systems (e.g., e-learning systems involving asynchronous video and audio streaming technology) may be used in distance learning to enhance learner motivation (Casarotti et al., 2002; Yaegashi et al., 2005). ICT can be used in particularly powerful ways in subjects that emphasize competence and performance, such as foreign languages (Pennington, 1995), because ICT can facilitate learner-centered learning that responds to learner inquiry and authentic scene setting (Oliver, 2002).

2.8.2 Information and Communication Technology in Recent Years

The Japanese government has indicated that education should be individualized by adapting to each student's unique characteristics, learning progress, achievement level, interests, concerns, and desired career direction, and it normalized this style of education in 2021. In the context of English language education, technology can provide a wealth of ways to effectively assist English language learners by adapting to their particular needs (Rafiq & Hashim, 2018).

Moreover, Mofareh (2019) reported that many students today are digital natives; that is, they are familiar with many modern technologies. Most digital natives are dissatisfied with traditional English teaching methods; they consider them irrelevant and want technology to be used in language learning. Accordingly, Mofareh showed that most digital natives learn English skills via devices such as smart boards and computers; such learners strongly believe technology can enrich learning experiences (Bower, 2017). Indeed, Yamamoto (2021) showed that ICT can improve learning and reported that ICT use improves motivation to learn by impacting convenience, learner-centered transmission, interaction, autonomy, and a learner's sense of their level of competence (additionally, its recording and storage functions are useful in learning). Further, Yamamoto noted that it is important to be aware of and visualize the teacher's presence when using ICT and to see the teacher beyond the technology.

Given these benefits, the paradigm shift from traditional F2F classrooms to online learning communities, where participants can easily discuss issues at any time, regardless of location, is not surprising (Clark et al., 2015).

In Japanese education, information and communication networks should provide opportunities for collaborative learning by enabling students to interact with others from diverse environments inside and outside of schools, including remote people and experts (The Central Council for Education, 2021).

Regarding English language learning, the structure of a typical teacher-led classroom conversation today is characterized by the initiation–response–follow-up flow, in which the teacher asks questions, the students respond, and the teacher provides feedback via an evaluation. However, this approach is not beneficial to language acquisition (Markee, 2000). Conversely, the online environment allows for increased opportunities for speech and learner-centered interactions (Kern, 1995; Sullivan & Pratt, 1996; Warschauer, 1996) and promotes peer support and collaboration (Loewen & Wolff, 2016); accordingly, CMC may free students from teacher-led instruction.

2.8.3 Mobile-Assisted Language Learning

With the proliferation of smartphones and other portable ICT devices, mobile-assisted language learning (MALL) has enabled spontaneous and informal learning at various places and times (Miangah & Nezarat, 2012). Notably, MALL can improve proficiency in oral performance because language skills learned in class can be applied in authentic learning contexts (Shi et al., 2017). Additionally, it can increase motivation for language learning and reduce anxiety around language learning because it does not require the learner to speak in public (Kessler, 2010). Moreover, given that learners are likely to communicate with each other using mobile devices, MALL can encourage them to continuously learn a language by using it to communicate beyond the classroom, making it an effective approach to language learning (Alqarni et al., 2020).

2.8.4 Online Intercultural Exchange

CMC with foreigners from different cultural backgrounds offers L2 learners a valuable opportunity to engage in authentic communications that can enhance language skills and intercultural competence (Dugartsyrenova & Sardegna, 2017; Lee, 2018; Schenker, 2012). This approach is considered highly effective because it can enable ample social interaction (Fotos, 2004; Kern & Warschauer, 2000). Notably, intercultural competence is integral to the language learning process (Moeller & Nugent, 2014). Thus, to gain intercultural perspectives, L2 learners must approach intercultural issues with open-minded curiosity and develop a critical cultural awareness (Byram, 2012). Therefore, L2 learners should be given opportunities to interact with people from different cultures and should be taught to understand that others have their own values and unique perspectives, which they should accept (Byram et al., 2002). Thus, learners must evaluate and compare cultures, practices, and perspectives

from their own and other cultures without falling prey to stereotypes (Houghton, 2013).

CMC-based virtual interactions have many other benefits. Beyond developing learners' language skills and cross-cultural competence (Rubin, 2016), they allow learners to reflect on their thoughts and express their cultural perspectives (O'Dowd & Ware, 2009). These characteristics may be beneficial in EFL settings without many opportunities for L2 communication outside and inside the classroom.

Regarding the affective aspects of language learning, online cross-cultural interactions increase motivation and autonomy (Fuchs et al., 2012; Lee, 2011). CMC can provide an unusual social and communicative space, where many foreign language learners can learn without inhibitions, which may reduce their foreign language anxiety (Kelm, 1992). Specifically, ACMC and SCMC can create situations that lower learner stress and anxiety and encourage learners to participate in discussions (Bump, 1990; Roed, 2003; Warschauer, 1996). The increased use of SCMC and ACMC activities has been accompanied by a growing body of studies suggesting that CMC offers various benefits for L2 learning and teaching. Network-based communication, which emphasizes meaning negotiation, is beneficial for SLA (Yu et al., 2010). Notably, ACMC is less likely to induce anxiety and more likely to increase interest in culture than SCMC (M. Yamauchi, 2019). The next section discusses how CMC provides opportunities for students to engage in authentic interactions with people from different countries that can encourage them to use English and proactively engage with the world.

2.9 Typology of Computer-Mediated Communication

Ngyuen (2008) conceptualized the form of CMC by locating it between the two poles of SCMC and ACMC. SCMC regards computer-based simultaneity, which requires participants to come together at the same time to communicate. Put differently, it regards communications that occur in real time between different parties, such as video calls, video conferencing, text chats, and web conferencing. SCMC is characterized by a conversational style like that of an F2F interaction and usually comprises instantaneous and brief message exchanges (Lapadat, 2002; Nunan, 1999; Yates, 2001).

Most prior studies on SCMC have reported that it can help learners recognize their errors (Lai & Zhao, 2006) and increase their confidence (Skinner & Austin, 1999) by facilitating activities in which participants can reread and edit their output, such as text-based online chat content. Notably, text-based online chats do not require immediate responses, unlike F2F communication. Thus, scholars suggest that they may be less threatening to users, which may encourage them to be more comfortable in taking risks; for example, users may be more proactive about sharing their thoughts (Chew & Ng, 2021; Kamhi-Stein, 2000). Other studies found that 87% of participants experienced only low levels of language-related anxiety during text-based online discussions (Meunier, 1998); accordingly, scholars have reported that because carefully composing messages may reduce anxiety, online discussions can be a relatively safe and comfortable space (Beauvois, 1998; Fitze, 2006; Warschauer, 1996). However, online cross-cultural interactions can be challenging because they involve

coordinating participants across different time zones to engage in real-time interactions; specifically, the organization of such interactions can be troubled by participant schedules, limited Internet access, and a lack of technological skills (Helm & Guth, 2010; O'Dowd, 2013).

In contrast, ACMC involves time-delayed communications, which allow learners to participate in interactions on their own time. They can take the form of written materials, such as e-mails, electronic bulletins, discussion boards, blogs, and video or audio messages. In ACMC, multiple threads can run concurrently; thus, participants do not have to take turns sending alternating messages, as in F2F communication (Yates, 2001).

The following section first outlines the possible benefits and disadvantages of SCMC, focusing on previous studies on video calls and videoconferencing systems that are highly relevant to the affective aspects of this doctoral dissertation and how they impact speaking ability.

2.10 Benefits and Disadvantages of Synchronous Computer-Mediated Communication

2.10.1 Benefits of Synchronous Computer-Mediated Communication

Computer-assisted conversational activities, such as video calls, are becoming increasingly popular, especially in foreign language classrooms (Chun et al., 2016). From a methodological perspective, foreign language classrooms that use video calls can be viewed as a unique research setting to conduct longitudinal analyses of L2 dialogue. By introducing video-based conversational activities to foreign learners who rarely interact outside the classroom, researchers can experimentally control and track the quantity and quality of L2 conversation experiences (Saito et al., 2021). In particular, Skype (a highly interactive communication tool that can be used for SCMC) can be used to facilitate conversational experiences between students and foreigners (Tabira & Goto, 2017). Scholars expect that introducing SCMC-based interactions with students from other countries into schools will improve students' affective aspects and speaking skills. SCMC, such as video chats, can approximate F2F interactions and enable a relatively high degree of intimacy between interlocutors (Lee, 2007; Yabumoto et al., 2013). Accordingly, video calls that facilitate simultaneous communication for English language learning enable learners to engage in realistic communications. Hence, video chats notably allow interlocutors to pick up on non-verbal information useful for communication, such as facial expressions and gestures (body language), intonation, pitch, and speed (paralanguage). Even regarding voice-only online communication, the learner's speech output can be modified (Salomonsson, 2020). Another advantage of online English conversations is that they can be conducted not only in school or during class hours but also at home or anywhere with an Internet connection. This creates opportunities to speak and practice in one's spare time.

2.10.2 Bi-Directionality

Some studies (e.g., Tuovinen, 2000) have emphasized the disadvantages of SCMC; for instance,

they have suggested that SCMC can involve a lack of F2F communication, loneliness, and anxiety regarding computer skills, which contribute to poor student performance. However, many studies have reported advantages; for example, they have advised that SCMC enables real-time information exchanges and feedback and has a high degree of bi-directionality, which helps learners feel less isolated (Bayode, 2020). Other scholars have suggested that learners in a virtual environment are likely to ask more questions and perform better than learners in an F2F environment (Tutty & Klein, 2008).

Further, videoconferencing systems, a kind of SCMC, allow students to hear and interact in English in real-time with people in remote locations in a natural setting, albeit on a computer screen, to acquire the ability to speak and use language appropriate for the situation. For example, videoconferencing systems can offer students opportunities to use communication strategies, such as asking the other person to repeat themselves to clarify something or avoiding challenging expressions when struggling to effectively communicate a point. Videoconferencing systems also allow students to use and extend their existing English knowledge and skills, which may motivate them to learn English and understand different cultures, broaden their horizons, and explore new worlds; in turn, these activities induce more active communication activities. Thus, such systems can offset the weakness of conventional pseudo-communications within the regular classroom (Takahashi, 1999).

2.10.3 One-on-One Interaction

The advantage of one-on-one interactions is that the content of the conversation can be adjusted based on factors such as the student's academic ability. Additionally, because a one-on-one interaction occurs in a particular place and time and with specific individuals, it can allow students to practice conversing in English with an awareness of the purpose, situation, and context of experiencing different cultures. Moreover, one-on-one interactions, compared to large group situations such as simultaneous instruction, offer more opportunities for exchanges, input and output language use, and immediate instructor feedback, which can be very useful. However, one-on-one interactions do not allow for collaborations between friends, unlike pair or group web conferencing; thus, participants must handle everything independently from start to finish.

2.10.4 Paired or Group Interactions

Pair- and group-based approaches to language training have many advantages. They can involve a lower psychological burden than individual training (based on the ZPD and scaffolding) and can offer several benefits for class management (e.g., it can be easier to secure a video call partner). However, interlocutors may not participate in a pair or group conversation as much as in a one-on-one session.

2.10.5 Disadvantages of Synchronous Computer-Mediated Communication

One disadvantage of SCMC is that it can be difficult to take the time to prepare to speak and process

what the other participant says, which can be a barrier for participants who are not confident in their language skills (M. Yamauchi, 2018). In general, SCMC is not as smooth as F2F communication. For example, when two speakers' voices overlap in an SCMC, it may be more challenging to hear each other than if they were F2F; given that it creates such dialogue problems, SCMC tends to be evaluated negatively (Harada, 1997). In recent years, improved IT skills, ICT equipment, and educational environments have reduced such technical problems (e.g., time lags have decreased; Hayashi, 2015). However, webcam-based communication has been associated with feelings of awkwardness because of seeing oneself on video chat (Smidt et al., 2017). Additionally, SCMC has also been found to involve less social presence than F2F communication (Short et al., 1976). It has been reported that SCMC can impair spontaneity and diversity in conversation because interlocutors cannot convey visual cues like in F2F interactions (Stephenson et al., 1976). Additionally, the presence of a microphone often creates challenges; for example, an interlocutor may stall the conversation in an attempt to speak coherently (Sugihara, 2005). Another disadvantage of SCMC, which was noted above, is that users must negotiate time differences to engage in real-time interactions. For example, students in Japan using SCMC for English language learning may need to coordinate their timing with that of English instructors from countries in very different time zones. Given such timing issues, it is not easy to give students opportunities to speak with people from multiple countries and listen to English worldwide. Thus, time differences must be considered when selecting English instructors. Today, many online English conversation companies in Japan have Filipino instructors (instructors living in the Philippines have been chosen by many companies because the time difference from Japan is small, and online tuition is inexpensive); indeed, the Tokyo Metropolitan Government is currently implementing exchange and distance learning programs for 10 pilot schools, where English conversation will be conducted in a one-on-one format with Filipino instructors (MEXT, 2020). The next section describes case studies of the use of video calls for one-on-one, pair- and group-based, and lecture-based instructions.

2.11 Synchronous Computer-mediated Communication Case Studies

2.11.1 One-on-one Video Calls

Monteiro (2014) explored the use of one-on-one videoconferencing for 30–40 minutes twice via Skype. Forty-two EFL Brazilians between the ages of 18 and 42 years were divided into three groups with different types of feedback, including picture descriptions, storytelling, and questions and answers (Q&A). The study found that foreign language development was not affected by the presence or absence of corrective feedback or its nature.

Ryobe (2008) incorporated 25-minute one-on-one video calls with a Filipino instructor into 14 classes from April to July for 20 Japanese junior college students with a wide range of English proficiency levels. Students selected teaching materials and prepare for the lesson by themselves. After

preparation, they attended the lesson and wrote a reflection report on it. The results showed reduced student anxiety and increased student confidence in English communication and their strategic competence to deal with communicative problems. However, the number of video call lessons varied among participants, with some participants taking only one lesson per week and others taking two or three, depending on their number of elective courses.

Shimizu (2015) introduced a one-on-one videoconferencing system for technical college students. Students were asked to use the system to speak in English with American university students over 16 sessions. They practiced introducing Japanese culture and discussing American culture after preparing in advance. The results showed that participants felt that their English abilities improved with each session and that they enjoyed understanding their interlocutor's English. These outcomes nurtured a sense of accomplishment in the participants, which increased their motivation to learn English and their English abilities.

Yamazaki (2015) conducted 15 presentations and opinion exchanges in English via videoconferencing over nine months. The participants included 40 first-year high school students in Japan and Australian high school students studying Japanese. Students researched in advance what they thought would be of interest to their counterparts, thought about the structure of their statements, created English scripts and visual aids to compensate for their lack of English skills, and gave their presentations alone. Many students reported that their English skills improved with the activity and that they felt more confident about independently giving presentations to native English-speaking students. The experience motivated them to further develop their skills. Ultimately, this study suggested that giving presentations using videoconferencing systems can increase student confidence and reduce student tension and resistance.

Saito and Akiyama (2017) examined the effects of longitudinal, task-based, and video-based interactions with an NS in the US on the L2 oral proficiency of Japanese learners with little or no overseas experience using English. The results of their study suggested that weekly sessions over one school term significantly improve students' overall fluency, vocabulary, and grammar.

Saito et al. (2021) divided 30 Japanese university students into two groups: an experienced group, comprising 10 learners with ample overseas experience and high L2 proficiency; an inexperienced group, comprising 10 learners with limited experience and low proficiency; and a comparison group comprising 10 learners. A longitudinal approach was used to examine the extent to which the two groups could develop multiple dimensions of L2 speech (pronunciation, fluency, and lexicogrammar) while using videoconferencing tools to interact with interlocutors in the US over the course of one academic semester. The experienced and inexperienced groups participated in a weekly videoconference for 12 weeks with 20 college students in the US who were native English speakers. On examining the impact of each group on the development of the participants' L2 oral proficiency, the researchers found that they equally improved the participants' levels of grammatical complexity

and articulation rates. Moreover, Saito et al. also found differential effects of long-term interactions relative to L2 learners' developmental stages. In other words, the inexperienced group showed a wide range of outcomes regarding lexicogrammar and fluency development; meanwhile, the experienced group demonstrated significantly enhanced phonological accuracies, which are thought to gradually develop in the later stages of L2 speech learning. Additionally, native-speaking interlocutors provided feedback on approximately 5% to 15% of the non-NS' pronunciation and grammatical errors and approximately 15% to 40% of their vocabulary errors, indicating that the nature of the interactions was meaning- rather than form-oriented and that L2 interaction is particularly beneficial for inexperienced L2 learners.

2.11.2 Paired Video Calls

One notable study of paired video calls offers a practical example in which motivation to speak improved after a single experience (Konishi, 2017). A 70-minute video call was conducted with 28 Japanese university students taking a teaching course at a Japanese university and 14 university students from Asia enrolled in a Japanese language course at an Australian university. The results suggested that projecting visual information on the screen helped to build friendly relationships between interlocutors and motivated students to learn English. Additionally, motivation to learn English was also stimulated by the high Japanese language levels of the students in Australia. Moreover, the students expressed the desire to conduct video calls when they became teachers in the future. In this study, participants thought about the topics to be discussed in pairs in advance and prepared photos of Japanese culture and travel to present during the class on slides. However, the English–Japanese use balance was not uniform; 13 participants used Japanese more frequently than English. It is unknown how effective the video calls would have been if they had been conducted only in English or on a one-on-one basis.

Additionally, Iino and Yabuta (2016) conducted an interactive English language instruction program 19 times for 16 Japanese university students. The program asked pairs of students to discuss the same topics with an English teacher living in the Philippines using a web conferencing system. Before the meeting, participants repeated diverse tasks in class; for example, they practiced speaking in English with each other using the text as the topic source and prepared slides. The results suggested that the repetition of various tasks on the same topics to complete a web conference in English may improve overall English proficiency and promote fluency in speaking.

2.11.3 Group Video Calls

In a study of group video calls, Kobayakawa et al. (2012) conducted three 30-minute video calls outside of class time with 92 Japanese university students and 70 Filipino university students. Students were divided into groups for the video calls comprising three Japanese students and two or three

students from universities in the Philippines. After the calls, they were asked to summarize their conversations in 100-word English sentences and present these sentences during class time. The results revealed that their confidence in communicating with their counterparts in English increased. However, they could not fully communicate with each other about cultural differences and differences in opinion.

Meanwhile, Yanguas and Flores (2014) divided 31 university students studying Spanish in the US into two groups, using different teaching methods: the F2F and oral CMC methods. Students were asked to work in groups of three on different decision-making tasks for 12 minutes. The teaching methods were then switched for each group, with both groups experiencing each of the two teaching methods once. A comparative verification of the number of spoken words and dialogue turns and an investigation of the correlation with WTC showed that oral CMC yielded significantly more dialogue turns than F2F, indicating that Skype may be an effective means for facilitating communication. However, for WTC, a significant correlation was found between the number of utterances and dialogue turns during F2F interactions but not during oral CMC.

Toyama et al. (2017) found that videoconferencing improves speaking skills and reduces anxiety. Three short online group learning (OGL) sessions were conducted with 11 university students with low proficiency in English. The groups comprised two to three students and one teacher, with a capacity for four students per lesson. The results showed that even only a few short OGL sessions can improve the English-speaking abilities of students with low proficiency and reduce their anxiety when using a second language. Perhaps, the OGL sessions might have taught the students that it is better to avoid words and expressions that cannot be conveyed; in such situations, the students realized that there was no need to rush and tried to communicate these things using other phrases and gestures. Indeed, after seeing other learners in the group become upset in similar situations, they realized there was no need to worry, given that such anxieties were quite normal and could happen to anyone.

2.11.4 Lecture-Based Video Calls

Field et al. (2005) conducted three cross-border lecture-based video calls with 14 Japanese and 11 American university students. The camera and microphone were placed next to the classroom blackboard, and the participants moved in front of the microphone when speaking. Topics were emailed the night before to enable participants to prepare for the discussion. The students found this technology interesting and useful. Notably, the calls enhanced student understanding of cross-cultural perspectives, improving students' L2 competence and skills. However, the group-based and lecture-style video call format may have limited the interactions; for example, the physical distance and time lag between the cameras and monitors may have hindered negotiations of meaning.

Further, Nishihori (2002) conducted cooperative distance learning between Hokkaido and Stanford University to form a human network on top of an information network and incorporate intercultural communication equivalent to F2F communication in the classroom. This study involved teaching

methods that assembled many learners living in different cultures at the same time and introduced the possibility of intercultural communication education, which allows learners to negotiate with other cultures while remaining within their own culture. For example, chat and video response language activities provide an excellent opportunity for intercultural communication and experiencing current cultural events. In real-time discussions in English among multiple groups using digital networking technologies, opinions can be exchanged through a chat projected on a shared screen. This cooperative approach provides a great incentive for learning. Such digitally enriched learning environments can advance foreign language proficiency by compelling learners to inform each other, compensate for deficits, and resolve challenges (Lewandowska-Tomaszczyk et al., 2001). Moreover, Tabira and Goto (2017) conducted a single 20-minute Skype-based international exchange between Australian elementary school students and 39 Japanese high school students. They found that the session increased the students' IP but did not directly impact their English language abilities.

2.11.5 Summary of Synchronous Computer-Mediated Communication and the Need for Asynchronous Computer-Mediated Communication

Studies on SCMC have indicated that the sense of accomplishment derived from interacting in English increases a learner's confidence in communicating in English, which may stimulate their motivation to learn to speak it. Moreover, studies have also shown that SCMC can facilitate intercultural communication by reducing anxiety, improving WTC and IP, and potentially improving English-speaking ability. However, relative to F2F communication, SCMC video calls have some disadvantages, such as a lower social presence: While they can give the student a sense that a speaking partner is present (Short et al., 1976), they also involve time lags and conversation stoppages (Harada, 1997), which can create psychological barriers to on-the-spot communications for participants who are not fluent in English (M. Yamauchi, 2018).

Meanwhile, other studies have reported that no significant correlation coefficients exist between the number of utterances and dialogue turns and WTC when using oral CMC methods (e.g., Yanguas & Flores, 2014). Indeed, the use of Skype does not directly contribute to the improvement of English language proficiency (Tabira & Goto, 2017). Additionally, the potential anxiety-relieving effects of CMC have not yet been fully clarified (Abrams, 2003; Kern, 1995). Therefore, how ICT may best be used to improve the emotional and speaking skills of Japanese learners of English is unclear.

Nevertheless, scholars have advised on how ICT should be incorporated into the classroom. For example, Hafner and Miller (2011) argued that teachers should create pedagogically appropriate CMC tasks, build collaborative online learning communities, and use ICTs to facilitate international interactions; however, teachers need platforms that facilitate cooperative engagement across time differences. Thus, video-based ACMC should be considered; it does not have the same time constraints as SCMC and may be less likely to cause tension and foreign language anxiety (M. Yamauchi, 2019).

To date, few studies have examined the use of video-based ACMC in speaking lessons; however, the ICT succession model (Stephens, 2007) suggests that messages are most effectively communicated when they pass through two different types of communication media. The next section considers the benefits and disadvantages of ACMC and offers practical examples of its use. It previews prior studies on the affective impact of video exchanges using ACMC that incorporate SCMC and speaking.

2.12 Benefits and Disadvantages of Asynchronous Computer-Mediated Communication

2.12.1 Benefits of Asynchronous Computer-Mediated Communication

Previous ACMC research has generally focused on text-based ACMC, which, unlike real-time SCMC, offers more freedom regarding time and space (Lee & Markey, 2014). Text-based online ACMC discussions provide learners with more equal opportunities to exchange ideas and enable balanced participation, the opportunity to hear members' views, and a freer and more comfortable environment (Chew & Ng, 2016; Vonderwall et al., 2007). This format also benefits learners who are shy, introverted, or who do not like to speak in front of other learners, because it gives them an equal opportunity to voice opinions to their counterparts without speaking aloud; additionally, it is preferred by less proficient learners (Chew & Ng, 2021).

2.12.2 Functions of Asynchronous Computer-Mediated Communication

Internet-based communication excels in offering learners immediacy, memorability, and the ability to play back footage; however, mastering it requires the ability to communicate smoothly, even with counterparts living abroad, to collaborate and transmit information (e.g., by creating videos; Hayashi, 2015). Given that ACMC video exchanges give learners access to data recorded during exchanges (which serve as authentic evidence of English learning) and the ability to play it back as often as they desire, this format allows for more personalized learning at one's own pace without space-time constraints (L. V. Moore & Filling, 2012). In the context of education, ACMC video-based interactions allow students to learn in a realistic setting, record their learning, watch themselves speak English, watch videos of their teachers and friends, present and share their learning outcomes, observe their learning and that of others, and reflect upon their learning (Iwai, 2019). These features notably allow learners to engage a familiar vision of the person who embodies the self they want to be (the ideal self) and the pressure to be a certain way (obligatory self; Kobayashi, 2021c). As self-evaluations of video recordings help L2 learners to improve their linguistic skills (M. Castañeda & Rodríguez-González, 2011; H. Lin, 2015; Sun & Yang, 2015), ACMC videos may enhance L2 learning by enabling them to evaluate and reflect upon their performance.

2.12.3 Ease of Access to Asynchronous Computer-Mediated Communication

As noted, a key advantage of ACMC is that it can be implemented regardless of any differences in

participants' time zones. While SCMC strategies, such as video calls, can be used to connect classrooms in different regions in real time, time zone compatibility limits potential interlocutors based on whether they are available during school hours, making it challenging to leverage ICT's abilities to transcend time and space. However, ACMC offers a solution: Given that ACMC can be conducted regardless of time differences, it removes the limitations time zones impose upon potential cross-national partners. Moreover, ACMC systems break any location limitations: They can be used inside and outside of the classroom, eliminating the need to conduct interactions during class time, which increases the number of learning opportunities.

Meanwhile, ACMC strategies may enable more effective communication between English language learners than SCMC approaches. For example, interlocutors with poor listening or speaking skills may not communicate effectively with each other in real time during an SCMC video call. However, communicating using ACMC content, such as e-mails and recorded videos, can give learners opportunities to gain a deeper understanding of the ideas being conveyed, because they can repeatedly read or listen to asynchronous content until they understand it (Al-Mutairy & Shukri, 2017). Hence, communicating online through asynchronous typed messages allows participants to freely express their thoughts at any time and gives them time to think about their previous posts and current drafts before sending them (Lever-Duffy & McDonald, 2011; Sotillo, 2009). Accordingly, this format encourages learners to reflect upon and create their messages (D. A. Castañeda, 2021); that is, learners can carefully consider and rewrite the content of their transmissions as needed. Thus, ACMC strategies can enable individualized learning by giving learners the time they need to consider their communications.

Another benefit of an ACMC approach is the tracking feature, which allows student progress to be monitored. Large-scale, valuable data on students' individual and collective performance offers insights into their abilities and challenges, which can be helpful for teachers seeking to design individualized lessons (e.g., data may show a teacher that a particular student needs more access to language forms and detailed feedback; Kessler, 2018). Moreover, the wealth of data recorded in video discussions enables researchers to make detailed observations about participants (Wang & Vásquez, 2012). Given these benefits, ACMC may fill in the gaps of SCMC; thus, combining these strategies may be the most effective way to promote the improvement of students' emotional and speaking skills.

2.12.4 Social Media

Online forums and social media, such as instant messaging applications, Facebook, Instagram, TikTok, Twitter, and blogs, are now the preferred platforms for learners to connect with others and develop their language skills through collaborative learning and discussion (Mansor, 2016). Further, Facebook has become popular for informal communications (Jin, 2015). Digitally recording videos using Facebook has been reported to improve oral fluency and increase confidence in speaking in the

education context; however, uploading large video sizes is time consuming. Hence, it is necessary to create a practical online learning environment where videos can be recorded directly on the platform (Göktürk, 2016).

2.12.5 Flipgrid

An alternative to Facebook videos, which present several issues as described above, is an application called Flipgrid. It is an application that allows users to easily shoot, edit, and share videos. It is one of several recently developed, convenient, and centrally managed educational communication apps for smartphones and computers.

Today, many educators worldwide use Flipgrid as a virtual learning space, where students can interact with people from other regions (Lee, 2020). Notably, Flipgrid allows students to practice their speech repeatedly in advance, reshoot their videos until they are satisfied with them, and carefully review them before sharing them. In the context of English language learning, video-based shared learning apps that allow asynchronous exchanges, like Flipgrid, can curb students' anxiety about speaking English to others on the spot, which is especially important for students with low proficiency in English. Moreover, Flipgrid allows users to freely play back the other party's recorded videos, which can help learners objectively capture the workings of communication (Inoi et al., 2020). Additionally, it enables users to verbally comment on exchanged videos and check the other party's comments about or reactions to their videos (notably, reviewing such comments can help users recognize whether they successfully communicated with the other party, making Flipgrid easy to use). Flipgrid also offers English subtitles, which allow learners to take their time to reflect on a video (e.g., they can carefully consider its context) and craft a stronger response; in particular, this feature can promote comprehension and help learners who are uncomfortable with English to more easily participate in the exchange.

In Japan, there is a growing number of practical examples (Hattori, 2022; Kitano, 2021) of people interacting with technologies like Flipgrid. For example, Flipgrid has been used to conduct peer reviews of performance tasks (Kobayashi, 2021c) and continuously send video messages in exchanges with foreign countries (Inoi et al., 2020).

2.12.6 Multimodal Communication

Flipgrid enables multimodal communication by combining various features, such as video, text, and voice. Multimodal communication signifies exchanges that simultaneously employ multiple modes of communication, including linguistic, textual, spatial, and visual modes (Kress & Van Leeuwen, 1996). Incorporating rich features, such as textual information and video, into digital learning platforms can capture learners' attention, provide contextual cues, ease challenges with comprehension, and motivate students to communicate and learn the language (Derakhshan et al., 2015; M.-H. Lin et al., 2017).

Video is a production activity that prepares students for real audiences and can be a great way for beginner and intermediate learners to gain experience in using English (M. Yamauchi, 2019). Moreover, videos can be recorded and viewed using participants' smartphones; crucially, it increases students' exposure to English by enabling them to watch videos anytime, anywhere. Another advantage of video sharing is that the act of shooting and sharing videos with a smartphone is itself a very routine act for many students today, which makes the creation and subsequent exchange of videos on familiar devices very easy (M. Yamauchi, 2018). Thus, text, audio, video, images, and various combinations of these media are more generally pervasive and everyday parts of the participatory culture that is prevalent on the Internet (Kessler, 2013).

2.12.7 Disadvantages of Asynchronous Computer-mediated Communication

Text-based ACMC interactions have some disadvantages. For example, they involve limited social interaction, given that a dialogue partner is not present. Additionally, there is a lack of visual and audio cues, and the time required to write and read text-based postings may reduce students' motivation to actively participate in the interaction (Basharina, 2007). Scholars note that voice blogs are less authentic for ESL students because interacting in this way is more time consuming (Hung, 2011), and voiced-based ACMC interactions can cause learner anxiety as they do not involve body language, which can support interpretation (Lee, 2018). Even video-based ACMC presents challenges, such as time delays between exchanges—not receiving immediate feedback can affect the number of turns in the exchange, and if time passes without a reply from the other party, it can be challenging to continue, which affects the improvement of English language skills (Kessler, 2018; Lee, 2016).

Although ACMC can be implemented anytime and anywhere, there is little supervision when it occurs outside the classroom, inducing differences in participation attitudes; participants who are less motivated to learn may not use the ACMC outside of class. Additionally, sharing videos using personal smartphones or other ICT devices may be limited by battery life and the individual's home Internet environment and communication capacity (Iwai, 2019). Given that uploading videos may be costly and time consuming, consideration should be given to reducing this burden by limiting video recording and uploading to the classroom. Moreover, while video-based ACMC may induce less anxiety in learners than SCMC, students may still feel uncomfortable sharing recorded videos (Lee, 2016) and be resistant to filming themselves speaking (M. Yamauchi, 2019). Consideration should accordingly be given to allowing students to hide their faces with emojis, which is a feature in Flipgrid. The next section describes a text-based ACMC study and a video-based ACMC study.

2.13 Asynchronous Computer-Mediated Communication Case Studies

2.13.1 Text-Based Asynchronous Computer-Mediated Communication

Previous ACMC studies have reported that the use of e-mail enables students to understand each

other's opinions and take sufficient time to reply (Sasaki, 2015). Meanwhile, a study of an English diary on a blog reported that the ease of updating the diary allowed participants to focus more on the task of writing in English, which helped them feel a sense of accomplishment and success and made them more confident (Ominato & Chino, 2006). Notably, Nishihori (2002) introduced exchange activities between two groups using IntelligentPad, a knowledge media system that enables the editing of complex documents mediated by asynchronous language activities. Further, he introduced peer tutoring, where students learn each other's target languages through collaborative translation work involving target and native languages via a software tool called Collaboard. He suggested that this strategy could be developed for cross-border cooperative learning.

ACMC studies consider text-based exchanges, rather than video-based speaking exchanges; nevertheless, understandable exchanges occur between senders and receivers. Arnold (2007) studied 56 college students studying German in the US and compared an F2F discussion group with a chat-based SCMC group and an out-of-class e-mail-based ACMC group to determine the impact on student communication anxiety. The results revealed that, regardless of the form of communication, student-led discussions provided ample opportunity for practice and positive experiences, triggered familiarity with speaking in a foreign language, and reduced anxiety about communication; however, there were no statistically significant differences between the respective groups, and the study did not mention what caused the reduction in anxiety or the impacts of the different modes. Arnold's findings differ from those of previous studies, which have reported that F2F speaking can induce anxiety. While e-mail-based ACMC can provide a more relaxed environment than F2F communication, time lags can be a barrier that prevents them from being suitable for conversations.

2.13.2 Video-Based Asynchronous Computer-Mediated Communication

Videos contain verbal and non-verbal cues in F2F interactions (Griffiths & Graham, 2009). Visual and audio cues establish a social presence and create a sense of belonging to a community (Borup et al., 2012). Thus, audio and visual communication can help students feel closer and less alone (Clark et al., 2015). Accordingly, ACMC accompanied by video is likely to have a different impact on English skills than text-based ACMC, even though it is unlikely to realize the same effects as F2F interactions.

M. Yamauchi (2019) conducted a 10-week interclass language and cultural exchange program for 15 Japanese university students with limited English proficiency and seven American university students centered on video exchanges using the Facebook application for smartphones. The participants were divided into four groups. Each group created a video on a designated topic, posted it in English and Japanese, and engaged in an ongoing text-based exchange about the video using English and Japanese. Participants were very satisfied with the video-sharing and commenting features and felt that the group-based format alleviated foreign language anxiety and made the activity a positive experience. Further, the cross-cultural exchange helped them enjoy interacting with their

exchange partners in English and increased their interest in their partners and culture. However, the participants also indicated issues with the program, such as a gradual decrease in the number of replies to videos given timing discrepancies in posting and the inability to successfully upload large elaborately-edited videos.

Hirose et al. (2020) conducted a remote exchange between sixth graders at two small elementary schools using an SCMC videoconferencing system and LoiLoNote, an ACMC. This was followed by the students using their prepared material to interview foreigners in Kyoto during their school excursion. These combined methods allowed participants to exchange pre-prepared materials. Accordingly, using an SCMC tool with a clear objective encouraged participants to more actively use the ACMC tool, ultimately leading to more partner-aware communication.

Notably, Iwai (2019) surveyed 82 Japanese university students about their impressions of speaking skills training using Flipgrid. They reported that the video-based activities motivated them to learn, and the ability to record and review videos enhanced their grammar and vocabulary acquisition and retention. Moreover, Iwai reported that dozens of German students enjoyed Flipgrid-based video exchanges on the topics of self-introductions, hobbies, culture, and eating habits, which compelled them to continue the exchange. Until recently, time differences made it impossible for Japanese students to communicate with German students via an SCMC tool like Skype; however, Flipgrid's ACMC-based video message exchange has made this possible. Iwai also reported that the participants repeatedly listened to the other parties' German messages to understand them, pondered over their replies, and rehearsed their replies multiple times before recording them. Additionally, participants felt that having dozens of German speakers' pronunciations at their fingertips was effective. However, only a little more than half of the respondents answered that Flipgrid was useful. They reported that the app was not effective because it did not allow them sufficient interactions beyond self-introductions, highlighting the need for further studies on the content and continuity of exchanges.

Iwai (2021) also reported on the practice of using Flipgrid in an online German class for Japanese university students and found that videotaping, sharing learning outcomes, and submitting videos to review after each class greatly motivated learning and revitalized online classes. In another case in this study, an exchange with German university students studying Japanese using Flipgrid was conducted as a test to see if Japanese students could communicate in German. The results suggested that the use of ICT tools functions as a motivator and that the presence of peers improves motivation.

Meanwhile, Lee (2020) conducted a 14-week online exchange project between 37 college students in Spain and the US using Flipgrid's ACMC features. The results suggested that ACMC allows learners to build a virtual learning community that fosters interpersonal relationships and promotes the development of intercultural communication skills and knowledge in an authentic and meaningful way. Nearly 90% of students were satisfied with Flipgrid for cross-cultural interactions and accordingly valued the app. However, this study involved only a small number of participants and its program

targeted advanced learners; accordingly, the effect on beginner learners remains unknown. Further, the transformation before and after the implementation of the program cannot be determined only from the results of the post-questionnaire. Additionally, while the focus group interviews offered insights that may support the overall results, they did not reveal individual participant transformations or specific interactions. Thus, follow-up research is needed to determine the impact of the use of ACMC.

2.14 Summary and Implications

In summary, prior studies have offered the following insights. Notably, English learners are most anxious about speaking. Indeed, they may struggle to demonstrate their abilities in anxiety-causing situations (Horwitz et al., 1986; Yashima et al., 2009), inducing poor language performance (Kondo & Yang, 2004; MacIntyre, 2017). Anxiety can be further intensified by a lack of speaking-practice opportunities, preventing learners from experiencing boosts in confidence from successful experiences in speaking English (Thornbury, 2005).

Thus, student anxiety about speaking can be reduced through positive communicative experiences, achievement, and regular successes (Beatty & Andriate, 1985; Dörnyei, 2001; Matsuda & Goble, 2004; Okada et al., 2018; Yalçın & İnceçay, 2014); repeated practice (Iimura, 2016; Iimura & Nomura, 2014); more contact time with the target language (Clément & Kruidenier, 1983); engagement in interactive communication activities, such as pair and group work, focused on student interaction (Mejías, 2014; Woodrow, 2006; Yalçın, & İnceçay, 2014); and involvement in moderately risky activities that build a tolerance for ambiguity (Oxford, 1999). Meanwhile, engaging in impromptu interactions with foreigners in English can cause learners to experience frustration if they cannot communicate effectively. While this can cause anxiety, it can also make them aware of their challenges, which may enhance their WTC (Yashima, 2009a). Further, scholars argue that students' foreign language anxiety can be reduced by creating non-threatening environments, where learners are not required to perform individually in front of classmates (Crookall & Oxford, 1991).

In recent years, SLA researchers have begun to probe the potential of ICT for improving students' affective aspects and language performance, considering meaning negotiation, the interaction (Long, 1996) and output (Swain, 2005) hypotheses, transactional distance theory (M. G. Moore, 1993), the concept of the ZPD (Vygotsky, 1978), and scaffolding (Wood et al., 1976). Scholars have suggested that CMC with foreigners from different cultural backgrounds offers L2 learners a valuable opportunity to engage in authentic communication that enhances language skills and intercultural competence (Dugartsyrenova & Sardegna, 2017; Lee, 2018; Schenker, 2012). Thus, this approach is effective because it can provide ample social interaction (Fotos, 2004; Kern & Warschauer, 2000).

Regarding the benefits of SCMC, the use of video calls (a highly interactive communication tool) enables students to speak with foreigners from different cultural backgrounds. Scholars have reported that this approach reduces communication anxiety by cultivating a sense of accomplishment and

success (Ryobe, 2008; Toyama et al., 2017), increases motivation to speak (Konishi, 2017), and promotes speaking skills (Iino & Yabuta, 2016; Toyama et al., 2017). Further, online environments promote interaction, peer support, and collaboration among learners (Loewen & Wolff, 2016).

ACMC also has several benefits. For example, there is no pressure from time constraints because participants do not exchange information in real time and do not have to take turns exchanging messages (as in F2F communication; Yates, 2001), making ACMC less likely to cause tension and anxiety (M. Yamauchi, 2019). ACMC can also enhance cultural knowledge and skills. The use of video in ACMC can provide an opportunity for interlocutors to express their cultural perspectives (O'Dowd & Ware, 2009); meanwhile, tools that create virtual learning communities where students can interact with students abroad, such as Flipgrid, promote intercultural communication skills and knowledge development (Lee, 2020). In particular, Flipgrid's ACMC features enable users to easily record learning content, present and share learning outcomes, observe and reflect on learning outcomes (Iwai, 2019), and replay recorded data for learning (L. V. Moore & Filling, 2012).

Based on these previous studies, this doctoral dissertation focuses on the potential of CMC that incorporates improvisational elements to give students opportunities to practice interacting in English with people from abroad. It aims to ascertain how this may be done in a psychologically safe learning environment, where students can take risks without worry (Turner & Harder, 2018) in ways that cultivate positive communication experiences.

SCMC video calls allow students to practice impromptu speaking in real-time interactions with people from diverse cultural backgrounds in foreign and remote regions. From the literature, repeated video calls may induce meaningful exchanges and regular successes. Thus, SCMC video calls may be an excellent tool for improving the affective aspects and speaking skills of EFL participants.

Given that Flipgrid involves ACMC features, such as video playback and recording, it can give students more time for preparation and practice than an SCMC tool, which may lower student anxiety. For example, Flipgrid may lower student foreign language anxiety by allowing learners to repeatedly practice and review their speech before sharing it. Further, the ability to freely replay the recorded speech of the other party and display English subtitles as appropriate may lower student fears about performing in front of others on the spot, increase WTC, and enhance comprehension and IP.

Additionally, following the ICT succession model (Stephens, 2007), which recommends the use of two different communication media, using SCMC and ACMC in succession may fill the gap in language activities in Japanese schools that nurture an awareness of exchange and improvisational skills in a way that also responds to the class size problem. This strategy may improve students' affective aspects and speaking skills.

Chapter 3. The Present Study

This chapter first examines the limitations and problems of the previous studies described in Chapter

2. Next, it discusses the need for further research on whether SCMC and ACMC can improve the affective aspects and speaking skills of English language learners. For lucidity, this chapter includes a figure and table: Figure 3.1 presents a conceptual diagram of the exchange learning model with people in overseas and remote areas using ICT (synchronous and asynchronous) and Table 3.1 presents a list of studies and describes the key points of each. Finally, the chapter states the research questions of Studies 1 through 6 and the angles from which the study approached each question to address the broader questions of the doctoral study.

3.1 Questions Driving the Study

Prior studies have clarified that studies on videoconferencing in Japanese education to date have mostly involved speaking activities by university students who were given opportunities to prepare and practice what they wanted to say in advance. In these cases, teachers rarely provided instruction on impromptu exchanges. Moreover, most prior CMC studies involved a small number of participants and a short implementation period. Further, many of the video calls were conducted in pairs or groups after prior preparation. Therefore, it remains unclear how different participation conditions in video calls (e.g., improvisation and the presence of a script) impact students' affective aspects and how different video call instructional formats, such as one-on-one and lecture-based, impact learner anxiety. Regarding the relationship between one-on-one online English conversations and speaking anxiety, few studies have probed the long-term effects of impromptu interactions in English with a foreigner on the anxiety of a large group of high school students. Moreover, information on whether participants' English proficiency levels and ages impact speaking anxiety and ability is lacking. Whether learner anxiety is impacted by the number of times speech is performed or the time it takes to perform it remains uncertain. Thus, for a deep analysis of the effectiveness of classroom practices, it is necessary to study a group of learners with varying proficiency levels over a long period.

Although scholars have suggested that explicit and implicit corrective feedback should be provided regularly through SCMC videoconferencing to draw learners' attention to language forms and help them build connections between language forms and meanings (Lee, 2011), there is little qualitative research in this context on anxiety and speaking ability; scholars have not yet explored the psychological changes and actual conversational interactions of beginner learners of English who have experienced one-on-one online English conversations. Additionally, aside from the studies mentioned above, little work has been done on how SCMC video calls between Japanese and foreign classrooms that incorporate improvisational elements and connect and use an interclass lecture-based instructional format impact WTC and speaking. Few studies have examined ACMC video-sharing practices, and little is known about how they impact students' affective aspects and speaking skills and the interaction content and continuity. Further, scholars have not yet clarified how speaking anxiety and IP may be impacted by exchanges that incorporate improvisational elements and are conducted via a combination

of an SCMC, such as a video call, and an ACMC, such as Flipgrid, between Japanese and international classrooms in a lecture-based instructional format. The transformations of individual participants and specific interactions have also not been shown. Follow-up research is needed to bridge these gaps.

3.2 Rationale

The GIGA School concept has increased the demand for ICT-based instructional skills. This trend should also incorporate the effective use of CMC in classrooms to enable learners to communicate meaningfully using ICT equipment, which may potentially reduce their anxiety in using and learning L2 and improve their speaking skills. SCMC and ACMC technologies can enable authentic and meaningful L2 communications that may not otherwise be readily available to EFL students. Given the gaps in the literature, how to apply CMC in classrooms to reduce student anxiety, improve student WTC and IP, and develop student English-speaking skills warrants examination.

SCMC video calls and ACMC Flipgrid practices, which combine the advantages of SCMC and ACMC with other benefits (e.g., individual optimization of learning and collaborative learning through interactions with diverse others) are, arguably, likely to be useful for learners with limited English proficiency. Thus, this doctoral study set the affective aspects of student learning as subjective variables and student English-speaking ability as the objective variable to uncover the factors related to CMC use in English language learning in Japanese classrooms that may improve the affective aspects. Next, it examined their influence on speaking ability.

3.3 General Research Questions

The study attempted to answer the following overall research questions, which emerged from the literature review:

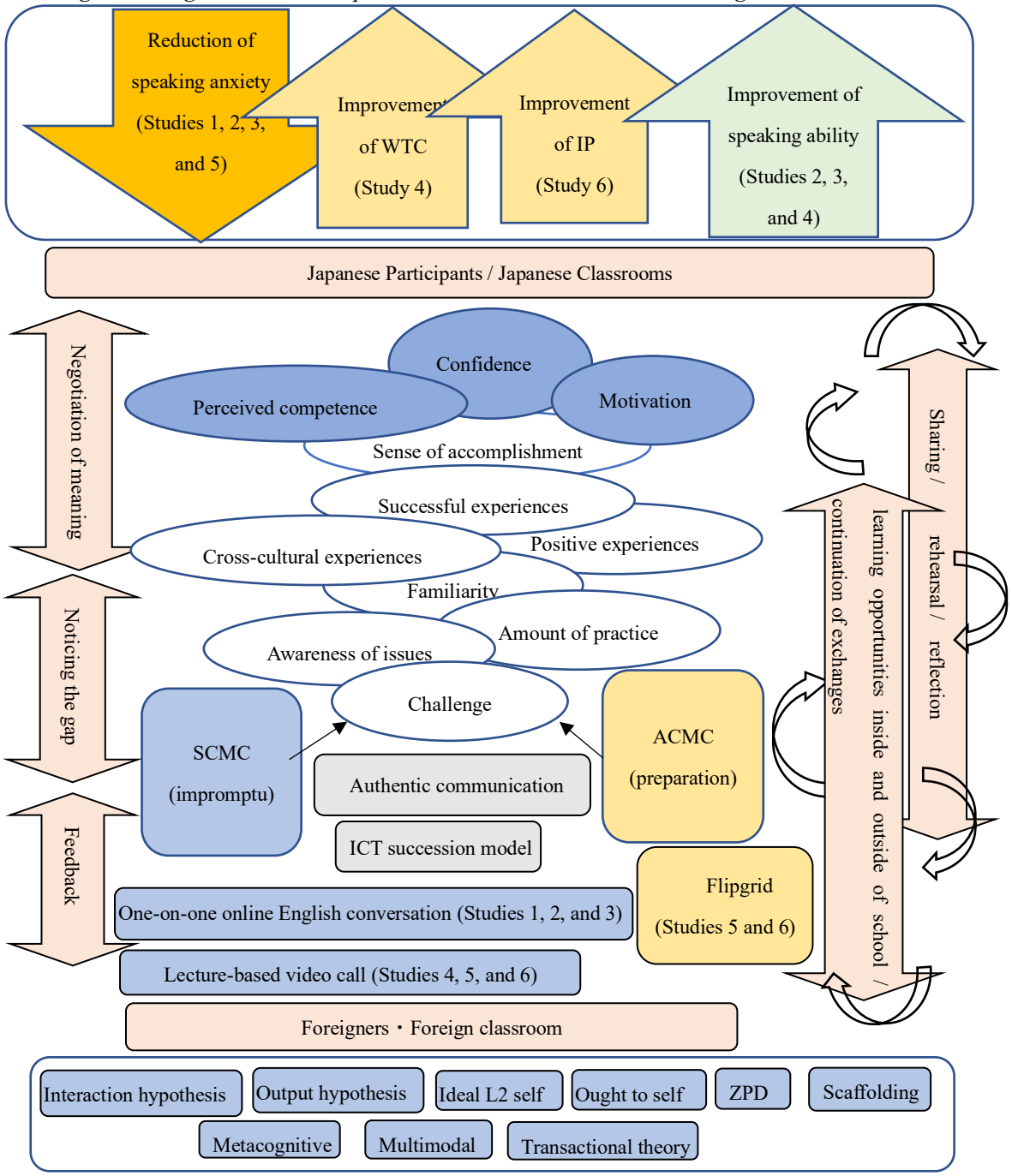
(1) How does the use of synchronous ICT impact the affective aspects—anxiety, WTC, and IP—and speaking skills of English language learners from different types of schools?
(2) What factors influence learners' affective aspects—anxiety, WTC, and IP—and speaking skills? Specifically, what factors determine how synchronous ICT can be used to improve learners' affective aspects—anxiety, WTC, and IP—and speaking skills?
(3) Does the combined use of synchronous and asynchronous ICT improve speaking anxiety and IP? If so, what factors contribute to this effect?

The conceptual diagram of the exchange learning model with people in overseas and remote areas using ICT (synchronous and asynchronous; Figure 3.1) clarifies the queries that drove the research. In this doctoral dissertation, synchronous ICT is a one-on-one online English conversation (Studies 1–3), synchronous ICT in a simultaneous classroom situation is a lecture-based video call (Studies 4–6), and asynchronous ICT regards Flipgrid (Studies 5–6). Meanwhile, speaking anxiety (Studies 1, 2, 3, and

5) is the psychological feeling about not speaking well; not communicating what one wants to say; and feeling nervous, worried, and confused when conversing in English with people abroad or in remote areas without a manuscript or other form of preparation. WTC (Study 4) captures whether a student enjoys and is interested in an English class and their willingness to listen to and speak English. The next chapter details these elements of the research.

Figure 3.1

Exchange Learning Model with People in Overseas and Remote Areas Using ICT



3.4 Specific Research Questions Driving Studies 1–6

Referring to the research concept diagram (Figure 3.1), Table 3.1 details the studies comprising the current doctoral work.

Table 3.1

List of Studies on Online Learning with Foreign Countries Using ICT (SCMC・ACMC) in this Doctoral Dissertation

	Independent variable (Manipulated variable)			Dependent variable (Variable to be measured)				
	Synchronous Type		Asynchronous type	Anxiety	WTC	IP	Other factors (e.g., self-confidence, motivation, and free-text descriptions)	Speaking ability
	One-on-one online English conversation	Simultaneous classroom situation—lecture-based video call	Simultaneous classroom situation—Flipgrid					
Study 1 (n=34) High school students with relatively strong English skills	○ Preparation/ Improvisation			○				
Study 2 (n=4) University students with relatively strong English skills	○ Preparation/ Improvisation			○			○	○

Study 3 (n=1) University students with relatively poor English skills	○			○			○	○
Study 4 (n=34) Elementary school students		○			○		○	○
Study 5 (n=17) University students		○	○	○			○	
Study 6 (n=158) High school students with relatively poor English skills		○	○			○	○	

(Study 1)

RQ1: What are the levels of speaking anxiety among high school students who are proficient in English?

RQ2: To what extent does a long-term commitment to one-on-one online English conversations reduce speaking anxiety?

RQ3: Do improvised and prepared one-on-one online English conversations impact speaking anxiety differently?

(Study 2)

RQ4: Is there a difference in effectiveness in reducing speaking anxiety between two groups of college students proficient in English, when the improvisation and preparatory groups engage in one-on-one online English conversation for a short period? If so, what causes the participants to feel less anxious?

RQ5: Is there a difference in the improvement of speaking skills between two groups of college students proficient in English, when the improvisation and preparatory groups engage in one-on-one online English conversation for a short period? If so, what do participants feel helps them improve their speaking skills?

RQ6: What is the difference in the awareness of short-term one-on-one online English conversation in the improvisation and preparatory groups?

(Study 3)

RQ7: Does engaging in one-on-one online English conversations impact the speaking anxiety of a university student who has difficulty with English?

RQ8: Does engaging in one-on-one online English conversations impact the speaking ability of a university student who has difficulty with English? Will the student retain these skills after a one-on-one online English conversation?

RQ9: When does the participant experience speaking anxiety? What helps reduce speaking anxiety and improve speaking ability?

RQ10: How are attitudes and awareness of speaking transformed through one-on-one online English conversation?

(Study 4)

RQ11: Does participating in lecture-based video calls as part of group-based instruction impact WTC and unwillingness to speak English among elementary school students?

RQ12: Does participating in lecture-based video calls as part of group-based instruction impact speaking ability among elementary school students?

RQ13: When engaging in lecture-based video calls as part of group-based instruction, how do participants who are good at English and participants who are not so good at English feel, what do they notice, and what do they want to pay attention to in the future?

(Study 5)

RQ14: Does combining a real-time video call (SCMC) and Flipgrid (ACMC) reduce college students' speaking anxiety?

RQ15: Does the reduction of speaking anxiety vary with proficiency?

RQ16: If combining a real-time video call (SCMC) and Flipgrid (ACMC) reduces college students' speaking anxiety, what elements of this approach help reduce anxiety?

RQ17: If combining a real-time video call (SCMC) and Flipgrid (ACMC) does not reduce college students' speaking anxiety, what factors contribute to this result?

RQ18: How do the participants feel about interacting with students from other countries?

(Study 6)

RQ19: Do high school students who have difficulty with English improve their IP by engaging in SCMC video calls?

RQ20: Does continuing Flipgrid (ACMC) use after a synchronous video call improve IP?

RQ21: If IP improves by continuing Flipgrid use after a synchronous video call, then what causes this change?

Further exploration of these questions is needed to examine the extent to which synchronous video calls and Flipgrid (ACMC) can effectively improve students' affective and speaking skills and the conditions that promote their effectiveness. Therefore, to answer the above questions, this project examined effective ICT approaches based on the model outlined in Figure 3.1 and the six studies listed in Table 3.1. The next chapter details Study 1.

Chapter 4. Study 1: The Effects of Unscripted and Scripted Methods on Speaking Anxiety During Video Call Conversations: A Comparative Examination

4.1 Purpose

The previous chapter established the need to study whether SCMC approaches to improvised one-on-one online English conversations may serve as an effective ICT approach for English language learning. Study 1 aimed to investigate the extent of speaking anxiety among the target learners in the researcher's educational environment—that is, among the Japanese EFL high school students in the classes taught by the researcher. Specifically, this study involved one-on-one online English conversation sessions with students who had speaking anxiety. These students were divided into two groups: (1) an improvisational group, which did not prepare English manuscripts to support their online English conversations (improvisation group) and (2) a preparatory group, which did prepare such manuscripts (script group). Whether the two methods impacted students' speaking anxiety differently before and after the session was compared. Furthermore, the teaching methods were alternated and one-on-one online English conversation sessions were continued to investigate whether changes in speaking anxiety occurred when the methods were switched. Specifically, Study 1 was guided by the following research questions:

RQ1: What are the levels of speaking anxiety among high school students who are proficient in English?

RQ2: To what extent does long-term commitment to one-on-one online English conversation reduce speaking anxiety?

RQ3: Do improvised and prepared one-on-one online English conversations impact speaking anxiety differently?

4.2 Method

4.2.1 Participants

In this study, 34 Japanese EFL high school students participated in a one-on-one online English conversation session with a Filipino teacher. The students attended a public high school in Tokyo. They were 15–16 years old (first-year high school students) and had studied English for three to four years. None of the participants had prior experience with one-on-one online English conversations or overseas study. Over a six-month period, students participated in an EFL intervention consisting of a series of one-on-one online English conversations. Specifically, one-on-one online English conversation sessions were held once a week for 25 minutes between May and October 2017 for a total of 20 sessions. Some of the students attended the one-on-one online English conversation without the aid of a prepared script (improvisation group), while others attended with a prepared script (script group). Seventeen students were assigned to each group. The improvisation and script groups then switched instructional methods, and sessions were held again 17 times from November 2017 to February 2018. To minimize the differences between the two groups in terms of English proficiency, the participants' English proficiency levels were checked in advance. Candidates were only recruited as participants if they had scored Grade 2 or higher on the Practical English Proficiency Test (Eiken) and equivalent to a score of 520 or higher on the basic level of the Global Test of English Communication for Students. The candidates were asked to participate and their consent was obtained, following a briefing about the study's aims and the publication of the study results.

Based on their abilities, the participants had all been assigned to the upper class of the high school. The researcher had already worked at the high school and taught some English lessons for this class. These students were motivated to learn English but had difficulties with speaking, suggesting that the intervention would provide a valuable opportunity for English-speaking practice.

The one-on-one online English instructors pool comprised Filipinos aged 20–39 years; these instructors were not native English speakers. The instructors' English proficiency levels were unknown; however, observations of the hourly one-on-one online English conversations indicated that instructors generally spoke relatively slowly to facilitate the participants' comprehension.

4.2.2 Procedure 1: Overview and Features of a One-on-One Online English Conversation

To control for differences in speaking ability, the participants' speaking abilities were measured before they were assigned to groups. The test used for this purpose was Aptis, a computer-based test developed and managed by the British Council (2017). Aptis measures speaking ability using a numerical scale ranging from 0 to 50, which was mapped onto the A1–C range of the CEFR. The test takes approximately 12 minutes and is divided into four sections that reflect real-life situations that many teenagers experience, such as social media participation, sports, and eating habits. Each section requires students to answer a couple of questions. For example, "Tell me about your school day" and "What do you usually eat for lunch on school days?" Some examples are shown in Appendix 1. The participants' test results were analyzed to check whether there were any statistically significant inter-group differences in pre-intervention speaking ability. A Mann–Whitney *U* test revealed that the inter-group difference was nonsignificant, with only a small effect size ($U = 133.000$, $p = .688$, $r = .07$). This result confirmed that there were no statistically significant inter-group differences in pre-intervention speaking ability.

Beginning the month following the pre-survey, participants participated in one-on-one online English conversation sessions in a computer classroom in the school. Each student was given a tablet device and a headset. The Benesse Educational Research and Development Institute (2017a, 2017b) provided the online English conversation learning system, instructors, curriculum, and textbook materials. For each online English conversation, the instructor was randomly selected by the Benesse Educational Research and Development Institute. Therefore, the participants only knew who their instructor was once the online English conversation began. Randomly assigning an instructor for each conversation ensured that each participant would be unfamiliar with the instructor at the beginning of the online English conversation. This step was necessary to prevent students from growing accustomed to the same instructor across successive online English conversations, which might have impacted the results, as repeated online English conversations with the same instructor may reduce anxiety owing to a good rapport between instructors and students. Based on the content volume, the number of lessons, and the proficiency levels of the students, an intermediate-level textbook (Appendix 2) was used in the first half of the course and an advanced-level textbook (Appendix 3) in the second half. Examples of topics covered in the conversations include summer vacations, favorite books, annual events, time travel, treasures, travel, and respect. Both intermediate and advanced-level textbooks were used in the speaking lessons.

The learning flow of the one-on-one English conversation when the intermediate materials were used was as follows. First, as a warm-up, the Filipino instructor and the student briefly introduced themselves to one another and then read the title and the main text aloud using the teaching materials shown in Appendix 2. The students then answered questions about the content and listened and tried to understand their instructors' explanations of the grammar points. Next, in Practice 1, the students

practiced answering their instructors' questions about themselves using these grammar points. In Practice 2, they practiced with another conversational text. Then, in the activity task at the end of the material, the students gave a presentation of about 100 words on a given topic and received feedback from their instructors.

The learning flow, when using the advanced materials, was basically the same. As above, they warmed up by quickly introducing themselves and reading the title and main text aloud (using the materials outlined in Appendix 3); next, the students answered questions about the content and tried to get a sense of the grammar points. In Practice 1, the students engaged in role play in a given situation using example sentences. In Practice 2, they used different conversational sentences and answered questions about themselves based on these sentences. Last, the students gave a presentation of 150–200 words on a particular topic and received the instructors' feedback.

4.2.3 Procedure 2: One-on-One Online English Conversation Practice

The procedures for the improvisation group are outlined below.

(1) Learning materials were provided immediately before the online English conversation to ensure that the students could not prepare scripts. The video conferences were held on Mondays during the second hour slot. Each lesson began at 8:40 am. At the beginning of the lesson, the participants received a tablet, headset, and a two-page handout taken from the textbook (Appendices 2 and 3). This ensured that participants could only access the information in the handout once the lesson began. The first 10 minutes of the lesson were spent checking the Internet connection and audio input. The online English conversations then began simultaneously at 8:50 am.

(2) After the 25-minute session, the tablets, headsets, and handouts were collected. The students then received sheets of A4 paper, on which they were asked to write speeches on the theme indicated by the final "activity" task. In composing their speeches, they were asked to integrate the content they had covered in their online English conversations.

(3) The participants submitted this work on the day of the next online English conversation, before the conversation began. The work was then marked and returned to the students. The participants were informed about the study's purpose and were instructed to refrain from preparing for the online English conversation or asking their counterparts in the script group what the theme would be. Each online English conversation was monitored throughout the study to make sure there were no technical issues and that the interactions were genuinely improvised and unscripted.

The procedures for the script group are outlined below.

(1) The participants in this group received a two-page handout in advance, detailing the theme and content of the upcoming lesson. As a homework assignment, the participants studied the material in its entirety to prepare for the lesson. First, they read through the sample English conversations,

looked up any unfamiliar terms, and digested the commentary outlined in the "grammar focus" section. Next, they tackled the two "practice" tasks. Finally, they tackled the "activity" task. For this task, they were required to write a composition on a given theme; the required word count was around 100 words at the intermediate level.

(2) The online English conversation took place on Wednesdays during the second hour slot. During the conversation, the participants read out the composition that they had prepared for the activity. The observation notes attest that the participants relied on their scripts throughout their online English conversations and scarcely made eye contact with their instructors. For the final "activity" task, the participants simply recited their compositions verbatim.

(3) After the online English conversations, the compositions were collected, marked, and returned during the next lesson.

The participants used headsets to cancel out any noise from other participants in their groups (all participants in a group began their online English conversations simultaneously). The observation protocol found that none of the participants appeared to be distracted by the voice or gaze of other participants. Figures 4.1 and 4.2 show participants conducting a one-on-one online English conversation. The specified speaking tasks were common to all lessons to minimize the psychological burden and other effects of any variation across the tasks.

Figure 4.1

Online English Conversation Class, Scene 1

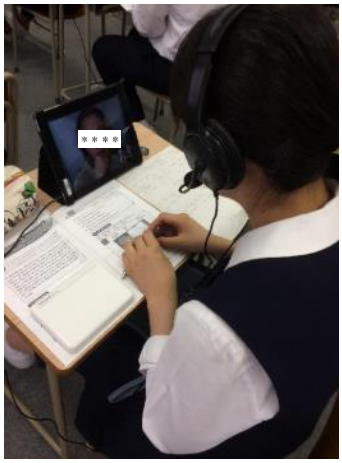


Figure 4.2

Online English Conversation Class, Scene 2

4.2.4 Data Collection and Analysis

Phase 1 of the study consisted of 20 online English conversations held weekly from May to October 2017. To ascertain whether the intervention differently impacted the speaking anxiety of participants in each group, the students were surveyed on their speaking anxiety pre-intervention (in May) and post-intervention (in October). In Phase 2 of the study, 17 online English conversations were

conducted from November 2017 to March 2018, but the groups were reversed: Those who were assigned to the improvisation group in Phase 1 were assigned to the script group for Phase 2, and vice versa. This enabled each participant to experience both instructional approaches by the end of Phase 2. This measure was used to avoid ethical issues.

The instrument used to measure speaking anxiety was a questionnaire based on Motoda's (2000) JLAS but modified for EFL learners. Motoda's scale was initially designed for learners of Japanese as a foreign language. The modified version used in the current study consisted of eight statements describing anxiety associated with communication difficulties arising when conversing with a non-Japanese English speaker. In this questionnaire, anxiety about communicating with foreigners was defined as feelings of being unable to communicate well in conversation with foreigners, anxiety about not being able to communicate what one wants to say, and impatience when speaking in English. Examples include a fear of being unable to convey something and a fear of being misunderstood by the interlocutor. Each item was scored on a five-point scale; the higher the score, the more strongly the respondent agreed with the statement. The scores were aggregated, and the mean averages were calculated. The pre-intervention and post-intervention scores were compared using a two-way ANOVA with repeated measures to determine the change in English-speaking anxiety. Additionally, the change in speaking anxiety was analyzed again in February 2018 near the end of Phase 2. The overall anxiety scale used in this study is shown in Appendix 4.

4.3 Results and Discussion

4.3.1 The First Phase of the Study

The improvisation and script groups' scores for the anxiety scale were analyzed to determine whether the effects of the intervention varied depending on the instructional method. Table 4.1 shows an inter-group comparison of the mean scores (*M*) and standard deviation (*SD*) pre- and post-intervention.

Table 4.1

Overall M and SD on Speaking Anxiety (N = 34)

Pre-intervention (May)				Post-intervention (October)			
Improvisation (17)		Script (17)		Improvisation (17)		Script (17)	
M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
4.044	.476	4.088	.446	2.779	.509	2.897	.543

Pre-intervention, both groups gave high scores to all items, indicating a consistently high level of pre-intervention anxiety among the participants. Post-intervention, the scores for each item were lower compared to pre-intervention in both groups, suggesting that the intervention had a consistent effect

throughout the sample. Next, whether there was a statistical difference in the effectiveness of the improvisation and script groups was tested in terms of the mean pre (May) and post (October) scores from the eight-item questionnaire regarding anxiety about speaking with foreigners. The results for the two groups (improvisation and script groups) and two time points (pre- and post-intervention surveys) were subjected to a two-way ANOVA with repeated measures. In English pedagogy, the independent variable is often some form of intervention, such as teaching methods, and the dependent variable is often test scores or questionnaire means. The ANOVA in this study was conducted by establishing groups using teaching method and time as independent variables and the questionnaire as the dependent variable, and then testing whether there was a significant difference between the means of the questionnaire for the two groups.

Table 4.2 shows the results of the participants' anxiety levels broken down by method (improvisation vs. script) and time (pre- vs. post-intervention). The analysis results showed that the main effects of pre- and post-instructional methods proved nonsignificant at the 5% level. Pre-intervention, time exhibited a main effect at the 5% significance level, with a large effect size (F = [1, 32] = 205.870, p = 0.000, η2 = 0.865). Effect size was measured by eta squared (η2) and categorized according to Cohen's (1988) benchmark, which defines small (η2 = 0.01), medium (η2 = 0.06), and large (η2 = 0.14) effects.

The interaction effects between the method and time proved nonsignificant, with a small effect (F = [1, 32] = 0.185, p = 0.670, η2 = 0.006). Table 4.2 and Figure 4.3 show the results for speaking anxiety. The Cronbach's alphas for the pre- and post-intervention results were 0.833 and 0.864.

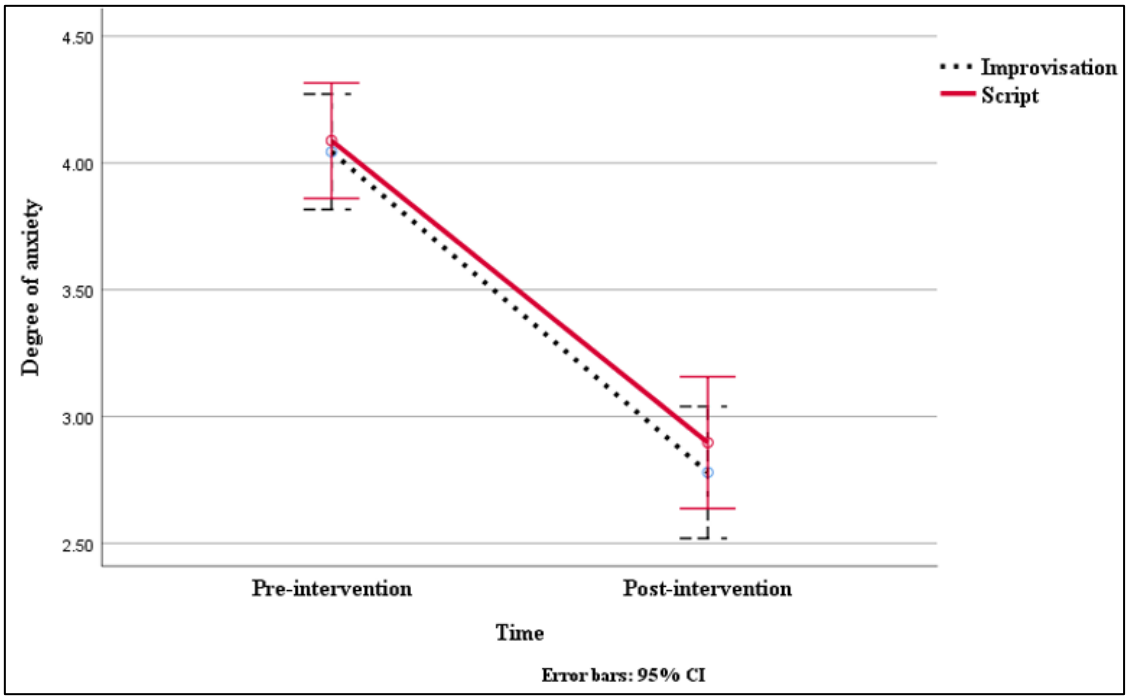
Table 4.2

Results of the Two-Way Repeated-Measures ANOVA (N = 34)

Source	Type Ⅲ sum of squares	Degrees of freedom	Mean squared	*F*	Significance	Partial η^2
Method	0.111	1	0.111	0.305	.585	.009
Time	25.633	1	25.633	205.870	.000	.865
Method × Time	0.023	1	0.023	0.185	.670	.006
Error	3.984	32	.125			

Figure 4.3

Results for the Method (Improvisation vs. Script) and Time (Pre- vs. Post-Intervention)



The above results are interpreted below. First, time exhibited a significant main effect upon anxiety, with a large effect size. This observation suggests that practicing speaking through one-on-one online English conversations was effective in reducing the learners' speaking anxiety. Second, the interactive effect between the two variables (time and method) proved nonsignificant, with a small effect size. This observation implies that the intervention was effective in reducing speaking anxiety under both methods. In other words, 25-minute online English conversations once a week for six months reduced speaking anxiety regardless of whether the students prepared for the conversation in advance.

4.3.2 The Second Phase of the Study

This section reports and discusses the results of the second phase. Recall that, in this phase, the teaching methods of the groups were switched, the online English conversations were continued, and the effects of the different methods on speaking anxiety were investigated using questionnaires in November 2017 and February 2018. Table 4.3 presents an inter-group comparison of the *M* and *SD* pre- and post-intervention.

Table 4.3

Overall M and SD on Speaking Anxiety (N = 34)

Pre-intervention (November)				Post-intervention (February)			
Script (17)		Improvisation (17)		Script (17)		Improvisation (17)	
M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
2.779	.509	2.897	.543	1.985	.187	1.993	.150

The results show that both groups showed a marked reduction in anxiety across all items at post-intervention (February). Next, whether there was a statistical difference in the effectiveness of the improvisation and script groups was tested in terms of the mean pre (November) and post (February) scores of the eight-item questionnaire regarding anxiety about speaking with foreigners. The results for the two groups and times were subjected to a two-way ANOVA with repeated measures. Table 4.4 shows the results for the students' anxiety levels broken down by method (improvisation vs. script) and time (pre- vs. post-intervention). The analysis results show that the main effects of the pre- and post-instructional methods proved nonsignificant at the 5% level. Pre-intervention, time exhibited a main effect at the 5% significance level, with a large effect size (F = [1, 32] = 119.879, p = 0.000, η2 = 0.789).

The interactional effect between time and method proved nonsignificant, with a small effect (F = [1, 32] = 0.185, p = 0.505, η2 = 0.016). Table 4.4 and Figure 4.4 show the results for speaking anxiety. The Cronbach's alpha for the post-intervention results was 0.532. Items 3 and 8 have little impact on the reliability, with modified items below .020, and their deletion could have increased reliability. However, they were not deleted because the total number of question items was small (8); they were considered significant items related to the construct.

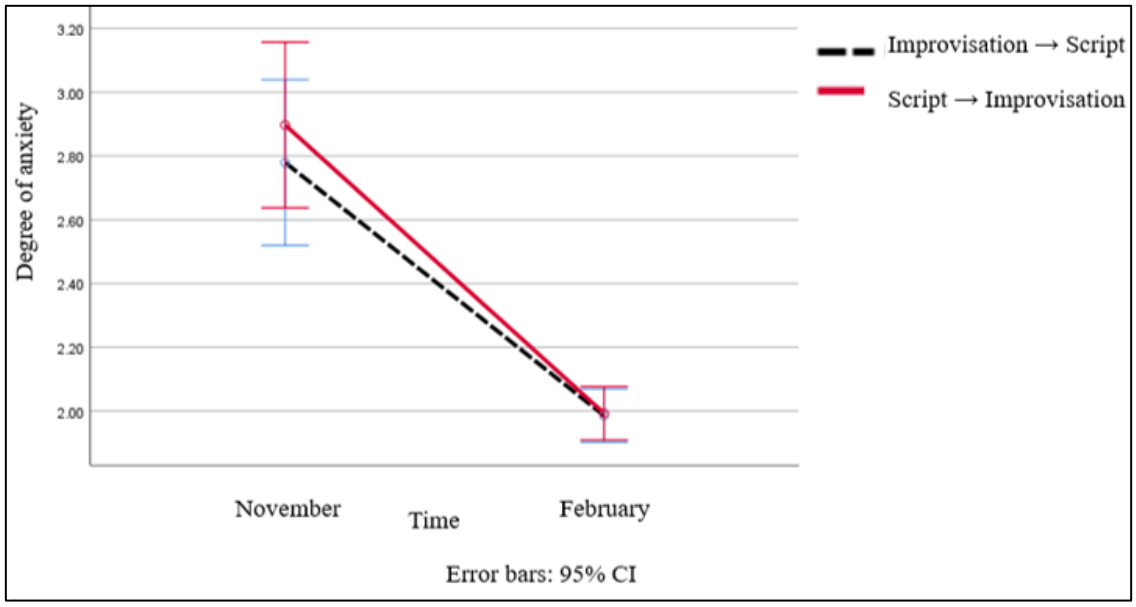
Table 4.4

Results of the Two-Way Repeated-Measures ANOVA (N = 34)

Source	Type Ⅲ sum of squares	Degrees of freedom	Mean squared	*F*	Significance	Partial η^2
Method	.066	1	.066	.326	.572	.010
Time	12.261	1	12.261	119.879	.000	.789
Method × Time	.052	1	.052	.185	.505	.016
Error	3.273	32	.102			

Figure 4.4

Results for the Method (Improvisation vs. Script) and Time (Pre- vs. Post-Intervention)



The significant main effect of time upon anxiety and its large effect size indicates that continued speaking practice through one-on-one online English conversations can reduce the learners' speaking anxiety. Second, the fact that the interactive effect between the two variables (time and method) proved nonsignificant and had a small effect size means that, as in the first phase, both instructional methods reduced speaking anxiety. As outlined above, in the second phase of this study, 17 one-on-one online English conversation sessions were conducted for 25 minutes once a week on an ongoing basis, and both script and improvisation instructional methods were found to be effective in reducing speaking anxiety. Although anxiety in foreign language learning may center on listening and speaking (Horwitz et al., 1986), the present study showed that such anxiety was eased when learners practiced their communicative exchanges in the specific learning environment of online English conversation. In this learning environment, the learners were exposed to an appropriate level of risk and pressure by conversing with a foreigner one-on-one, free from the gaze and scrutiny of peers. The anxiety-reducing effect of this learning environment corroborates Crookall and Oxford's (1991) claim that students begin to relax in an unthreatening environment, where they feel free from the need to perform in front of onlooking classmates.

Often, teachers instruct EFL learners to engage in speaking encounters with a prepared script out of concern for the learners' fears of improvised speaking. However, the study's findings suggest that this anxiety eases with regular speaking practice over the long term, regardless of whether the learner prepares for the encounters in advance. Thus, the paucity of improvised speaking in EFL classes can be solved by exposing learners to speaking encounters in a stepwise manner, where learners can

gradually reduce their dependency on scripts and their dread of improvisation. Specifically, if learners exhibit speaking anxiety, they could initially attend a number of speaking encounters with the aid of a prepared script. Once learners have grown more comfortable and confident through cumulative practice, they may start attending the speaking encounters unscripted. If the learner has already experienced unpleasant emotions in relation to improvised English speaking, they may experience the same adverse effects whenever they are placed in the same situation. However, the present study suggests that if the learners attend a series of speaking encounters without onlookers, then their general anxiety about speaking English would gradually ease, which would in turn reduce their anxiety about improvisation. Thus, when faced with students who fear improvised speaking, teachers should resist the temptation to revert to script-based instruction; instead, they should provide students with opportunities to regularly practice their speaking to gradually wean them off scripted speaking and encourage them to engage in unscripted speaking.

Regarding the implications for pedagogical practice, the findings suggest that a teacher may reduce learners' script-dependency and fear of improvised speaking by providing them with repeated opportunities to speak English in an unthreatening environment; this approach helps learners become more familiar with improvised speaking and, thus, more confident in their impromptu English-speaking skills.

4.4 Conclusion and Issues for Further Study

In this study, an EFL program involving online English conversations was conducted with two groups of students. One group attended the video conferences with prepared scripts and the other attended those without scripts. The impact of the program on speaking anxiety among both groups of students was analyzed to determine whether the effects varied by instructional method. The three main findings derived from the study are as follows:

(a) All participants had an English proficiency level equivalent to Grade 2 or higher on the Eiken and averaging above a CEFR level of B1. Although the students had relatively strong English proficiency for their schooling level, they were very anxious about speaking English.

(b) The experience of speaking English in an online English conversation reduced anxiety in both groups.

(c) Subsequent comparative testing (by switching the instructional methods used for each group) showed that continued speaking practice through one-on-one online English conversations further significantly reduced speaking anxiety. However, no differences in the reduction of speaking anxiety were observed across the two groups. In other words, a long-term program of one-on-one online English conversation can reduce student foreign language anxiety regardless of whether students attend the online English conversation with the aid of a prepared script. Therefore, getting students comfortable with speaking English through repeated exposure and practice in unobtrusive

situations can reduce their speaking anxiety, even in impromptu situations.

Meanwhile, this study had five limitations:

(a) This study only examined 34 participants, all of whom were relatively proficient in English. Owing to this limited sample size, caution is advised in extrapolating the findings. The intervention may have been effective because this specific group was so proficient; a similar intervention may only be this effective among learners with the same level of proficiency.

(b) The study took place over 10 months; therefore, the effect of the program over a shorter period remains unclear.

(c) This study only explored whether different teaching methods differently impacted speaking anxiety, but not speaking ability. This is because speaking anxiety is determined through subjective self-assessment. Therefore, it may be necessary to conduct an objective assessment speaking test to evaluate the methods' effectiveness from multiple perspectives.

(d) As students engaged with different instructors in different sessions, the results might have been influenced by variations in the quality and quantity of instructor feedback and the individual English proficiency levels of the instructors. For example, in many instances, instructors engaged in improvised exchanges (e.g., pleasantries and small talk) with participants in the script group. They would also heap extensive praise on the students, which may have created more abundant experiences of mastery. The sense of accomplishment that the students derived from regularly practicing English in one-on-one conversations with a foreign instructor may have helped reduce their speaking anxiety. To respond to this limitation, future research should investigate what the participants say during these exchanges, how much they say, and what qualitative changes occur in their speech.

(e) It is also very important to conduct qualitative research to examine the formation of, and changes in, sentiments. Additionally, detailed observations of learners should be conducted to determine how they act and feel in particular situations. As it is unknown at what point during the 10 months in the study the students' speaking anxiety began to reduce, it is possible that factors that were not directly related to the online conversations may have influenced the results. In the future, the results of the quantitative analysis should be further clarified by supplementing it with qualitative perspectives, such as individual interviews and reflections after one hour of one-on-one online English conversation to uncover how the students felt during that time.

Despite these limitations, the study results suggest that students' speaking anxiety may be reduced if students repeatedly practice engaging in one-on-one online English conversations without a manuscript, even in educational settings where they have traditionally been able to use a manuscript to practice speaking English. Based on the above discussion, several research questions were

developed to investigate in a subsequent study (Study 2). In the next chapter, these research questions are introduced and considered by reporting the results of the subsequent study.

Chapter 5. Study 2: A Practical Report of the Impact of Skype-based Video Chats on Speaking Anxiety and Speaking Skills in Improvisation and Preparatory Groups

5.1 Purpose

In light of the findings of Study 1, a second study was conducted to investigate how practicing English with online English conversations over a relatively short period of time impacted speaking anxiety and speaking ability. Specifically, the aim was to answer the following research questions:

RQ4: Is there a difference in effectiveness in reducing speaking anxiety between two groups of college students proficient in English, when the improvisation and preparatory groups engage in one-on-one online English conversation for a short period? If so, what causes the participants to feel less anxious?

RQ5: Is there a difference in the improvement of speaking skills between two groups of college students proficient in English, when the improvisation and preparatory groups engage in one-on-one online English conversation for a short period? If so, what do participants feel helps them improve their speaking skills?

RQ6: What is the difference in the awareness of short-term one-on-one online English conversation in the improvisation and preparatory groups?

5.2 Method

5.2.1 Participants

A case study was conducted with four male English majors from a national university, from the end of October to the end of November 2018. Participants engaged in 25-minute one-on-one online English conversations twice a week in the researcher's lab, for a total of eight sessions over a month's duration. The four participants were divided into two groups: two improvisational participants (A and B) and two preparatory participants (C and D). All participants were highly proficient in English, but the English proficiency of one participant was particularly high. Specifically, one improvisational participant, A, had a Test of English for International Communication (TOEIC) score in the low 800s; the other three participants' TOEIC scores were in the high 600s. The results of the pre-English-speaking test showed that the improvisational participants had higher scores than the preparatory participants, which could be an interfering variable; however, all participants were highly anxious before the program. They had rarely practiced impromptu exchanges in English in their previous classes and had no experience using one-on-one online English conversation services. Nevertheless, they expressed interest and

willingness to participate in this practice.

Regarding the researcher's relationship with the participants, all four participants were active students in the researcher's university classes on English language teaching methods and aspired to become junior high school English teachers. Therefore, it was believed that engaging in the study would improve their English skills and give them valuable experience in practical training. As the researcher was able to communicate with them in class, they were asked to join the study, thinking that it would be easier to elicit what they were thinking if they were comfortable with the researcher and thus less nervous during the interview. Dates and times for individual sessions were arranged with each participant, and the sessions were conducted in the researcher's lab, outside of class hours. Written consent was obtained from all students for participation and data use in compliance with confidentiality obligations.

Regarding the instructors who engaged in one-on-one online English conversations with the students, a different native English-speaking instructor was assigned each hour. This was due to the nature of online English conversational learning, which involved a last-minute reservation system that made it impossible to assign the same instructor for all eight sessions. However, using a different instructor for each hour also helped to avoid any effects from conducting repeated video calls with the same instructor, such as habituation due to relationship building. As the participants were advanced English speakers, native English-speaking instructors with at least three years of experience teaching advanced English were requested so that participants could receive accurate feedback, including guidance on vocabulary and grammar. The instructors were men and women in their 20s and 30s, from the US, Canada, Australia, and the UK. The same instructors were used for each round of sessions for each of the four students, and the quality and quantity of feedback from the same instructor was controlled.

5.2.2 Procedure 1: Instructional Design for One-on-One Online English Conversation

In this part of the study, one-on-one online English conversations were conducted via the Internet using Skype, a free software. This allows users to easily have a conservation at any place and time over a screen, similar to F2F conversations; notably, the video format allows users to see the instructor's facial expressions, which can help them better understand what the instructor is trying to convey. This format also ensures ample opportunity for speech. Moreover, online video calls take away students' worries about being watched by others during their one-on-one conversations with a native English speaker, which can reduce anxiety. Additionally, Skype has a chat box that the interlocutors can use to enter text to clarify their communications; this facilitates meaning negotiations and can be referred to for post-lesson reviews. Given these features, one-on-one online English conversations over Skype designed to enhance student awareness of exchange and improvisation are expected to increase how much students speak and reduce their speaking anxiety.

The instructional procedures used in this part of the study were based on SLA, which incorporates a combination of effects based on the interaction hypothesis (Long, 1996). Exercise 1 provided (1) students with increased opportunities to produce English outputs. Instructor feedback during this exercise was expected to (2) help students recognize and learn from missing words and expressions, (3) provide corrective feedback, and (4) provide comprehensible input. Furthermore, by re-describing themselves based on the feedback given to them and by interacting with the instructor, students could (5) deepen their understanding and obtain more opportunities to produce output and receive further input and corrective feedback from the instructor. In addition to these elements, the following was expected to occur in Exercise 2: (6) interaction; (7) meaning negotiation; and, in the home-learning situation, (8) awareness through reflective writing.

Tables 5.1 and 5.2 show the procedures for one-on-one online English conversation in the improvised and prepared formats, respectively. Each participant individually came to the researcher's lab twice a week to engage in a 25-minute one-on-one online English conversation with an instructor over Skype, for a total of eight conversations over one month. Tablet terminals were used to make faces visible and to ensure that the instructor in charge was following the procedure. Headphones were not worn so that the researcher could hear both the participants and instructors.

The practical procedures for an impromptu one-on-one online English conversation are described in accordance with Table 5.1. During the warm-up, the researcher reminded the instructor of the flow of the day's task and made sure that the subsequent tasks would run smoothly. The students received a worksheet (Appendix 5) with five or six photos just before the start of the one-on-one online English conversation. In Exercise 1 of Step 1, the students were given 1 minute to understand the photos depicting the sequence of the worksheet and think about what they were going to say. In Step 2, the students worked on a photo description task in which they told a story in about 2.5 minutes. The researcher asked them to give as full a description as possible without stopping, even if the time was either less than 2.5 minutes or slightly more. In Step 3, the students received feedback from their instructors on their descriptions. Specifically, the researcher asked the instructors to give them explicit feedback on their overall impression, grammatical errors, and English expressions. In Step 4, the students performed the same photo description task again with their instructors' feedback in mind. During this step, instructors provided more feedback by interrupting their descriptions of each photo. The researcher thought this would make it easier for the instructors to provide clear feedback on any changes that the students had made. In Step 5, the students worked on another task (Appendix 6), involving looking at two photos on the spot, responding to the instructors' questions about the photos, and engaging in an improvised exchange of ideas in English. After their one-on-one online English conversations, the students were required to write a 150- to 200-word English report on Exercise 1 based on what they had said and their instructors' feedback. They were asked to submit their reports in the next lesson.

Table 5.1

Procedure for One-on-one Online English Conversation by Improvisation Type (n = 2)

Warm-up	Explain the flow from Steps 1–5	1 min
Step 1	Exercise 1: Look at five or six photos and think about a story	1 min
Step 2	Exercise 1: Look at five or six photos and improvise a story	2.5 min
Step 3	Feedback from the instructor	1.5 min
Step 4	Again, look at the photos one by one, improvise a description, and receive feedback from the instructor	10 min
Step 5	Exercise 2: Improvise and answer questions from the instructor about two photos	9 min
Home study	Complete a written reflection about what you said	Within 30 min

The practical procedures for preparatory one-on-one online English conversation are described in accordance with Table 5.2. The preparatory group received worksheets (Appendices 5 and 7) a few days prior to the start of the one-on-one online English conversations, thought about what they would talk about in Exercise 1, and wrote an English sentence of 150–200 words to bring with them to the conversation. Therefore, in Step 1, participants immediately worked on describing photos using the manuscripts they had prepared. In Step 4, the participants again prepared in advance by looking at the assigned worksheet (Appendix 7), which contained two pictures and related questions, and writing their answers in English. During the day's one-on-one online English conversation, the participants responded to questions from their instructors in English while looking at their prepared scripts. After the one-on-one online English conversation, a series of learning cycles were set up in which students were required to add and revise their own English stories based on their instructors' feedback from Exercise 1 and submit them at the next lesson.

The basic flows of the impromptu and the preparatory conversations were the same; however, students in the improvisation group received worksheets (Appendices 5 and 6) with pictures on them just before the start of the one-on-one online English conversation. In Exercise 1 of Step 1, they were only given 1 minute to understand the sequence of the five or six pictures on the worksheet and to think about what they were going to say. In Step 5, participants looked at two photos on the spot (Appendix 6), answered questions from the instructor, and engaged in an impromptu English exchange. After the one-on-one online English conversation, a series of learning cycles were set up: Based on their conversations, the students wrote 150- to 200-word stories in English based on their instructors' feedback on Exercise 1 and submitted them in the next lesson.

Table 5.2.

Procedure for One-on-one Online English Conversation by Preparatory Type (n = 2)

Home study	Write and prepare a draft of your talk at home	Within 30 min
Warm-up	Explain the Skype flow for Steps 1–4	1 min
Step 1	Exercise 1: Based on the manuscript, tell the story by looking at five or six photos	2.5 min
Step 2	Feedback from the instructor	1.5 min
Step 3	Again, look at the photos one by one, describe them, and receive feedback from the instructor	10 min
Step 4	Exercise 2: Based on the manuscript, answer questions from the instructor about the two photos	10 min
Home study	Make additions and corrections to the manuscript	5 min

5.2.3 Procedure 2: Materials for One-on-One Online English Conversation

The worksheets used in the one-on-one online English conversations in the improvised and prepared formats are shown in Appendices 5, 6, and 7, respectively. The materials used in this study were provided by DMM English Conversation Division (2019). These materials were selected because they deal with a series of photographic descriptions similar to the format used in the pre- and post-speaking tests, and because they allow students to interact with English Q&As on the subjects in the photographs. The flow of the eight one-on-one online English conversations was controlled so that the same procedure was followed for all eight sessions. Different photos were used in each hour. To ensure that the level of the subject matter remained consistent across the eight sessions, only advanced materials were used. The improvisation worksheet (Appendix 6) only contained photos and did not include the questions in Step 5. The speaking tasks common to all lessons were clarified to minimize the psychological burden and the other effects of the different tasks.

5.2.4 Data Collection and Analysis 1: Speaking Anxiety Scale and Reflection Sheet

Participants were asked to complete pre- and post-surveys (Motoda, 2000) made up of a modified version of the psychological scale questionnaire for English language learners. This study employed the same anxiety scale as the previous study (see Section 4.2.4 for details on the anxiety scales used in Study 1).

Additionally, students were asked to complete a reflection report at the end of each lesson to determine what may have caused them to feel less anxious during the one-on-one online English conversations. Specifically, students were instructed to reflect on (1) speaking anxiety, (2) feedback from their instructors, (3) what they did and did not accomplish, and (4) what they may be able to improve upon for the next session.

5.2.5 Data Collection and Analysis 2: Speaking Test and Reflection Sheet

Next, a speaking test was administered to the participants using the same pictures as the pre- and post-surveys. The speaking tests were conducted in one-on-one, F2F sessions with the participants. Speaking ability was measured using pre- and post-sample tests that asked participants to describe a picture from a past question from the Grade Pre-1 of the Eiken (Eigokenteikyokai, 2013a) with permission from the Eiken Foundation of Japan. The test was only administered after the participants confirmed that they had not seen it before. Each test consisted of four pictures that were connected in content. The illustrations included six descriptive points (see Appendix 8). Participants were asked to describe the content of each picture in English in as much detail as possible. After a 1-minute planning period, the participants were given 2 minutes to describe the pictures, although participants were allowed to speak for more than 2 minutes. Their descriptions were captured as audio recordings. An example of a speaking test is shown in Appendix 8.

The measurement items adopted the fluency, complexity, and accuracy indices of Iino and Yabuta (2016). Specifically, fluency was measured based on the following five perspectives: (1) the number of six description points in the illustrations mentioned; (2) the number of utterances; (3) utterance time; (4) words per minute (WPM); and (5) a holistic evaluation (Table 5.3) that considered fillers, pauses, repetitions (including correction), and speaking speed, using a five-point scale rated by two raters. Meanwhile, complexity was measured based on the number of (1) clauses and (2) words per sentence, which was calculated by dividing the total number of words by the total number of sentences (a dependent clause was counted as a sentence). Last, accuracy was measured based on (1) the number of correct verb usages (past tense) and (2) the rate of correct verb usage among the predicate verbs in a sentence. Predicate verbs in the past tense were employed because they were included in the guiding sentences of the speaking test question cards, which instructed the speaker to use the past tense to initiate speech, and thus provided a clear indicator.

Table 5.3

Fluency Criteria in the Holistic Evaluation

5	Speaks at an appropriate speed with few unnatural fillers, pauses, or corrections
4	Occasional unnatural fillers, pauses, and corrections, but speaks at an appropriate speed
3	Lots of unnatural fillers, pauses, and corrections, and speaks slowly
2	Many unnatural fillers, pauses, and corrections, and speaks very slowly
1	Only unnatural fillers, pauses, and corrections, and no coherent speech

The holistic assessment of fluency in Table 5.3 modifies and adds to Iino and Yabuta's (2016) framework. Kappa coefficients were obtained to examine the reliability of ratings provided by two university English teachers. The results confirmed a high Kappa coefficient of $k = .81$, which is

considered practically consistent.

As in the speaking anxiety inquiry described in Section 5.2.4, students were asked to complete a reflection report after each lesson to determine what they felt helped them improve their speaking skills during the one-on-one online English conversations. In particular, students were asked to think about (1) feedback from the instructors, (2) their own speaking and listening skills, (3) what they did and did not accomplish, and (4) what skills they may improve going forward.

5.2.6 Data Collection and Analysis 3: Semi-Structured Interview

Additionally, semi-structured interviews were conducted to examine how students felt about the one-on-one English conversations and whether there were differences in attitude between the improvisation and preparatory groups. The semi-structured interviews were conducted in Japanese on a one-on-one basis immediately after the first, third, and eighth one-on-one online English conversations. Each interview lasted 15–30 minutes. The participants were asked about (1) how they felt immediately after the online English conversation, (2) what they did not understand, and (3) the online English conversation task.

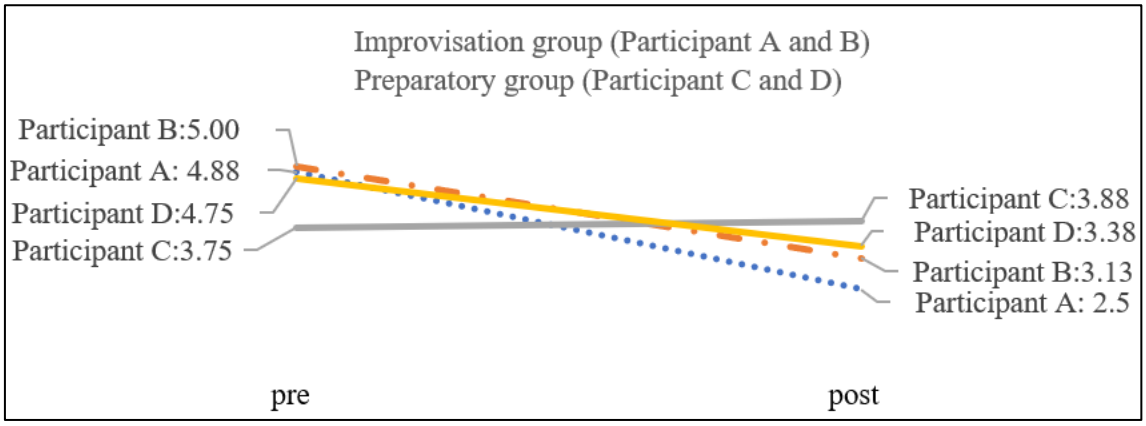
5.3 Results and Discussion

5.3.1 Results and Discussion 1: Speaking Anxiety Scale and Reflection Sheet

This part of the study involved a psychometric scale questionnaire comprised of a modified version of the psychological scale questionnaire for English language learners (Motoda, 2000). It was administered at the end of October and the end of November 2018, before and after one-on-one online English conversations, to analyze changes in participants' speaking anxiety. The pre- and post-test averages are shown in Figure 5.1.

Figure 5.1

Results of Pre- and Post- Questionnaires on Speaking Anxiety (M) for Each Participant



Results of the pre-questionnaire on speaking anxiety for the improvisation and preparatory groups were $M = 4.94$, $SD = 0.06$, and $M = 4.25$, $SD = 0.50$, respectively. The results of the post-questionnaire for the improvisation and preparatory groups were $M = 2.82$, $SD = 0.32$, and $M = 3.63$, $SD = 0.25$, respectively. The speaking anxiety of the improvisational participants greatly reduced after the instruction.

An analysis of the reflection reports revealed how the participants' anxiety levels changed over the sessions. Regarding the first session, improvisational participant A stated, "I felt nervous because it was more difficult to use facial expression changes and gestures than in real life, F2F exchanges." Regarding the third session, A noted, "My level of anxiety decreased through repetition of the online English conversation." Regarding the eighth session, A wrote, "This was the least anxiety I have ever felt." Meanwhile, regarding the first session, improvisational participant B recalled, "I was nervous—mostly because I was communicating with a flesh-and-blood person and because I was aware that I had to improvise." Regarding the third session, B stated, "I got used to it. The instructor laughed a lot, which helped me relax." Regarding the eighth session, B reported, "In a class, I feel anxious because I am compared to others, but with Skype, I feel comfortable because it is individualized and tailored to me." These quotes indicate that the students' anxiety decreased as they experienced more lessons and felt more comfortable with the style of one-on-one instruction that online English conversations can provide. These findings suggest that these students may have become accustomed to improvising in English by repeating related tasks.

However, the speaking anxiety of preparatory participant C did not significantly change after the session. When asked why, C replied, "I have the impression that I am getting less nervous as the session goes on." However, C also stated, "When I was asked about something other than what I had prepared, I got nervous because I said something that didn't make sense in English, and I was confused about what I was saying" and "I felt nervous because I could not understand the instructor's English." C's replies indicate that while the experience of preparing and speaking gave him a sense of security, he was also affected by the natural flow of the conversation, as he was confused by the questions that were asked. However, C's listening ability did not differ greatly from that of the other participants (his TOEIC listening score was 400). This result may have been because C was given an impromptu post-speaking test and then completed a questionnaire even though he had been previously working in a preparatory manner. Meanwhile, as with the improvisational participants, preparatory participant D's anxiety decreased as he gained more experience with one-on-one online English conversations. These results suggest that improvisation may be more effective than preparation in reducing anxiety.

Next, the participants' reflection reports were reviewed to determine what may have helped reduce their anxiety. Participant A said, "I think I got used to it. I knew that I was getting my message across. I had never experienced being understood before, so it is important to experience success. The

instructor praised me." Meanwhile, B reported, "Now that I have experience with improvisation, I feel okay about it, and the anxiety I felt at first is gone" and "When I heard a word I didn't understand—'justifiable'—it sounded like 'just fire ball?' and I had a hard time understanding it, but my instructor typed it into the chat box and helped me." These expressions indicate that the improvisational participants recognized that practicing impromptu speaking successfully reduced their anxiety and that the chat box function provided a scaffolding for them.

However, C commented, "I felt I was affected by the instructor's mood. If the instructor is serious, I might be even more nervous. If the instructor is cheerful, I can have fun" and "I became less anxious about speaking as the sessions went on. The instructor was smiling and praised me a lot, so it was easy to do." For their part, D indicated that the instructor's disposition and praise and their own familiarity with the conversation through repeated practice reduced their anxiety.

These results suggest that repeatedly practicing speaking English in a one-on-one online conversational environment, with no fear of being seen by friends, may reduce anxiety. Particularly, the improvisational interactions allowed the participants to frequently negotiate meaning and enjoy successful exchanges; this increased their confidence and, in turn, significantly reduced their anxiety. However, the reduction in anxiety was not as pronounced in the preparatory group as it was in the improvisation group. Therefore, overall, online English conversations did lower anxiety, but the improvisational type was more effective in reducing nervousness.

5.3.2 Results and Discussion 2: Speaking Test and Reflection Sheet

Table 5.4 shows the results of the English-speaking tests conducted before and after instruction.

Table 5.4

Results of Pre- and Post-English-Speaking Tests for Each Group

		Improvisation group				Preparatory group			
		Participant A		Participant B		Participant C		Participant D	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post
Fluency	Illustration description points (6)	5.00	6.00	4.00	5.00	3.00	4.00	5.00	5.00
	Number of utterances	121.00	199.00	173.00	241.00	99.00	108.00	96.00	81.00
	Utterance time	91.00	111.00	116.00	150.00	79.00	79.00	125.00	95.00
	WPM	79.78	107.56	91.03	96.40	75.19	82.03	46.08	51.16
	Holistic evaluation (5)	3.00	4.00	3.00	4.00	2.00	4.00	2.00	3.00
Complexity	Number of clauses	22.00	28.00	29.00	38.00	11.00	16.00	14.00	10.00
	Word count/sentence	10.08	15.31	11.53	14.18	16.50	13.50	16.00	13.50
Accuracy	Number of correct verb usages (past tense)	10.00	12.00	14.00	27.00	4.00	6.00	4.00	6.00
	Rate of correct verb usage (%)	56.52	40.00	69.70	81.40	41.67	35.29	26.67	46.67

This section discusses the different results and challenges of using improvised and prepared speech in one-on-one online English conversations to strengthen speaking ability. Speaking tests were administered before and after the one-on-one online English conversation to assess changes in speaking ability based on measures of fluency, complexity, and accuracy. These results were interpreted as follows.

With regard to fluency, there was a significant increase in the number of illustration description points, number of utterances, utterance time, WPM, and holistic evaluation scores for all measures of fluency for the improvisational participants. However, while some growth was observed in the results of the fluency index for the preparatory participants, it was not as pronounced as it was for the improvisational participants. Specifically, C's utterance time did not change, and D's number of utterances and utterance time decreased. However, both C and D demonstrated increased WPM, which suggests that they were concise and descriptive, with higher holistic evaluation scores. Ultimately, these results suggest that improvisation may have promoted fluency more than preparation, especially in terms of utterances and utterance time.

To supplement these results and determine what enriched fluency, the participants' reflection reports and excerpt examples of source texts that represent their characteristics were reviewed, with

their individual identification numbers. The participants' verbatim responses were translated into English.

At first, the improvisational participants seemed to be aware of their own issues with speaking English in impromptu situations after the conversations. For example, A stated, "I still feel it's far from natural. As the instructor pointed out, I think the part where I pause is still unnatural." Meanwhile, B reflected, "I am still immature. I can state facts, but I am not yet able to qualify them in detail." Furthermore, after repeated one-on-one online English conversation sessions, A stated, "I decided to try to be more conscious of uttering a lot of sentences rather than being conscious of being accurate," and B said that "The instructor was fluent as expected. The advice came quickly. I would like to be able to speak more concretely." These expressions indicate that the students were motivated by the actions they took to overcome their issues and by their instructors' English, which offered a model of their ideal L2 selves. Regarding the eighth session, A stated, "I was able to use many basic English conversational expressions, using the examples of the instructor's utterances as a guide for what I wanted to say." Meanwhile, B indicated, "When I wanted to add something to my speech, I was able to quickly construct an English sentence." These expressions suggest that A and B were able to gain confidence and a sense of accomplishment through practice. The improvisational participants repeatedly engaged in clarification requests (asking the instructor to repeat themselves more clearly) and comprehension checks (checking whether their own speech and understanding were correct), beginning with the first session. Along these lines, A wrote, "I had to ask for clarification two or three times for words like 'captivity' and 'distinct'" and "check whether my speech was understood correctly by the instructor." B stated, "I had to listen again and again when I didn't understand something the instructor said," and shared that he had to ask, "Did you get that?" These statements suggest that it is highly likely that the frequent meaning negotiations in the interactions facilitated understanding, which is essential for SLA.

Regarding the preparatory participants' reflection reports from the first to fourth sessions, C wrote, "I couldn't ask many questions. I couldn't ask the instructor to repeat themselves and I kept silent." However, by the fifth session, C stated, "I was able to honestly ask back what I did not understand. I could actively ask questions." These entries reveal a change in his attitude toward a positive desire to continue the interaction. Meanwhile, D stated, "At first, I could not tell the instructor that I did not understand and ask a question. I wanted to be able to ask in English." Notably, this statement shows the student's willingness to overcome this challenge. After the sixth session, D reflected, "I no longer really resist asking questions or making requests of the instructor. Now I am able to ask the instructor questions without embarrassment, which is very beneficial." Here, D recognized that he could negotiate meaning and experience a sense of accomplishment. However, the preparatory students had fewer opportunities to negotiate meaning than the improvisational type and made no other fluency-related reflective statements.

All complexity indicators—that is, both the number of clauses and word count per sentence—increased for the improvisational participants. The number of words per clause increased because of the use of subordinate clauses, such as “that,” “while,” “because,” “so,” and “but.” Linguistic facilitation of the uttered sentence structure was observed.

However, D used fewer clauses, and both C and D used fewer words per sentence. The improvisational participants showed growth in all measures of complexity, and the preparatory participants showed an overall decrease in complexity measures, indicating that improvisation also tended to increase speaking complexity. A stated, “I was able to immediately apply the feedback in the next activity. I now feel comfortable enough to use adjectives and prepositions appropriately.” B reported, “The instructor gave me advice on sentence structure and vocabulary.” These expressions suggest that immediate instructor feedback may have facilitated learning and helped the students become aware of missing words and expressions. However, C said, “I didn’t get much feedback on my grammar because I just said the sentences I had prepared beforehand,” while D stated, “I could only speak simple English and could not give details.” As the prepared participants had thought of appropriate expressions before speaking, they may not have had as many opportunities to correct errors as those in the improvisation group.

Regarding accuracy, both groups showed growth in the number of correct past tense verb usages. In the improvisation group, B demonstrated particularly significant growth in this regard, while A’s rate of correct verb usage decreased. An analysis of the test results showed that errors in tense and singular and plural forms were observed, which reduced the percentage of verbs used correctly. The largest increases in the number of word utterances and WPM suggest that a trade-off may have occurred between fluency and accuracy (Skehan, 1996) and that attention was not paid to formality. However, there were several occasions when the student noticed these errors immediately after speaking and corrected himself (e.g., correctly restated the words).

The number of correct past tense verb usages, a measure of accuracy for the preparatory participants, increased slightly, while the rate of correct verb usage for C decreased. As for the improvisational participant A, errors in tense and singular and plural forms were also uncovered by analyzing the results; as above, this may have reduced the percentage of verbs used correctly. Based on these results, the improvisational and preparatory methods did not significantly and differently impact speaking accuracy, but the practice of one-on-one online English conversation itself may have improved accuracy. However, as only eight sessions a month were used in this part of the study, continuing online English conversation over a longer period is likely necessary to improve accuracy.

5.3.3 Results and Discussion 3: Semi-Structured Interview

Finally, one-on-one semi-structured interviews were conducted to examine how participants felt about practicing one-on-one online English conversations and whether there were any differences in

attitudes between the two groups. Below are examples from the verbatim data descriptions that likely represent the differences in the results of the improvisation and preparation methods, with individual identification numbers. Improvisational participant A commented, “I still get stuck at times, but I think my speaking ability will definitely improve by practicing improvisation. It is a waste of time to read a manuscript because I can prepare as much as I want if I write it down. So far, I have not had many opportunities to improvise. I could improvise and talk about what I was thinking more than I thought I would.” Meanwhile, B stated, “In my previous high school classes, when we were told to write a manuscript, I always presented it while looking at the manuscript, so I tended to memorize it and read it aloud. I thought that improvisation would be more instructive, as it is the same as actual communication. It was fun being able to convey my feelings to others through improvised speech.” These expressions make clear that the improvisation group actually experienced impromptu exchanges and felt a related transformation in their English language skills. Participant A also said, “I felt it was okay if I misspoke a little when describing a picture. The instructor corrects me right away. I can restate based on their feedback.” Additionally, B stated, “The instructor’s English was so fast that there were times when I could not completely understand him, but he would smile when I casually skipped over something, and I could manage.” These expressions suggest that the task of freely imagining and telling a story based on the photos led participants to develop a tolerance for ambiguity. This indicates that although the participants had previously felt anxious, the actual practice of improvisation reduced their anxiety. This experience of improving their English language skills may have transformed the participants’ awareness.

However, C, in the preparatory group, said “If I prepare, I will read the manuscript, so I will not be nervous, but I don’t know if my English will improve or not. I think I can improve my speaking ability by practicing improvisation. I might be nervous, though. I think it would be better to do online English conversations without preparation in the future. I think I will grow from the stress I put myself through if I don’t prepare a manuscript. If I prepare, I will see it, and an actual conversation won’t have a manuscript either.” D commented, “Personally speaking, I am glad I prepared. I don’t have a very large English vocabulary, so I cannot express myself right away. I want to put in some vocabulary and knowledge before I do it. But I think my speaking ability will probably improve without the script. I feel like I interact with the instructor more often without the script.” These statements reveal that even the preparatory participants thought that not preparing a script would be more effective in improving their English skills. Specifically, they reflected that when manuscripts are prepared, they are read out loud, even when consciously trying not to look at them as much as possible. This suggests that manuscripts may hinder the development of speaking skills. However, some participants felt that advance preparation was necessary; depending on proficiency, researching vocabulary and thinking about what to say in advance may help reduce speaking anxiety.

5.4 Conclusion and Issues for Further Study

In this study, repeated one-on-one online English conversations between relatively proficient students and English instructors were used to investigate how online conversations impacted speaking anxiety and speaking ability in the improvisation and preparatory groups. This study revealed three main findings:

(a) Speaking anxiety was greatly reduced after improvisation-based instruction and slightly reduced after preparation-based instruction. These results suggest that improvisation can reduce English-speaking anxiety, even when it is only practiced a few times in a short period. All four participants (1) felt that their anxiety had been reduced in part due to the one-on-one exchange that online English conversations can provide; (2) found that the feeling of a safe environment—facilitated, for example, by smiles and compliments from the instructor—enabled them to engage more easily; and (3) became accustomed to the situation by repeating similar tasks. The chat box function worked as a scaffolding that facilitated meaning negotiation. Additionally, improvisation proved to give the students more opportunities to negotiate meaning and successfully communicate with the instructor in English, which boosted their confidence and significantly reduced their anxiety.

(b) Speaking ability greatly improved through improvisation-based instruction. Significant growth was observed in all measures of fluency, suggesting that improvisation may have further promoted fluency. However, while some growth was observed in fluency among the prepared participants, it was not as pronounced as it was among the improvisational participants. Meanwhile, all complexity indicators increased among improvisational participants; however, these indicators also partially decreased among preparatory participants, indicating that improvisation increased speaking complexity. There was little difference in accuracy between the improvisational and preparatory groups; accordingly, more prolonged online English conversations may be necessary to improve accuracy.

Regarding the reasons, the participants felt their speaking abilities had improved and indicated that the experience of speaking extemporaneously made them more aware of their own issues and motivated them to actively overcome them and use the instructor's spoken English as a model for their ideal L2 selves. They also felt that they experienced a sense of confidence and accomplishment, and that frequent semantic negotiation and the promotion of semantic understanding helped them improve their speaking abilities. Furthermore, the results indicated that immediate feedback from instructors may have facilitated learning and helped participants become aware of missing words and expressions. Meanwhile, there were indications that the preparatory group developed a positive attitude, a willingness to overcome challenges, a better ability to negotiate meaning, and a sense of accomplishment; however, compared to the

improvisation group, the preparatory group had fewer opportunities to negotiate meaning and there were no other written comments or reflections on fluency. Additionally, as the participants had thought about appropriate expressions beforehand, they may not have been corrected as frequently as if they were improvising, suggesting that one-on-one online English conversations—and impromptu conversations in particular—can improve speaking skills, even when conducted only a few times over a short period and a small number of times. Therefore, in educational settings where opportunities for impromptu English communication are rare, practicing impromptu speech in a one-on-one online English conversation environment may help students gain successful experiences in communicating in English with others and may help activate their English skills.

(c) Regarding any differences in awareness between the improvisation and preparatory groups, participants in the improvisation group had previously been anxious about speaking without preparation, but their anxiety was reduced by actually practicing improvisation. It was also suggested that experiencing an improvement in their own English ability may change a participants' awareness of improvised speaking. The prepared participants felt that if they created a draft of what they wanted to say in advance, even if they tried to avoid looking at it as much as possible, they would become dependent on the draft, which would hinder the activation of their English skills. Furthermore, both improvisational and preparatory participants believed that practicing English by engaging in an improvised conversation improved their speaking abilities more than speaking with a prepared manuscript because improvisation provided them with more opportunities to negotiate meaning. These results are consistent with the previously mentioned results that anxiety can be alleviated by enabling students to participate in moderately risky activities and to endure ambiguity in a relatively relaxing environment (Oxford, 1999); taken together, these findings suggest that practicing extemporaneous speech in a one-on-one online English-speaking environment may reduce anxiety. These findings are significant: to date, few studies have actually attempted to demonstrate language development and psychological change using SCMC with one-on-one online English conversations across preparatory and improvisation groups.

This study had three main limitations:

(a) This was a case study in which four participants, two improvisational and two preparatory, were individually invited to a laboratory outside of class for short one-on-one online English conversations over a month. As this study involved very few participants over a short period of time and statistical significance was not confirmed, caution should be exercised in generalizing the results.

(b) It is necessary to minimize the impact of differences in the speaking ability and anxiety of the

participants in the two groups on the results. The four participants had high levels of English proficiency, especially A (who had the highest TOEIC score). Notably, the improvisational group scored higher than the preparatory group in the pre-test; therefore, the relationship between the participants' English proficiency levels across the two groups is not clear. The strategy employed in this study may only be effective for learners with relatively strong English skills. Future research should control for both groups of participants in advance to see the benefit of targeting a diverse learning population, including both high- and low- proficiency English learners.

(c) Additionally, this study only examined how speaking anxiety and ability differed across different instructional methods involving one-on-one online English conversation and did not examine the content of utterances during the eight instructional sessions. The quality and quantity of instructor feedback may have affected the results because, as described above, it was difficult to use the same native English-speaking instructor every hour. Future research should analyze the participants' actual speech exchanges and changes in the quantity and quality of their speech to determine what kind of feedback and interactions impact speaking anxiety and ability.

Despite these limitations, the results suggest that English-speaking activities focused on exchange and improvisation may reduce students' speaking anxiety and improve their speaking ability. While the study suggested that improvisational exchanges may initially feel difficult and anxiety-provoking to students, repeated practice using the unique and positive environment of one-on-one online English conversations may help students overcome their anxiety and become more confident with speaking in impromptu exchanges. It is necessary to continue conducting qualitative research on one-on-one online English conversations to clarify the effectiveness of specific instructor feedback, especially regarding how participants act and feel during these sessions.

The next chapter outlines a third study, Study 3, which was inspired by research questions derived from considering the above discussion.

Chapter 6. Study 3: Transforming Speaking Anxiety and Enhancing Speaking Skills Among Learners With Poor English Proficiency Through a Skype-Based Video Chat

6.1 Purpose

Given the findings of Study 2, a third study was designed to qualitatively examine how interaction and feedback in short-term online English conversations may impact the speaking anxiety and ability of a beginner English learner with poor English proficiency. Specifically, this study examined how a learner's awareness and attitudes transformed when the learner felt speaking anxiety, and what helped reduce this anxiety.

As multiple information sources should be secured for case studies (Cresswell, 1998), this study also investigated the expansion of the subject's speaking ability. The study's purpose was to gain a

deep understanding of the detailed psychological changes of an individual learner. Although quantitative research reveals overall tendencies, it cannot reveal the learner's thoughts. Accordingly, a quantitative analysis of the instructors' feedback and the participant's reflections and videos was conducted to determine the participant's affective aspects and speaking abilities. Uncovering the detailed psychological changes that result from one-on-one online English conversations may clarify high learner speaking anxiety and what may reduce this anxiety. Thus, both qualitative and quantitative approaches were employed in this study. The quantitative analysis results were supplemented by a qualitative analysis of the one-on-one online English conversations to glean further insights. More specifically, the following research questions were investigated:

RQ7: Does engaging in one-on-one online English conversations impact the speaking anxiety of a university student who has difficulty with English?

RQ8: Does engaging in one-on-one online English conversations impact the speaking ability of a university student who has difficulty with English? Will the student retain these skills after a one-on-one online English conversation?

RQ9: When does the participant experience speaking anxiety? What helps reduce speaking anxiety and improve speaking ability?

RQ10: How are attitudes and awareness of speaking transformed through one-on-one online English conversation?

6.2 Method

6.2.1 Participant

A case study was conducted with one female student who was not majoring in English at a national university in Japan, from the end of November to mid-December 2019. This student had low English proficiency; she had a TOEIC score of 295 points and thus was qualified as a beginner based on Ishikawa and Ishikawa's (2008) classification (they situate beginner scores as ranging from 5–495 points). The participant had no experience with improvised interactions in English, one-on-one online English conversations, or studying abroad. She attended the researcher's English class once a week but did not otherwise study English. In a pre-study interview, she said, "In the classes I've taken so far, I have never communicated my thoughts or given presentations. I'm not good at those things. I have no experience in speaking in English in an improvised manner. I know what I want to say in Japanese, but I cannot say it in English. When I try, I get stuck—so I don't like it. I feel anxious because words and grammar don't come out smoothly."

The participant was completing the basic education program at the researcher's university and hoped to become an elementary school teacher. Despite her low English proficiency, she understood that she needed to learn English because it is now taught in elementary schools. For this study, she was asked to engage in one-on-one online English conversations with Filipino instructors. It was expected that practicing her English skills in this way would alleviate her speaking anxiety, improve her English ability, and serve as valuable practical training for her future career as a teacher. As the researcher and participant were able to communicate in class, she was not expected to be nervous or have difficulty telling the researcher her thoughts during the interview part of the study. The student was asked to cooperate and gave written consent for participation and data use in compliance with confidentiality obligations.

A different instructor was designated for every one-on-one online English conversation session. Based on the time zone, Filipino instructors were hired. All instructors were female. The instructors were all in their 20s with more than three years of experience in teaching English to beginners. To standardize the quality and amount of feedback from each instructor, the instructors were asked to proactively highlight any mistakes in vocabulary or grammar and to give pertinent feedback. It was ensured that the conversations were conducted under the same circumstances by specifying their contents, procedures, and durations to the instructors in advance.

6.2.2 Procedures: Instructional Design for One-on-One Online English Conversation

This was a follow-up study to Study 2; specifically, it sought to measure whether the effect of the teaching design varied based on the proficiency level of the student (where Study 2 targeted learners with advanced skills, this study engaged a beginner). As such, this study employed the same procedures and materials as Study 2 (detailed above in Sections 5.2.2 and 5.2.3). All the teaching materials used were of the same level to ensure that the sessions did not vary in difficulty. Although the student was a beginner, the materials were deemed appropriate because the stories would be accompanied by picture hints and the content would be spoken to the other person. The speaking tasks were common to all lessons, and tried to minimize the psychological burden resulting from the different tasks.

6.2.3 Data Collection and Analysis 1: Speaking Anxiety Scale

This study observed the events that occurred during the one-on-one online English conversation to investigate the changes in the participant's emotions and English proficiency after the sessions. Specifically, data were collected and analyzed from speaking tests, questionnaires, field notes, recorded videos, and semi-structured interviews. Although this study targeted one beginner learner with low English proficiency, according to the interest-correlation-based selection of the structural-construction research method (Saijo, 2007), it is possible to extend the tools that comprise the research

(e.g., fieldwork, subjects, and techniques), all of which can be chosen according to the researcher's interests, and the research value can be secured even with a small sample size. To measure the effects of the practice from multiple angles and increase the study's reliability, five data items were collected and quantitative and qualitative methods were used.

The participant was asked to complete pre- and post-surveys that consisted of a modified version of Motoda's (2000) psychological scale questionnaire for English language learners. This study employed the same anxiety scale as the previous study (described in Section 4.2.4).

6.2.4 Data Collection and Analysis 2: Speaking Tests

The speaking tests aimed to measure changes in the participant's English proficiency. A total of three tests were conducted: one in November before the practice, one in December after the practice, and another two months later in February to investigate to what extent the change was maintained. Speaking tests were conducted with the participant F2F. To measure speaking ability, authorization was obtained to use sample questions from Japan's Grade 2 Eiken (Eigokenteikyokai, 2013b) in pre-, post-, and delayed tests, which were administered after confirming that the participant was seeing these questions for the first time. All tests included three related illustrations, and the illustrations included five description points (see Appendix 9). The participant was asked to explain the content of each illustration in English in detail. She was given 1 minute of planning time and 2 minutes to provide a description. The audio of her description was recorded. Sometimes, she was allowed to talk for more than 2 minutes. An example of a speaking test assignment is shown in Appendix 9.

Iino and Yabuta's (2016) indicators of fluency, complexity, and accuracy were adopted as measurement items. A modified version of their indicators was also used to conduct a holistic evaluation of fluency. As previously stated, the evaluation was rated by two English professors, and the reliability of their work was confirmed by a high Kappa coefficient, which reflected an exact match with $k = 1$. This study employed the same speaking test scales as Study 2 (Section 5.2.5 details the speaking test scales).

6.2.5 Data Collection and Analysis 3: Semi-Structured Interview

Immediately after every one-on-one online English conversation, a one-on-one interview was conducted with the participant for approximately 15 minutes. The interview was semi-structured to ensure that the participant's discussion was relevant to the research purpose. The interviews were recorded with the participant's consent. During the interview, the participant was asked the following five questions to investigate changes in her consciousness: (1) How did you feel about the video call? (2) Did you feel anxious? (3) Did you notice anything new? (4) If you felt anxious, in which moment(s) did you feel like that? (5) If you did not feel anxious, why not?

The word-for-word transcriptions of these interview recordings were repeatedly read, and elements

were extracted related to consciousness, noticing, and speaking anxiety. Then, the data were segmented by meaning blocks before coding analysis worksheets with names that explained these blocks. In examining the data, care was taken not to make any biased interpretations. To increase the reliability of the raters (Guest et al., 2012), the data and codes were reviewed again two months later, and the suitability of the codes attached to the data was repeatedly confirmed. The results of the data analysis were presented to the participant to confirm that the interpretations were appropriate.

6.2.6 Data Collection and Analysis 4: Field Notes

Referencing I. Sato (2008), different aspects of the participant's one-on-one online English conversations were recorded in field notes, such as the date of each conversation, negotiation of meaning and feedback from instructors, the participant's response method and state, and the questions the participant had asked. The exact times of these observations were also noted. An inductive approach was used for analysis, and the field notes and coded points of interest related to changes in the learner's attitude were reread. After each conversation, the recorded data were checked, and anything that the researcher had been unable to write during the practice was added to use in the subsequent analysis of the video recording of the conversation, as described below.

6.2.7 Data Collection and Analysis 5: Video Recordings

The contents of all the one-on-one online English conversations between the instructors and the participant were recorded with a video camera and an integrated circuit (IC) recorder. All utterances from the video recordings and voice data were transcribed, and interactions and learning that occurred were examined. This study also analyzed changes in the learner's attitude by focusing on situations in which the participant could not understand the instructor and those in which incomprehensible inputs were changed into comprehensible inputs.

Immediately after each interview, a stimulated recall method was implemented in which the participant and the researcher watched the recordings of her one-on-one online English conversations for approximately 30 minutes, and the participant was asked about her state of mind. Based on the content described in the field notes, the focus was on moments during the conversations when the participant stayed silent for a long time, when she used fillers, when the instructor gave feedback, and when meaning was negotiated. In so doing, this study analyzed what kind of corrective feedback enabled learning and what helped reduce the participant's anxiety. All the exchanges were video recorded with an IC recorder with the participant's consent.

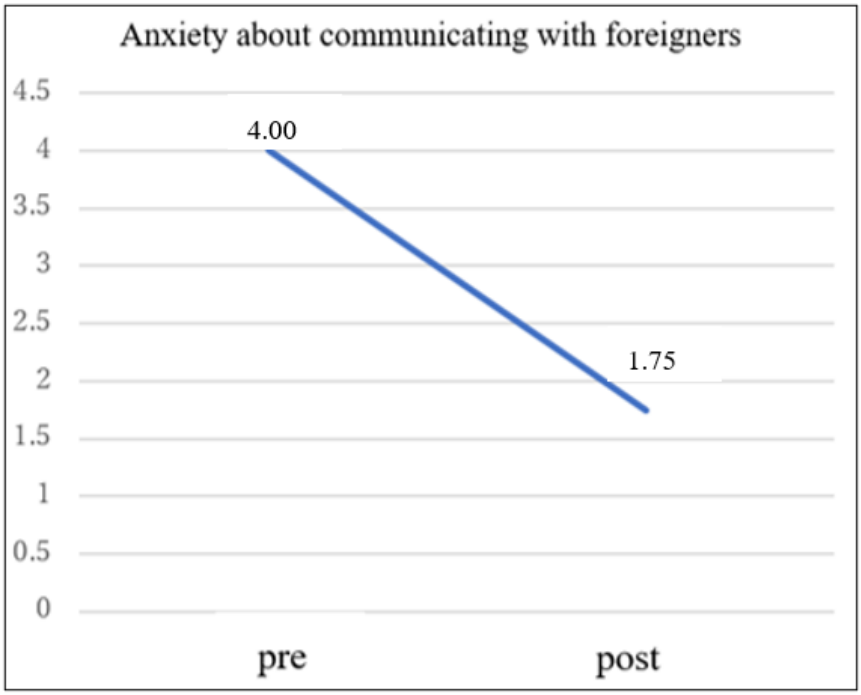
6.3 Results and Discussion

6.3.1 Results and Discussion 1: Speaking Anxiety Scale

The participant completed five-point psychological scale questionnaires at the end of November and in the middle of December 2019, before and after engaging in one-on-one online English conversations to analyze changes in her speaking anxiety. The average results from the scale comprising eight items of "anxiety about communicating with foreigners" are presented in Figure 6.1. The pre-questionnaire result for speaking anxiety was 4.00 points, and the post-questionnaire result was 1.75 points. Before the conversation, speaking anxiety was particularly high; after the conversation, it was much lower. These results suggest that improvisational one-on-one online English conversations may reduce speaking anxiety in beginner learners with low English proficiency.

Figure 6.1

Results of Pre- and Post-Speaking Anxiety



6.3.2 Results and Discussion 2: Speaking Test

Speaking tests were conducted before and after one-on-one online English conversations and two months after the sessions ended. Changes in speaking ability were evaluated in terms of fluency, complexity, and accuracy (Table 6.1).

Compared with the pre-test, a significant growth in fluency was observed in the post-test in terms of the number of description points, the number of utterances, WPM, and the holistic evaluation indicators. Utterance time was shorter in the post-test; however, the WPM results showed that the

participant spoke more concisely in the post-test. Regarding complexity, only a few short English sentences were uttered in the pre-test; however, the use of "while," "so," "and," and "but" increased in the post-test, and linguistic progression was observed in the structure of the uttered sentences. Meanwhile, all indicators showed an increase in accuracy in the post-test; notably, the participant used the past tense more appropriately and accurately in the post-test.

Regarding the delayed test, WPM and the holistic evaluation of fluency improved compared with the post-test, and the participant spoke at an appropriate speed during the delayed test. Complexity decreased slightly but not significantly. Meanwhile, accuracy improved slightly, and its aspects were maintained after the post-test. While the fact that the participant was repeating the same test may have impacted the results, the findings nonetheless suggest that even eight one-on-one online English conversations in one month may help a student improve and maintain her speaking ability.

Table 6.1

Results of Pre-, Post-, and Delayed English-Speaking Tests

		Pre	Post	Delayed
Fluency	Illustration description points (5)	2.00	5.00	5.00
	Number of utterances	40.00	85.00	69.00
	Utterance time	177.00	146.00	85.00
	WPM	13.56	34.93	48.71
Complexity	Holistic evaluation (5)	2.00	3.00	4.00
	Number of clauses	6.00	11.00	10.00
	Word count/sentence	8.00	17.00	13.80
Accuracy	Number of correct verb usages (past tense)	3.00	8.00	8.00
	Rate of correct verb usage (%)	50.00	66.67	80.00

6.3.3 Results and Discussion 3: Semi-structured Interview

To complement the results of the speaking test and questionnaire and determine how the participant felt during the one-on-one online English conversation, codes related to consciousness, anxiety, and noticing were assigned to the descriptions in the verbatim transcriptions of the semi-structured interviews. Table 6.2 summarizes the analysis worksheet on the process of the transformation in the participant's awareness, and Figure 6.2 shows the relationships between several categories of superordinate concepts. The participant's verbatim responses were translated into English.

Table 6.2

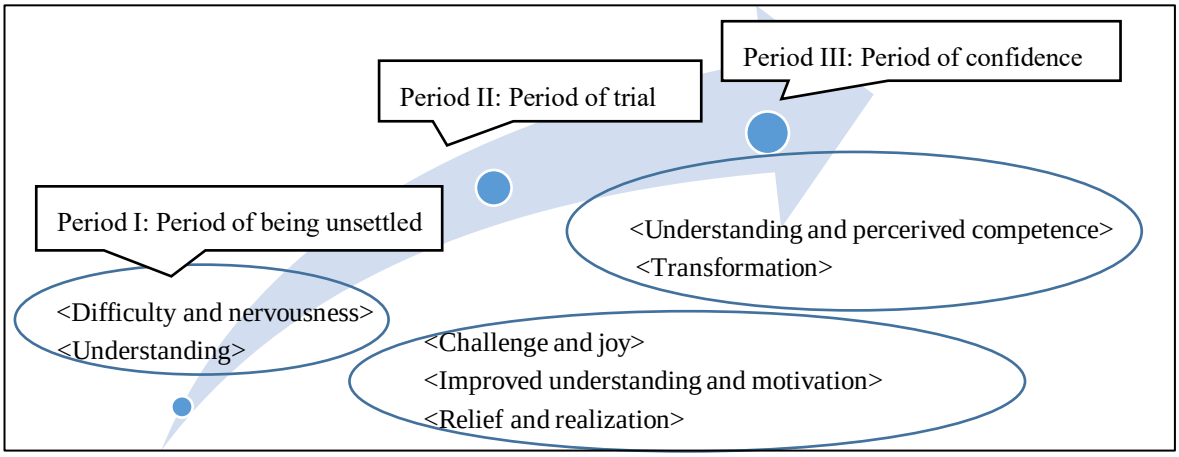
Free-Spoken Impressions

Session	Participant's verbatim responses	Code	Definition (description)
1st	・I thought it was difficult because I could see in her facial expressions that I wasn't able to express what I wanted to say…. I knew what I wanted to say in Japanese, but I couldn't say it smoothly in English, so I got nervous.	Difficulty and nervousness	State of being nervous because I couldn't say what I wanted to say in English
2nd	・I received great advice that was accurate and easy to understand …. She pointed out words in the sentences I said, …and I often thought, "Yes, that's right." Instead of a long, written explanation, she said, "That means something different," etc., and it was easy to correct my mistakes and to understand what was going on.	Understanding	State of being able to comprehend and receiving concise, easy-to-understand instructor feedback
3rd	・It was difficult. Somehow, I forgot the word "factory" and was thinking of a more difficult word for it. So, when I heard the word "factory," I thought, "Yes, that's right." There were quite a few situations like that.	Difficulty	State of being stuck because I couldn't immediately say an English word that I already knew
4th	・It was fun. Even if there were things I didn't understand and I skipped, …I was glad that I could ask a question for the first time. I managed to express myself in English more than before, and when the instructor understood and responded, I felt happy….	Challenges and joy	I felt happy because I was able to ask a question and joyful about speaking in English
5th	・The instructor responded in an easy-to-understand manner, but I spent a long time listening to the instructor, and I wanted to speak more myself.	Improving understanding and motivation	State of increasing understanding and a desire to talk
6th	・When I see the text in the chat box and hear it, I can have a conversation while understanding the other person…. I was relieved that I could see the text, and it was easy to understand because the instructor used	Relief and realization	State of relief because I understand the instructor's English and realize that I can ask questions

	simple expressions. I realized I could ask the instructor about what I didn't understand.		
7th	・I understood the story itself and was able to ask a lot of questions about what I didn't understand.	Understanding and perceived competence	State of increasing understanding and self-efficacy
8th	・I was told to describe my emotions and, this time, I could say "excited," "sad," etc. Compared to when I started, I was able to better express myself. I also feel that my listening ability has improved. If I didn't know a word but could hear its sound, I could ask the teacher. Sometimes I could understand the general idea by listening until the end….	Transformation	State of feeling accomplished and like my ability to speak English has improved

Figure 6.2

Awareness Transformation Process



The participant's attitude clearly changed over the sessions. Initially, she was unsettled because she felt her English ability was lacking. However, as she completed more one-on-one online English conversations, her understanding and self-confidence grew as a result of opportunities for hypothesis testing and her instructors' feedback, which helped her eventually feel comfortable asking questions.

Table 6.3 presents an analysis of the factors contributing to the participant's anxiety and her transformation. Meanwhile, Figure 6.3 shows the relationships between these factors. Based on these results, the factors that affected the participant's anxiety are discussed below.

Table 6.3

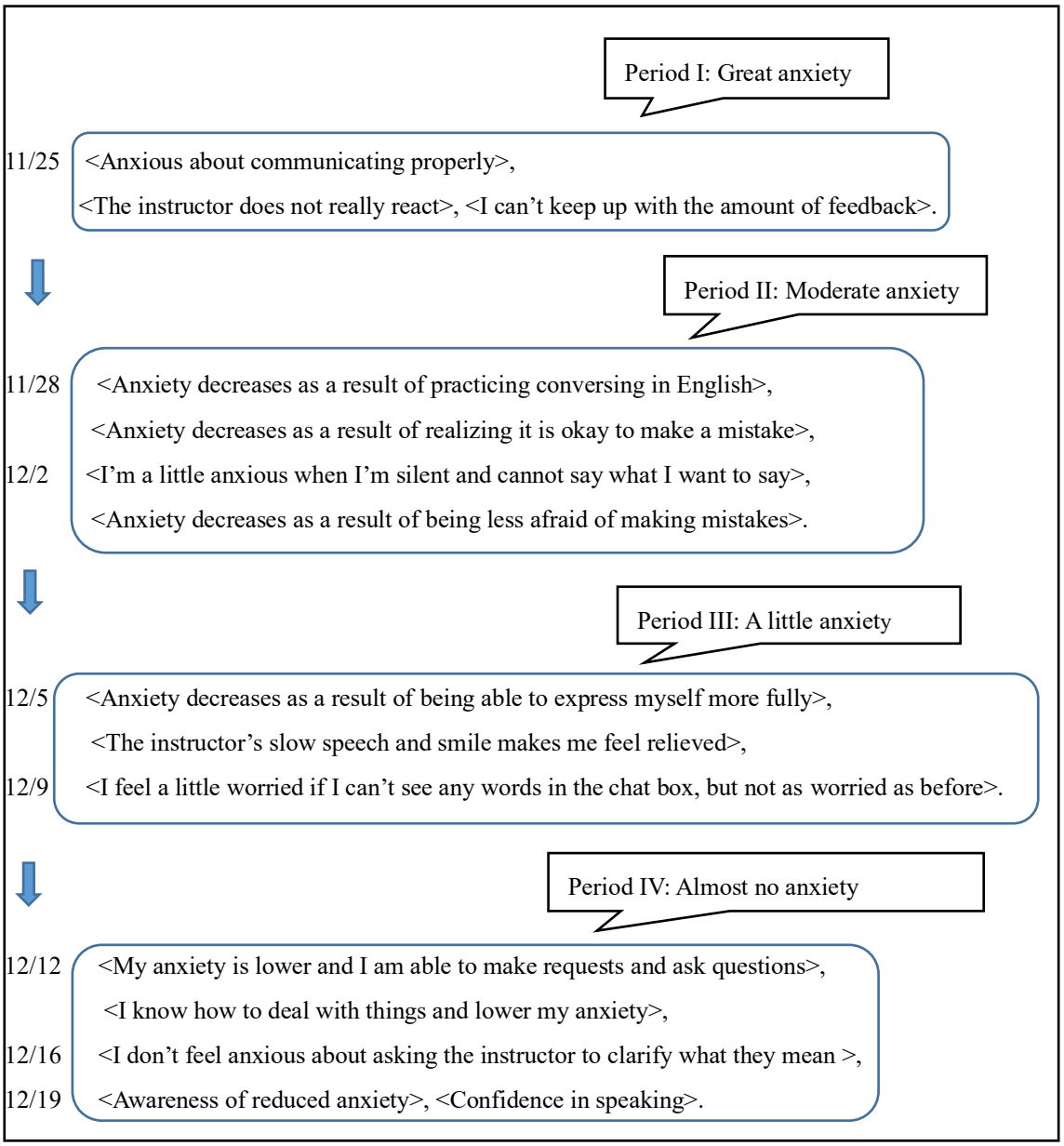
Factors of Anxiety and the Participant's Transformation Process

Session	Participant's verbatim responses	Code
1st	・There was something I wanted to say, but I felt frustrated about not being able to say it. I felt anxious about whether I was communicating properly and whether I was saying something strange [since] the instructor did not really react…. Sometimes, I didn't understand things along the way, and I got really nervous because the conversation continued quickly.	・Anxious about whether I am expressing myself ・Instructor's reaction ・Nervous when receiving a lot of feedback
2nd	・I'm less anxious than before. This was my second time, so I was a little more used to talking to a foreigner. Additionally, if I said something wrong, my instructor would correct me. This made me less anxious about saying something, which made me willing to try saying a lot of different things.	・Anxiety was reduced by practicing impromptu English conversation ・Developing a sense of security from realizing that mistakes are acceptable
3rd	・I felt a little anxious when the instructor said "So?" because I didn't know what to say, but I didn't feel anxious about speaking. At first, I was worried about mistakes, but this time I think I was able to speak without much concern.	・Feeling anxious when I cannot say what I want to ・Reducing anxiety by reducing fear of mistakes
4th	・My anxiety is gradually decreasing because of the expressions I can use and because I can use what I have learned so far. I was relieved that the instructor spoke slowly and with a smile.	・Reducing anxiety as more expressions are acquired ・Relief that the instructor speaks slowly
5th	・I didn't feel very anxious. My previous teachers had written things down in the chat box, which made the exchange easier. When I didn't see any words in the chat box, I got overwhelmed about speaking and felt a little anxious.	・I felt anxious when I could not see the words in the chat box, but not as anxious as before.
6th	As I became less anxious, I wanted to make requests and ask questions.…I thought I should go at my own pace [and] convey what I was thinking even if I couldn't find the words I wanted.	・Lower anxiety, a willingness to make requests, and an ability to deal with things I can't say
7th	・I was nervous when I asked the first question, but once I asked, …everything was okay. Regardless of whether I can do	・Not anxious about making a clarification

	it or not, …I know that if I get stuck, I just have to ask questions.	request
8th	・Compared to the first session, I'm no longer worried about speaking. Even if I talk with a foreigner in the future, I think I'll be able to talk without being nervous …. From now on, I will be able to use "How can I say...?" fillers. Up until now, it was hard for me to say what I wanted to say, but now I can.	・Awareness of reduced anxiety ・Confidence about speaking

Figure 6.3

Factors of Anxiety and the Participant's Transformation Process



The results of Table 6.3 and Figure 6.3 clarify the factors impacting the participant's anxiety. Specifically, anxiety was produced by factors related to the learner, such as not being able to say what she wanted to say or staying silent, and factors related to the instructor that impaired the participant's understanding, such as weak reactions and only giving oral feedback.

As the student became used to repeated communication, short and corrective feedback, slow speech, a friendly atmosphere, and chat box text, her anxiety decreased. As suggested above, the student's reduced anxiety may be related to the increased confidence she developed as a result of feeling that her English abilities were improving; notably, this helped her feel comfortable asking questions and solving problems.

Table 6.4 presents the analysis of noticing. The relationship of each generated code was examined, common codes were correlated, and categories were created. Under each category, subcategories were set as subordinate concepts. Finally, the categories shown in Figure 6.4 were generated.

Table 6.4

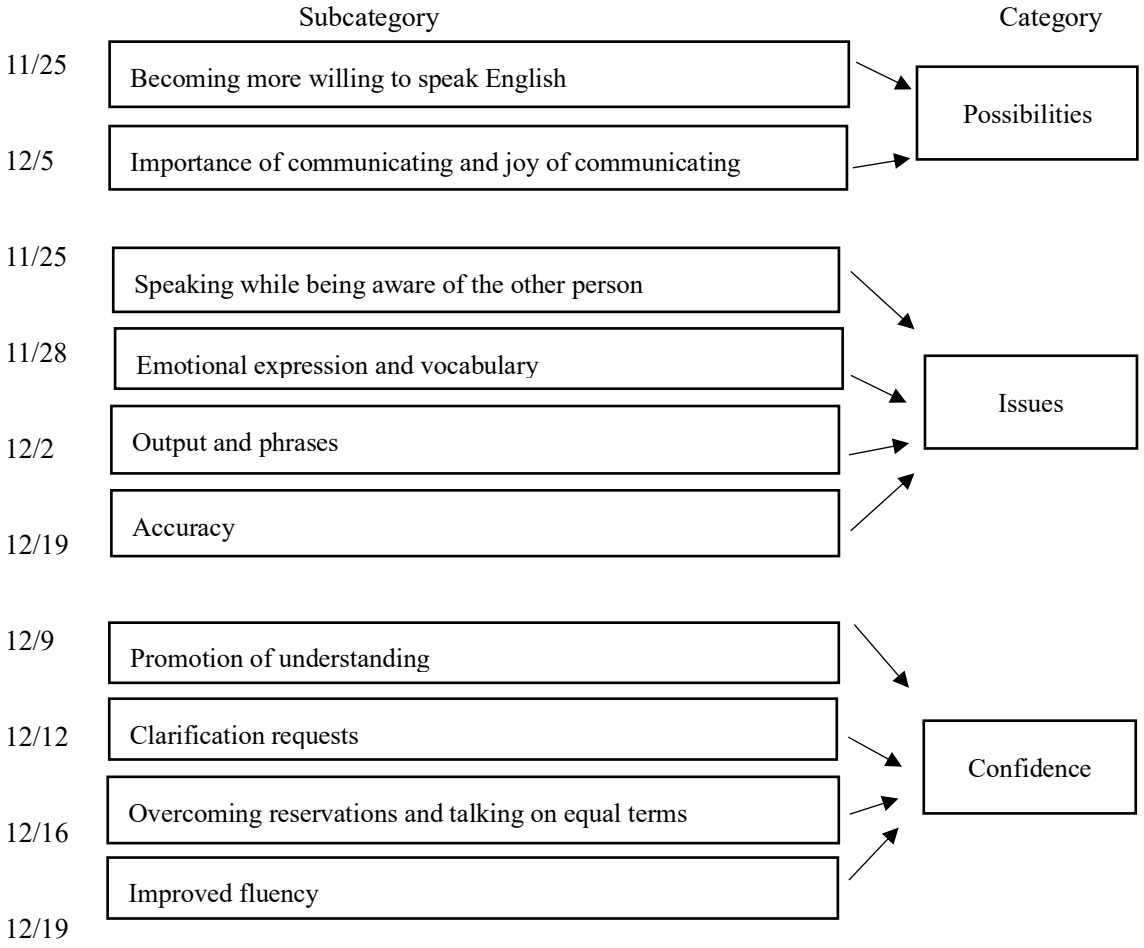
Noticing

Session	Participant's verbatim responses	Code	Definition (description)
1st	・Before, I thought that I wasn't good at speaking English and couldn't do it at all, but now that I have tried, I don't think it's impossible. It was difficult to speak, but I was able to listen and understand. In a video call, it is harder to hear the other person than when talking F2F, so I had to speak clearly even when I didn't know what to say.	・Becoming more willing to speak English ・Speaking while being aware of the other person	・Realizing that listening to and understanding English may strengthen speaking ability ・Understanding the differences between F2F and video calls
2nd	・I was told that I should talk about emotions,… and I didn't think I would be able to…. I didn't have a large enough vocabulary. But I still tried to do my best.	・Issues with vocabulary and expression	・Recognizing a lack of vocabulary and desiring to overcome problems
3rd	・I could listen and comprehend, but I was not sure about how to express [myself] in English. Given the phrase, "He got sick," I could understand "sick," but I couldn't use the word "got," so I couldn't say the phrase smoothly. I [realized] phrases are important.	・Difficulty with output ・Importance of phrases	・Noticing differences in understanding by listening and speaking ・Recognizing the importance of phrases
4th	・I thought it was important to use gestures and words and try to say something. Each time the	・Importance of	・Realizing the importance of gestures

	instructor told me “OK” or “that’s correct,” I was so happy that I was able to make sentences by myself. So far, there have been a lot of things that I have to improve, but I was happy that what I said was correct.	communication and joy at the ability to communicate	and words ・Happy about ability to communicate in English and receiving praise
5th	・Sometimes, I didn’t understand some words, but the conversation still continued. While listening, I finally understood what I wanted to say.	・Promotion of understanding	・Ability to grasp the outline and tolerate ambiguity
6th	・I got the courage to say what I want. I became able to ask, “How can I say it?” and, “Please type it and read it out loud.” It’s easy to say these things because I know the fixed expressions and various ways to say them, and I’ve come to be able to say them.	・Clarification requests	・Becoming able to ask questions and make requests ・Ability to use connective language
7th	・At the beginning, I was overwhelmed by talking to foreigners, and I didn’t feel like I was talking on equal terms. I got nervous about the other person’s pace, so if I didn’t understand, I didn’t say anything. However, this time, I was able to speak on equal terms and was no longer nervous to ask questions.	・Changing from being reserved ・Talking on equal terms	・Ability to talk at my own pace and ask questions about things I do not understand
8th	・I was able to use fillers several times. When I was silent and thinking about how to say something, I felt that my silence was getting longer and I had to say something, so I used them. I could express my emotions and say things in a unified way in the past tense; I was able to do this because I was careful,… [but] it was strange that, for some parts, the order of the words was reversed, like “suffering more” and “more suffering,” or “excited” and “exciting.”	・Improved fluency ・Accuracy issues	・Becoming able to speak while being aware of connective language, emotional expressions, and verb tenses ・Accuracy decreased due to this trade-off

Figure 6.4

Noticing Categorization Process



The results of Table 6.4 and Figure 6.4 demonstrate that the participant noticed that she was transforming with the one-on-one online English conversation experience. When trying to speak spontaneously in her first one-on-one online English conversation, she understood that she had underestimated her English proficiency but still realized that she had the potential to learn to communicate in English. Repeated one-on-one online English conversations offered her opportunities to increase her comprehensible output and to engage in hypothesis testing, and when she realized that she had problems with her vocabulary and output, she became motivated to overcome them. Citing Schmidt's "noticing the gap," Swain (1995) explained that when a speaker realizes that they cannot say what they want to in a target language, they will try to acquire new language knowledge by focusing on relevant inputs. In the latter sessions, the student negotiated meaning more frequently, which promoted her understanding, increased her confidence, and gave her a sense of accomplishment. Learners should consciously think about grammar rules through output (Swain, 1995); this gives her more opportunities to use grammar items, such as the past tense. By doing so, learners can develop

the skills necessary to use grammar items automatically and instantaneously (De Bot, 1996). Notably, successfully using these items will enhance their self-confidence.

6.3.4 Results and Discussion 4: Field Notes and Video Recordings

To determine what factors reduced the student's anxiety and improved her speaking ability, the researcher extracted and analyzed elements from the field notes and recorded data that indicated changes in the participant's attitude. An analysis of the stimulated recall revealed which corrective feedback resulted in learning, what factors reduced her anxiety, and how she became capable of making requests to the instructors. Excerpts 1 to 3 reveal changes in the participant's attitude. In the first one-on-one online English conversation (Excerpt 1; T=instructor; S=participant), she could not speak successfully when she did not understand what was going on and was unable to ask questions. By the fourth one-on-one online English conversation (Excerpt 2), she was able to say words she did not understand in Turn 2 and, later in that session (Turn 2 of Excerpt 3), she was able to make a clarification request. Consequently, input correction, which affects SLA, occurred in the next exchange with the instructor (Turn 3 of Excerpt 3). With such correction, inputs closer to learner proficiency can help language development (Long, 2015).

Excerpt 1: Implementation 11/25 (Step 3), video: 14 minutes 3 seconds

1 T: Did you get it?
2 S: Okay. (Responding with a smile while tilting her head to one side)
3 T: Do you have any questions?
4 S: Hmm. (In Japanese)
5 T: Any questions?
6 S: No.

Excerpt 2: Implementation 12/5 (Step 4), video: 28 minutes 12 seconds

1 T: Do you have any questions?
2 S: Hmm? (In Japanese) What…I can't understand "suffering".
3 T: Okay. "Suffering" is like you experience a bad situation. In this case, financial loss.

Excerpt 3: Implementation 12/5 (Step 5), video: 33 minutes 15 seconds

1 T: How are the people in the pictures cultivating vegetables?
2 S: Can you repeat that?
3 T: How do they prepare to grow vegetables? What does he do?
4 S: He has a vegetable. He is planting the vegetables.

These excerpts highlight that the participant's attitude changed with repeated one-on-one online English conversations. Specifically, the participant was initially relatively passive but became able to ask questions, make repetitive requests, and answer in two sentences instead of one. Additionally, she also seemed to become willing to try to have a conversation and develop a positive attitude toward speaking English. The participant described her feelings regarding this change as follows:

> The atmosphere made it easy to ask questions, and it was the fourth time, so I thought I'd try to ask about the things that I couldn't do before…rather than being totally passive. I'm no longer reluctant to speak by myself.

Thus, repeatedly engaging in one-on-one online English conversations alleviated the participant's anxiety, encouraged her to engage in the exchange more actively, and gave her the confidence to ask questions.

In the fifth one-on-one online English conversation (Excerpt 4), the participant asked the instructor to repeat the questions that she did not understand in Turn 2. In the sixth one-on-one online English conversation (Excerpt 5), she made another request in Turn 2. In the seventh one-on-one online English conversation (Excerpt 6), she negotiated meaning with the instructor because, in Turn 1, she could not say the English expression "show" to describe something that appeared on television.

Excerpt 4: Implementation 12/9 (Step 5), video: 13 minutes 35 seconds

1 T: How would you say the people in these pictures are different, personality-wise?
2 S: What does "personality-wise" mean?
3 T: The personality of each person.

Excerpt 5: Implementation 12/12 (Step 4), video: 18 minutes 10 seconds

1 T: Would you like me to give my own version of this story?
2 S: Yes. Type it and read it aloud.

Excerpt 6: Implementation 12/16 (Step 4), video: 6 minutes 8 seconds

1 S: There is a TV. Well… in the screen… How can I say?
2 T: The TV shows a war video. There is a TV showing a video about war.

In Turn 2 of the seventh one-on-one online English conversation (Excerpt 7), the participant interrupted and made a request to change the situation when the instructor's oral feedback was long. Furthermore, in Excerpt 8, she was able to stop the conversation and ask a question in Turn 2. By this

session, her attitude had clearly changed since the first one-on-one online English conversation (Excerpt 1), and she was notably able to make a clarification request.

Excerpt 7: Implementation 12/16 (Step 4), video: 10 minutes 16 seconds

1 T: While watching the movie at home, he heard a doorbell, and it was a postman.
2 S: Sorry, excuse me, please type your feedback in the chat box.

Excerpt 8: Implementation 12/16 (Step 4), video: 18 minutes 40 seconds

1 T: Any questions? No questions?
2 S: Wait. Last picture. How can I say the last picture? (hand-holding gesture)
3 T: They are holding hands.

Change was observed in the participant's responses to the instructor's questions and in her willingness to actively manage the conversation in a way that suited her. She shared the following:

> Somehow, I became able to ask questions. Until this point, I really didn't understand and didn't know what to do. I was silent and anxious, but I think I made progress by asking questions. I felt like I understood when I listened, but I wanted to understand things properly, so I asked the instructor to clarify. The instructor also gave me a lot of feedback and spoke quite quickly, which made me feel like I wouldn't be able to remember this advice. I thought that it didn't really make sense to get so much feedback, so I thought it would be better to ask the instructor to write…the feedback as text. I was confident that I was able to ask what I wanted to ask, and I was happy to get the answers I was looking for.

Here, the participant recalls that she was able to make requests that she had previously been unable to make, such as asking the instructor about things that caught her attention—this suggests that the student became more willing to communicate over time. Comments from the stimulated recall also showed that she felt that she was growing and that she was experiencing a sense of accomplishment. Asking the instructor questions, receiving feedback, and using the chat box served as scaffolding, which facilitated changes in the student's attitude, mitigated her anxiety and gave her a desire to understand things correctly.

In the eighth one-on-one online English conversation (Excerpt 9), guidance from a recasting of Turn 3 facilitated a pushed input in Turn 4, and the participant used fillers and considered meaning when responding to improvised questioning. Recasting is a method in which the teacher corrects a student's grammatically incorrect expression by restating the expression (i.e., maintaining the meaning of the

student's expression) with correct grammar. In response to the instructor's clarification requests in Turn 5, the participant asked questions in Turn 6 to address not being able to say what she wanted to say. However, the instructor did not understand the student's Japanese expressions. Consequently, in Turn 8, the participant tried to produce a comprehensible output and attempted a corrected output. The instructor's feedback in Turn 11 helped the participant find the words she wanted to use in Turn 12.

Excerpt 9: Implementation 12/19 (Step 5), video: 20 min 50 s

1 T: Which of the two girls in the pictures do you think is suffering more?
2 S: I think second picture she is more suffering.
3 T: She is suffering more, because...?
4 S: Because she is… well…
5 T: Sorry?
6 S: How can I say "傷つく" (*Kizutsuku*, "get hurt feelings" in Japanese)?
7 T: I don't understand.
8 S: First picture, she is scared by TV, but second picture, she is very sad because human.
9 T: Uh huh. Let me see, the woman in the first picture is scared by what she saw on TV but the girl in the second picture is hurt by real people who are her classmates.
10 S: Yes. Yes.
11 T: But the girl in the second picture is hurt by real people who are her classmates.
12 S: Hurt by classmates. So, I think the second picture she is suffering more.
13 T: I see. That's a good point.
14 S: Thank you.

This excerpt indicates that improvised exchanges increase output opportunities and promote the development of an interlanguage. The participant described her feelings regarding this exchange as follows:

> In situations where I could not say the expression I wanted to convey in English, I was able to listen to the instructor's feedback and know what I wanted to say. The instructor was able to guide me better when I asked questions. I thought that it would be better to ask questions and convey that I didn't understand.

The student's above reflection confirms the importance of clarification requests, the transformation of incomprehensible output into comprehensible output, and learning.

In the seventh one-on-one online English conversation (Excerpt 10), a transformation occurred in

that the participant began to use fillers. In the first one-on-one online English conversation, she was silent and unresponsive; however, from the sixth call onwards, she started to use fillers, such as “well” and “let me see.” In Turn 2, the instructor could immediately infer that the participant was worried when she said, “Let me see.” In Turn 3, the instructor tried to encourage the participant to speak by restating herself in a way that may have been easier for the participant to understand. This is a scene of input modification, in which the participant signaled to the instructor that she did not understand using signs, such as fillers and silence.

Excerpt 10: Implementation 12/16 (Step 5), video: 22 minutes 35 seconds

1 T: In what ways are the people in the pictures serving their country?
2 S: Let me see.
3 T: What does the army do? Why do they fight?
4 S: To protect the people.
5 T: The army is serving their country by protecting its people.

The use of fillers furthered the conversation and accelerated understanding. The participant recalled the following:

> I wasn’t able to use fillers the previous time, and the silence was long. So, I was conscious of using fillers this time. I’m glad I was able to. I felt that fillers helped the conversation continue and stopped the instructor from wondering whether there was something wrong with me.

Above, the participant suggests that her newfound ability to use fillers was a notable transformation that gave her a sense of accomplishment.

Excerpts 11 to 13 demonstrate that the participant’s anxiety was alleviated when she felt she had learned something from the instructor’s feedback. When the participant was silent in Turn 1 (Excerpt 11), the instructor recast an expression in Turn 2 by saying the beginning of the English sentence and allowing the participant to complete the phrase; the participant said the correct term “money,” while repeating the English sentence that was recast in Turn 3, but her construction was not completely grammatically correct. The instructor recast the expression again in Turn 4 and the participant was able to say the expression correctly in Turn 5. Similarly, the instructor’s utterance in Turn 6 inspired the participant to say what she wanted to in Turn 7.

Excerpt 11: Implementation 11/25 (Step 4), video: 11 minutes 39 seconds

1 S: She trying to... (silence)
2 T: What is she doing? She is trying to…?
3 S: She is trying to keep money.
4 T: She is trying to save…?
5 S: She is trying to save money.
6 T: That's right. What is her dream? Her dream is to…?
7 S: To travel around the world.

The instructor's corrective feedback and the sentence starters functioned as hints and contributed to learning. The participant expressed the following:

> When the instructor gives me a hint, it helps me to say what I want to express. I feel relieved if I get a hint and if the instructor says "okay" when I give an answer confidently.

Thus, the sentence starter served as a scaffolding and helped reduce the student's anxiety during the silence.

In Excerpt 12, meaning negotiation occurred during the exchange and the number of interactions comprising the exchange increased. The question that begins with "or" in Turn 4 and the paraphrased question in Turn 6 make the incomprehensible question at the beginning of Turn 2 into a comprehensible one; this reveals that input modification is useful for understanding.

Excerpt 12: Implementation 11/28 (Step 4), video: 14 minutes 15 seconds

1 S: He is not good.
2 T: In what way is he not good?
3 S: Hmm? (In Japanese)
4 T: Not good when it comes to appearance? Or not good when it comes to behavior?
5 S: He look... (silence)
6 T: He is not nice. Does the man look like he is angry?
7 S: Yes. He look, I think he look angry.
8 T: Okay. You can describe him with the picture.
9 S: He look at his smartphone. He don't talk to her.
10 T: He doesn't. He doesn't talk to her.
11 S: He doesn't talk to her.
12 T: So, she is bored.

13 S: She is boring. 14 T: Bored. 15 S: She is bored.

Comprehensible input in the form of an A or B question, paraphrased questions, and recasting encouraged the participant to speak and promoted her understanding. She reflected the following:

> I was relaxed and had fun. The instructor pointed out words and it was easy to understand them. I was able to have a smooth conversation because the feedback was short and was said in simple words. Last time, the instructor talked for a long time, and I just listened instead of having a back-and-forth conversation.

Therefore, simple feedback aided understanding, made the participant feel at ease, and reduced her anxiety.

In Excerpt 13, the instructor's English was understood through the chat box function. Since the participant did not understand the meaning of "dating app" in Turn 2, she made a clarification request and asked the instructor to repeat the statement. The question was presented in written form in Turn 3, and understanding of the expression's meaning was promoted in Turn 4.

Excerpt 13: Implementation 11/28 (Step 4), video: 21 minutes 40 seconds

1 T: Are dating apps common in Japan? Dating app? 2 S: Dating app? 3 T: Are dating applications common in Japan? (Reading aloud while typing) 4 S: Ah. Yes, yes, yes. (Responds while looking at the English text in the chat box)

Using the chat box enabled the participant to better understand expressions that she had trouble making sense of when they were only spoken by the instructor. The participant stated the following:

> Things are easy to understand when the instructor can teach me with text. I was less worried,… and it was good that sentences were written in the chat box.

In this way, the chat box served as a scaffolding and reduced anxiety.

In Excerpt 14, the participant managed to make a request by interacting with the instructor. The participant told the instructor in Turn 1 that she could not say the English word "factory," but because

she used the Japanese term "*Kōjō*" to describe what she meant, the instructor could not understand her (Turn 2) and consequently asked her to provide another output in Turn 4. In Turn 5, the participant further informed the instructor that she lacked the vocabulary needed to describe the picture in a little more detail. In Turn 7, the participant asked the instructor to tell her the correct word; in response, the instructor taught her that the English word for "*Kōjō*" was "factories."

Excerpt 14: Implementation 12/2 (Step 4), video: 9 minutes

1 S: I can't say "工場" (*Kōjō*). (trying to explain the word "factory" with gestures)
2 T: *Kojo?* Sorry?
3 S: What should I do? (The participant seems confused and stays silent for 1 minute and 13 seconds) Sorry.
4 T: What do you mean? How can you describe the first picture?
5 S: I can't have vocabulary to describe this picture.
6 T: So?
7 S: So, please teach me.
8 T: I can see a picture full of factories.
9 S: Oh, right. Yes, yes.
10 T: Can you tell me a sentence using factories?
11 S: There are full of factories.
12 T: Okay. Some factories produce pollution to the environment. Can you read it aloud?
13 S: Some factories produce pollution to the environment.

The participant's output was reviewed, allowing her to make a request following the instructor's clarification request and pushed output. The instructor waited for the participant to speak and provided her with the opportunity to give a pushed output, asking the participant to repeat the English text in the chat box in Turn 12 to check her comprehension. The participant stated the following:

> I felt I was annoying the teacher. I thought that I should let the teacher know that I had no idea, like, "I can't say it, so please teach me." Now that I think about it, because we communicated via Skype, I did not have to worry about others and did not have to worry too much about long periods of silence. I was able to say "I don't understand" when I didn't understand something. I worked hard. The chat box was also very helpful.

Here, a personalized teaching style helped the participant better negotiate meaning to overcome her silence and inability to say what she wanted so that she could give an output. Notably, personalized teaching is an advantage of one-on-one online English conversation.

The data discussed in this section suggest that the participant gradually felt more able to take risks over the sessions, which reduced her anxiety and improved her speaking ability. This suggests that a one-on-one online pedagogical English conversation in which the student feels safe in taking risks may positively impact speaking anxiety and ability.

6.4 Conclusion and Issues for Further Study

In this case study, a beginner English learner's speaking ability was recorded and verified before and after a series of one-on-one online English conversations, and changes in her psychology were observed throughout these exchanges. The ultimate aim was to uncover what factors impacted the speaking ability, speaking anxiety, consciousness around English language learning, and attitude toward English language learning of a beginner learner with low English proficiency. The study's four main findings were as follows:

(a) The learner's speaking anxiety was significantly lower after completing the program of one-on-one online English conversations.
(b) The learner's ability to speak English improved after completing the program. She was able to maintain this level of proficiency two months after the program.
(c) Speaking anxiety worsened owing to factors related to the learner—being unable to say what she wanted to say in English and falling silent—and factors related to the instructor—limited or poor responses and only verbal feedback when the learner was struggling to understand the instructor's English. Accordingly, speaking anxiety improved with actions that helped the interlocutors better negotiate meaning. These actions include repeated communication, the instructor speaking slowly and gently, the instructor giving only brief feedback, and the use of the chat box to communicate through text. Specifically, as the number of one-on-one online English conversations increased, opportunities for pushed output and hypothesis testing emerged. As successfully transmitting modified output can increase speaking ability, these exchanges enhanced the participant's English skills. Further, clear feedback from the instructor facilitated the participant's speech and semantic understanding, encouraged output by supporting meaning negotiation, and increased the participant's confidence in the exchange. Overall, these findings suggest that improving speaking ability and reducing speaking anxiety in a beginner English learner with poor proficiency requires the following: (1) real-life experience (becoming accustomed to spontaneously speaking in English through one-on-one online English conversations, even if it is only over a few sessions during a short period); (2) successful experiences of communicating in English with foreigners (using instructor feedback and utterance examples as a scaffolding); and (3) the ability to sense one's growth in learning English.
(d) One-on-one online English conversations gave the participant a sense of psychological safety.

They provide the opportunity to not worry about others and feel comfortable in making mistakes. In this state, the participant was able to take on the challenge of improvised conversations with foreigners and become aware of her potential as an English language learner and the issues related to her English skills that she needed to work on. Initially, she underestimated her English ability, but as the number of one-on-one online English conversation sessions increased, opportunities for pushed outputs and hypothesis testing were created, feedback from the instructor facilitated understanding, and successful experiences of being able to convey her corrected output to the instructor reduced her anxiety. Gradually, she could express herself better in English and realized that her English skills were improving. Consequently, she became more motivated to speak and more confident in speaking. During the program, the participant's English skills notably transformed to the point where she was able to request things from her instructors and ask them questions in English to solve problems.

These results are compatible with those of previous studies that have shown that foreign language anxiety can be reduced by providing learners with an environment in which they feel a sense of accomplishment (Matsuda & Goble, 2004) and, relatedly, regularly experience success (Dörnyei, 2001). Meanwhile, the development of an interlanguage can be promoted through a learner's efforts to use their own knowledge and communicate in English in a way that can be understood by their interlocutor. The instructor was able to elicit the participant's opinions successfully, which promoted the development of the participant's interlanguage. This study's participant acquired new linguistic knowledge by receiving appropriate feedback and listening to her instructor's model expressions. Additionally, the participant became more willing to speak English when the instructor complimented her on successfully expressing herself in English. The participant's English ability was consequently developed by efforts to produce a comprehensible output; this result is consistent with Swain's (1995) "comprehensible output" hypothesis. With these findings, this study responds to gaps in the scholarly archive around closely verifying utterances in the context of improving speaking ability and how the learner's psychology may change over the course of a program of one-on-one online English conversations.

However, this study had three main issues:

(a) Only one learner with low English proficiency was studied; therefore, the results of this study cannot be generalized.
(b) It did not measure communicative competence, such as asking the other person questions or speaking during interactions, as it only measured photographic depiction. Therefore, it is necessary to confirm the usefulness of the conclusions obtained in this study during exchanges.
(c) The feedback was limited to the minimum. However, there were occasions when the author gave

advice or suggestions when the participant asked questions during the stimulated recall method, one of the analysis methods used in this study. Therefore, the possibility that this may have affected the participant's performance cannot be ruled out.

Despite these limitations, this study offers meaningful insights into how a series of one-on-one online English conversations with an instructor impacted a beginner learner's speaking anxiety and speaking ability. Notably, this study revealed how the learner's psychology changed over the course of the sessions; this elucidates the learner's actual situation, which is difficult to grasp in quantitative studies.

Going forward, this study's conclusions could be confirmed by increasing the number of participants and targeting diverse learning groups. Additionally, future scholars would also do well to collect more in-depth knowledge about learners' psychological states during spontaneous speaking, which can help teachers better understand learners' needs. Meanwhile, although this study offered insights into learning in the context of one-on-one online English conversations, it remains unknown how learner speaking anxiety and ability may be impacted by online English conversations conducted in simultaneous instructional formats, such as lecture-based video calls, with groups or between Japanese and foreign classes. To apply the results of this study to this setting, the next study (Study 4) investigates how lecture-based video calls impact learners' speaking anxiety and ability. This format is significant because it is highly applicable to Japanese schools—it is feasible for classroom use and is versatile.

Chapter 7. Study 4: A Practical Report of the Use of a Skype-Based Video Chat to Improve Speaking Skills and Nurture Willingness to Communicate

7.1 Purpose

Following the above discussion of Study 3, the current study sought to investigate how lecture-based video calls between Japanese and foreign classrooms (in Malaysia, Australia, Russia, and India) impacted WTC, unwillingness to speak English (which is linked to speaking anxiety), and speaking ability. The video calls were part of a broader five-hour unit with elementary school students (sixth grade) that extended from January to February 2020.

Studies 1–3 used a questionnaire on anxiety about communicating with foreigners (Motoda, 2000). However, the subjects in this study were elementary school students who did not have much prior experience in speaking English with foreigners. Therefore, this study used a questionnaire on WTC and unwillingness to speak English (Isoda, 2007), which was modified for the subjects in this study. Ultimately, this study sought to take up the three research questions listed below.

RQ11: Does participating in lecture-based video calls as part of group-based instruction impact WTC

and unwillingness to speak English among elementary school students?

RQ12: Does participating in lecture-based video calls as part of group-based instruction impact speaking ability among elementary school students?

RQ13: When engaging in lecture-based video calls as part of group-based instruction, how do participants who are good at English and participants who are not so good at English feel, what do they notice, and what do they want to pay attention to in the future?

7.2 Method

7.2.1 Participants

Two sixth-grade classes (Class A and Class B) at a public elementary school in Ibaraki Prefecture participated in this study; in total, the classes comprised 56 students. The school is characterized by a subject–teacher system that allows for specialized instruction. Each grade level is equipped with a large-screen TV, the school has a local area network, and the school's ICT environment is comprehensive enough that each student can freely use a tablet terminal.

Ultimately, data from 34 children were used in the study. Children with overseas experience, foreign children, children who did not consent to their data being used, and children who were absent from the video calls were excluded from the final sample.

Most participating children were enthusiastic about learning foreign languages and were active in class. Before conducting the survey, the researcher explained that the students could refuse to volunteer for the study, outlined the content and purpose of the study, and confirmed that the students would not be identified. The participants provided written consent to join the study and for their data to be used in compliance with confidentiality.

7.2.2 Procedure 1: Practice for the Video Call

Before holding lecture-based video calls, students were given lessons based on material from Unit 6 of *We Can! 1* (MEXT, 2018c), titled "I want to go to Italy." Later, the video calls were rooted in the content of this unit. This unit was used to increase the children's interest in the world. Several activities from the unit were completed, such as quizzes that involved guessing what countries were depicted by images of famous landmarks and foods and matching countries to their national flags. The students competed the activities in groups and received points for each correct answer. They cheered happily when their team answered correctly. Many students actively engaged in trying to guess which flag belonged to which country and frequently suggested countries they knew. This material encouraged students to think about different countries before engaging in video calls with students from other nations on this topic.

During the video calls, students in one classroom were asked to figure out what country the students in the other classroom were in by asking questions and listening to the answers—this activity was called “Let’s find out which country you are in.” Following the three hours of lessons that were conducted before the video calls are described below. Next, the contents of the two video calls are reviewed.

The objective of the first lesson was “Let’s get to know Mystery Skype”. The children watched a video introducing an activity called Mystery Skype, which involved using Skype’s video call feature to play a game with an overseas classroom in which each class would guess the other’s country by asking and answering yes/no questions in English. The teachers knew where the other class was located. Most students were surprised that this activity was even possible and were excited to try it, but some were reluctant to participate because they could not speak English. The researcher and teacher informed the children of the flow of the activity and advised them that while the activity would incorporate some improvisational elements, they would have an opportunity to practice Mystery Skype before playing it with another class.

First, the students were asked to think about what kind of yes/no questions they could ask to find out the location of the other class. As some of the students were not able to deepen their ideas individually, they were given time to think together in Japanese and asked to share their ideas in groups of four and then present them to the class. Sample questions included the following:

・Are you in ~?
・Do you have ~?
・Are you near / by the sea?
・Do you live on an island?
・Is it cold (hot) now?
・Are you in the ~ continent?
・Are you in the northern (southern) hemisphere?

When translating a Japanese question into English, the teacher did not immediately give the answer, but instead asked the class, “How should we say this in English?” For difficult vocabulary terms, such as “hemisphere,” the teacher and the ALT provided support.

The objective of the second lesson was “Let’s practice Mystery Skype”. The participants were divided into groups of four for a practice game of Mystery Skype. The groups decided to be “located” in countries they already knew things about. Each group was given an iPad to use Google Earth and Google Search. Additionally, the students were given a worksheet with sample questions that were thought up during the previous session. After reading the worksheet as a class, the rules were reviewed and the game began. At first, the students could not take their eyes off the worksheets and simply read them out loud or spoke in Japanese, which prevented them from trying to spontaneously

communicate in English. In response, they were repeatedly instructed on the importance of adopting a “listening” attitude, which involves listening to what others say and continuously asked them to restate their expressions in English. In addition to the questions developed together earlier, the children asked the following questions during the practice game:

・Are you near ~?
・Does your flag have (more than) three colors?
・Do you usually use (speak) English?
・Is your country larger (smaller) than ~?

The objective of the third lesson was “Let’s practice Mystery Skype with an ALT”. The students practiced Mystery Skype again, this time with the ALT acting as the class located in another country. The students were split into eight groups. iPads were distributed to each group again, along with an updated worksheet of the questions that had been compiled. Figure 7.1 shows the Mystery Skype practice with the ALT. The ALT sat at the front of the classroom, and each group took turns asking her questions. The children were so focused on thinking in their groups that they sometimes missed the questions of the other groups. The teacher told the students that it was important to listen to what others were asking to avoid repeating questions. As they were familiar with the ALT, the students seemed relaxed and thoughtful after the first round; some students were so enthusiastic that they wanted to practice the game again. They started taking the initiative to think about what kind of questions they could ask the other class to narrow down its location. Accordingly, they began to think more deeply about effective questioning methods; for example, they considered the importance of asking about the country’s hemisphere and continent and whether the country is an island.

Figure 7.1

Mystery Skype Practice Class Scene

7.2.3 Procedure 2: Video Calls with Overseas Classrooms

In the fourth and fifth classes, two Mystery Skype sessions were held in each class. The students in Class A connected with classrooms in Malaysia in the first session and Australia in the second session. Meanwhile, the students in Class B connected with classrooms in Russia in the first session and India

in the second session. In the Mystery Skype session with Malaysia in Class A (Figure 7.2), the teachers wrapped up the session after the students had guessed each other's countries, because this was the first time both classes had played Mystery Skype. The Malaysian students were 10 years old and thus younger than the Japanese students; the age difference helped the game proceed peacefully from start to finish. When the Japanese students asked Malaysian students "Are you in Asia?" and they answered "Yes!" some of the Japanese students exchanged high-fives, expressing joy at having been able to communicate with the other class.

However, it was observed that the students seemed to use facial features and classroom decorations to guess which part of the world the other students were in. Thus, it is possible that English conversation was not the only way in which the classes explored each other's locations. Therefore, it was thought that it would be better to turn off the video function at the beginning of Mystery Skype and use only audio so that the students could concentrate more on communicating in English.

Accordingly, the second Mystery Skype session with a classroom in Australia began with the video function turned off. The teachers and the researcher had decided that the video function would be turned back on once the classes knew each other's countries, at which point the classes were encouraged to ask each other questions about each other's school lives.

Figure 7.2

Mystery Skype with Malaysian Students

The video function was also turned off at the beginning of the Mystery Skype session with 15-year-old students in Russia in Class B and turned back on once both parties knew each other's countries. This session was very interesting. The Russian students were very calm, which encouraged the Japanese students to also act calmly. The English proficiency of the Russian students was limited. They reacted similarly to the Japanese students who were the subject of this study, sometimes being stuck and sometimes being silent. Both classes were able to guess the other's countries. After doing so, they asked each other questions about their cultures and school lives. One of the topics was *Doraemon*, a Japanese manga series (called *Doradora* in Russia), in which both groups of students were interested. This common interest encouraged students by creating a sense of familiarity.

The video function was also initially turned off in the second Mystery Skype with India. It was agreed in advance that the camera would be turned back on once the classes had guessed each other's countries and shared their cultures with each other. Although the students were nervous about talking to students from unfamiliar countries, they were still engaged in the activity and used the tablet terminals to guess the other class's country based on their hints. In particular, questions about the color of the national flag and the temperature proved very useful. After correctly guessing each other's countries, they engaged in a cross-cultural exchange; for example, they sang each other's national anthems, and the students in India showed the Japanese students Indian currency.

Additionally, in cooperation with the ALT, sample questions were developed (Appendix 10) about school life for the sessions with Australia and India in the hope that it would be easier for the children to converse in English about a common topic. Preparing these sample questions enhanced the exchange after guessing each other's countries.

7.2.4 Data Collection and Analysis 1: Questionnaires on WTC and Unwillingness to Speak English

To explore the effects of this program on the students' psychology, two psychological scales—WTC and unwillingness to speak English—were administered to the participants as pre-, mid-, and post-surveys. In this practice, WTC was defined as liking English classes and being interested and willing to listen to and speak English. Six items on WTC were used. Additionally, unwillingness to speak English was captured by six items that were modified from questions about unwillingness to speak English by Isoda (2007) for the Japanese students in this study. To discourage the children from the tendency to respond to questionnaire items by stating that they are "undecided" (Moriyama et al., 1992), each item was scored on a four-point scale with a notation system, and the means of the results were tested for significant differences using a one-way ANOVA with repeated measures. The scales used in this study are shown in Appendix 11.

7.2.5 Data Collection and Analysis 2: Speaking Test

To measure speaking ability, a pre-test (first speaking test) was conducted on January 10 and a post-test (second speaking test) on February 28. The speaking test format is based on counting the number of English sentences that elementary school students utter in English. In other words, the speaking test score is based on how many sentences the student was able to express to the other person in English. Accordingly, for the purpose of this study, speaking ability is defined as the ability to ask questions in English. The children were given 15 seconds to read the test form (Appendix 12) and were also presented with illustrations that hid their teacher's face (Appendices 13 and 14; the boys were presented with the boy's appendix, Appendix 13, and the girls with the girl's appendix, Appendix 14). Additionally, the teacher's face was hidden by the illustration, thus preparing a situation for the

children in which they were next to a foreigner they did not know, rather than a teacher they knew. The children asked as many questions as possible in English within a 1-minute time limit, and the teacher counted how many questions they were able to ask. The teacher tried to only answer the questions the students had asked and avoided asking questions in return. The speaking tests were timed and recorded on video. The teacher later graded the students by reviewing the videos. The means of the results for the number of questions were tested for significant differences with a paired-samples *t*-test.

7.2.6 Data Collection and Analysis 3: Open-Ended Responses on Video Calls

Additionally, a free-response questionnaire was administered, in which participants were asked to freely describe their impressions of the video calls, what they noticed and discovered, and what they would like to pay attention to in the future. The free-text data were formatted for analysis and input into a spreadsheet software (MS Excel), and a quantitative text analysis was conducted using KH Coder, a free software for text mining (Higuchi, 2014). KH Coder was also used for the exploratory analysis of the free text from the questionnaire evaluating the teaching method. Analysis of the free text with KH Coder can be considered an efficient and objective analysis technique without the influence of the analyst (Higuchi, 2004), particularly when presenting a summary of an entire dataset by multivariate analysis. In other words, quantitative text analyses are used to analyze descriptive data in English pedagogy and SLA research because they can minimize bias caused by the analyst's theory or prejudice by removing manual work that causes arbitrary word selection (Higuchi, 2020).

To explore whether the children's English proficiency impacted whether distinctive descriptions were present in their free-response statements, the children were divided into two groups: an upper group and a lower group. To select these groups, this study used the Elementary School English Trial conducted by the Ibaraki Prefectural Board of Education in December 2019. This test was conducted to objectively capture the students' specific English proficiency levels, help students to grasp their own English language abilities, and support English teachers at each school in improving their teaching skills and rebuilding their teaching systems. Proficiency was based on the Eiken IBA, a test created by the Eiken Foundation of Japan that consists of 20 listening and 20 reading questions—with a maximum score of 550 points—and a questionnaire. The Elementary School English Trial participants in this study had an average Eiken institution-based assessment (IBA) score of 485 points. The 21 children who exceeded this average were placed in the upper group, and the 13 children who did not exceed this average were placed in the lower group.

7.3 Results and Discussion

7.3.1 Results and Discussion 1: Questionnaires on WTC and Unwillingness to Speak English

A one-way ANOVA with repeated measures was used to compare the mean scores at three time

points (pre, middle, and post) from a six-item questionnaire for WTC. The results showed that F (2, 66) = 4.75, p = .02, indicating a significant difference in mean scores at the 5% level. Regarding the effect size, η2 = 0.13, which is a relatively large value. The results are shown in Table 7.1 and Figure 7.3 (error bars in Figure 7.3 show 95% confidence intervals [CI]). Using Bonferroni's method, multiple comparisons confirmed a significant difference at the 5% level between the mean pre and post scores but no significant differences between the pre and middle and between the middle and post scores. Therefore, the effectiveness of Mystery Skype cannot be confirmed if it is practiced only once, but it is thought to be effective if it is practiced repeatedly. The results of the descriptive statistics showing the significance probability (p) and effect size (d) for each item are shown in Table 7.2. The reliability coefficients for the pre-, mid-, and post-questionnaire on WTC were .77, .81, and .80, respectively.

Table 7.1

Descriptive Statistics on WTC (N = 34)

	M	*SD*	Skew	Kurtosis	Min	Max
Pre	3.32	0.45	-0.93	0.84	2.00	4.00
Mid	3.46	0.46	-1.11	1.56	2.00	4.00
Post	3.50	0.40	-0.73	-0.36	2.67	4.00

Figure 7.3

M of WTC at Pre, Mid, and Post

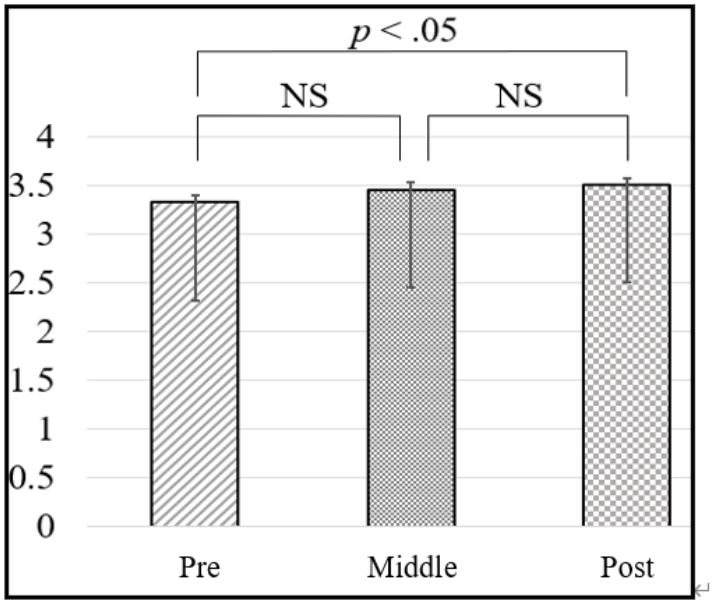


Table 7.2

Descriptive Statistics for Each Item

	Pre and Mid		Mid and Post		Pre and Post	
Item	*p*	*d*	*p*	*D*	*P*	*d*
1	.40	0.22	.17	0.24	.03	0.48
2	.33	0.26	.01	0.37	1.00	0.09
3	.06	0.42	1.00	0.08	.18	0.36
4	.05	0.34	1.00	0.00	.14	0.36
5	.97	0.19	1.00	0.07	1.00	0.13
6	.29	0.30	1.00	0.00	.17	0.32

Next, a six-item questionnaire on the unwillingness to speak English was administered, and the mean scores at three time points (pre, mid, and post) were compared using a one-way ANOVA with repeated measures. The results showed no significant difference in mean scores with F (2, 66) = .65, p = .53. Regarding the effect size, η2 = 0.02, which is a small value. The results are shown in Table 7.3 and Figure 7.4 (error bars in Figure 7.4 show 95% CI). Unwillingness to speak in English was low before Mystery Skype and thus did not change much with the program. These results indicate that these elementary school students were not really unwilling to speak English, and that they were able to communicate in English without feeling any resistance, even if they had just met the person they were speaking with or if this person was a foreigner. The results of the descriptive statistics showing the significance probability (p) and effect size (d) for each item are shown in Table 7.4. The reliability coefficients for the pre-, mid-, and post-questionnaires on unwillingness to speak English were .73, .51, and .80, respectively.

Table 7.3

Descriptive Statistics on Unwillingness to Speak English (N = 34)

	M	*SD*	Skew	Kurtosis	Min	Max
Pre	2.50	0.50	-0.08	0.40	1.33	3.67
Mid	2.48	0.40	-0.30	-0.11	1.50	3.17
Post	2.41	0.61	0.47	0.47	1.00	3.67

Figure 7.4

M of Unwillingness to Speak English at Pre, Mid, and Post

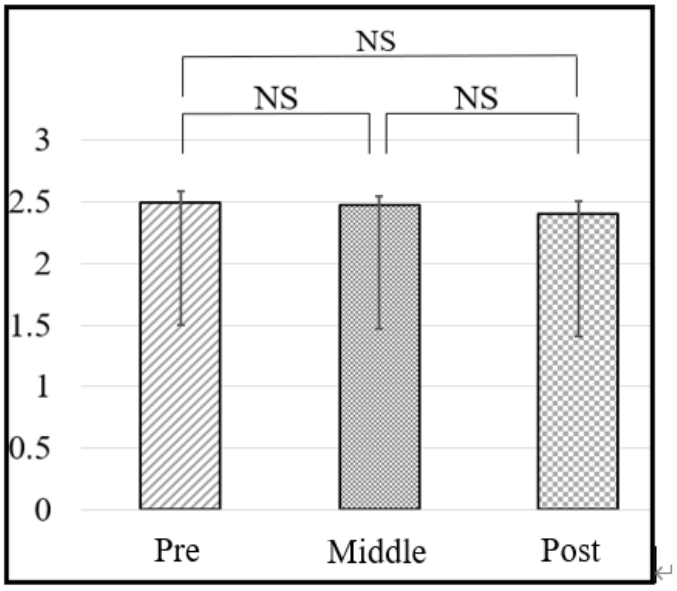


Table 7.4

Descriptive Statistics for Each Item

	Pre and Mid		Mid and Post		Pre and Post	
Item	*p*	*d*	*p*	*d*	*p*	*d*
7	.29	0.30	1.00	0.00	.17	0.32
8	.91	0.18	.02	0.51	.23	0.32
9	1.00	0.13	1.00	0.04	1.00	0.08
10	.89	0.24	1.00	0.16	1.00	0.08
11	1.00	0.04	1.00	0.04	1.00	0.04
12	.79	0.26	1.00	0.20	.91	0.04

7.3.2 Results and Discussion 2: Speaking Test

A two-tailed *t-test* was conducted to confirm whether the difference between the mean scores before and after instruction was statistically significant: $t\,(33) = 4.17$, $p < .01$, $r = .59$, indicating that the difference between the mean scores before and after instruction was significant at the 1% significance level. The effect size was also relatively large. The effect size, *r*, was defined as $r = .10$ (small effect size), $r = .30$ (medium effect size), and $r = .50$ (large effect size), as per Cohen's (1988) criteria. The results are shown in Table 7.5 and Figure 7.5. Note that Figure 7.5 is a violin plot showing the median, interquartile range, and rotated kernel density of the data.

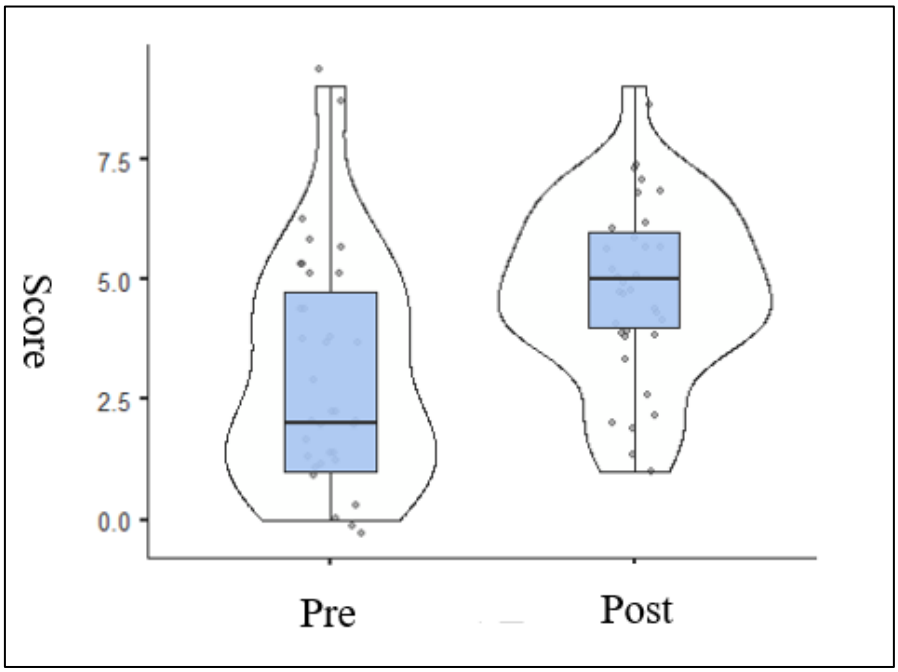
Table 7.5

Descriptive Statistics on English-Speaking Tests (N = 34)

	M	*SD*	Skew	Kurtosis	Min	Max
Pre	3.06	2.41	0.73	-0.16	0.00	9.00
Post	4.74	1.86	-0.14	-0.43	1.00	9.00

Figure 7.5

Results of Pre- and Post- English-Speaking Tests



The students asked many questions during the Mystery Skype video calls, such as “Are you from Australia?,” “What sports do you like?,” “Do you like Japanese food?,” and “What food do you like?” Many questions were rooted in English expressions that the students had learned in class. The number of questions beginning with “Do you~” and “Are you~” was 67 in the pre-test and 100 in the post-test, while the number of questions beginning with a question word, such as “What,” was 91 in the pre-test and 163 in the post-test. Such linguistic data suggest that the students demonstrated an ability to use yes/no questions to gather information, increased their use of various question words, and tended to ask relevant questions about relevant content.

7.3.3 Results and Discussion 3: Open-Ended Responses on Video Calls

Table 7.6 shows the results of preprocessing all data obtained from the open-ended questionnaire with KH Coder. Notably, the KH Coder analysis excludes particles and auxiliaries; therefore, the

number of words actually analyzed is smaller than that in the original dataset (in Table 7.6, the numbers in parentheses indicate the number of words analyzed after excluding particles, etc.). Morphological analysis and detection of compound words were performed using Chasen. The number of words in the items "Impressions," "Noticing and Discovering," and "Important Points" increased in the second session. Mystery Skype may have activated the students' cognitive processes in ways that enabled them to grow their descriptions (e.g., Mystery Skype may have helped students externalize their feelings and thoughts using various expressions).

Table 7.6

Statistical Information Representing Preprocessing Results

	Impressions		Noticing and Discovering		Important Points	
	1st	2nd	1st	2nd	1st	2nd
Total number of extracted words	535 (235)	542 (226)	493 (205)	470 (186)	371 (175)	385 (169)
Number of different words	135 (88)	145 (93)	145 (93)	158 (111)	109 (74)	119 (74)
Number of sentences	39	40	40	41	35	35
Number of paragraphs	34	34	34	34	34	34

Table 7.7 shows the top three most frequently used words in the first and second rounds of each question item. In all items, the number one word remained unchanged from the first to the second session. The word "楽しい"(fun) ranked first in "Impressions" and "英語" (English) ranked first in "Noticing and Discovering" and "Important Points," indicating that each student noticed and discovered things about English while having fun learning through the activities. The second most frequently used word in the second session of "Noticing and Discovering" was "オーストラリア" (Australia). The fact that this word is a proper noun shows that the participants were reflecting on the activity itself in a concrete manner. This can also be judged from the fact that "相手" (partner) was the third most frequently used word in the second session of "Important Points." During the activity, the teacher told the children the importance of "listening" to the other party. The children remembered their teacher's words and set the specific goal of practicing communicating with others in the next activity, which shows that they were able to reflect on their learning and the activity.

Table 7.7

List of Three Most Frequently Used Terms

Impressions			
1st		2nd	
Extracted Word	Frequency	Extracted Word	Frequency
楽しい (fun)	20	楽しい (fun)	20
国 (country)	12	国 (country)	14
人 (people)	12	人 (people)	13
外国 (foreign country)	11		
相手 (partner)	11		

Noticing and Discovering			
1st		2nd	
Extracted Word	Frequency	Extracted Word	Frequency
英語 (English)	16	英語 (English)	10
国 (country)	12	オーストラリア (Australia)	6
人 (people)	8	楽しい (fun)	5
		相手 (partner)	5

Important Points			
1st		2nd	
Extracted Word	Frequency	Extracted Word	Frequency
英語 (English)	12	英語 (English)	11
話す (speak)	7	話す (speak)	10
声 (voice)	5	相手 (partner)	8
話せる (can speak)	5		

To visualize the connections between the students' English abilities and the words used in each item (i.e., Impressions, Noticing and Discovering, Important Points), a network analysis was conducted and a co-occurrence network was drawn (Figures 7.6–7.8). Then, a co-occurrence network analysis result was produced, which visualized the co-occurrence between the extracted words and the external variables of the academic achievement levels, as shown in Figure 7.6. As noted above, the participants were divided into upper (n = 21) and lower (n = 13) groups based on how they scored in relation to

the average score of the Elementary School English Trial (485), and the upper and lower groups were used as external variables. Extracted words were used in each item of the second open-ended questionnaire, which was administered after the series of activities were completed. In Figures 7.6–7.8, the depicted circles represent extracted words and the squares represent external variables. The sizes of the circles correspond to the number of occurrences of each item. The stronger the co-occurrence relationship, the thicker the line. The numbers on the lines are the Jaccard coefficients, which emphasize whether words are co-occurring. Note that the drawn co-occurrence network shows the strength of a co-occurrence relation by a Jaccard coefficient, not the distance between words. The minimum number of occurrences was set to 3, and the number of edges representing co-occurrence relations was set to 60, which was the highest number in terms of the strength of a co-occurrence relation.

Figure 7.6

Co-occurrence Network of Words and Variables in the Question Item "Impressions"

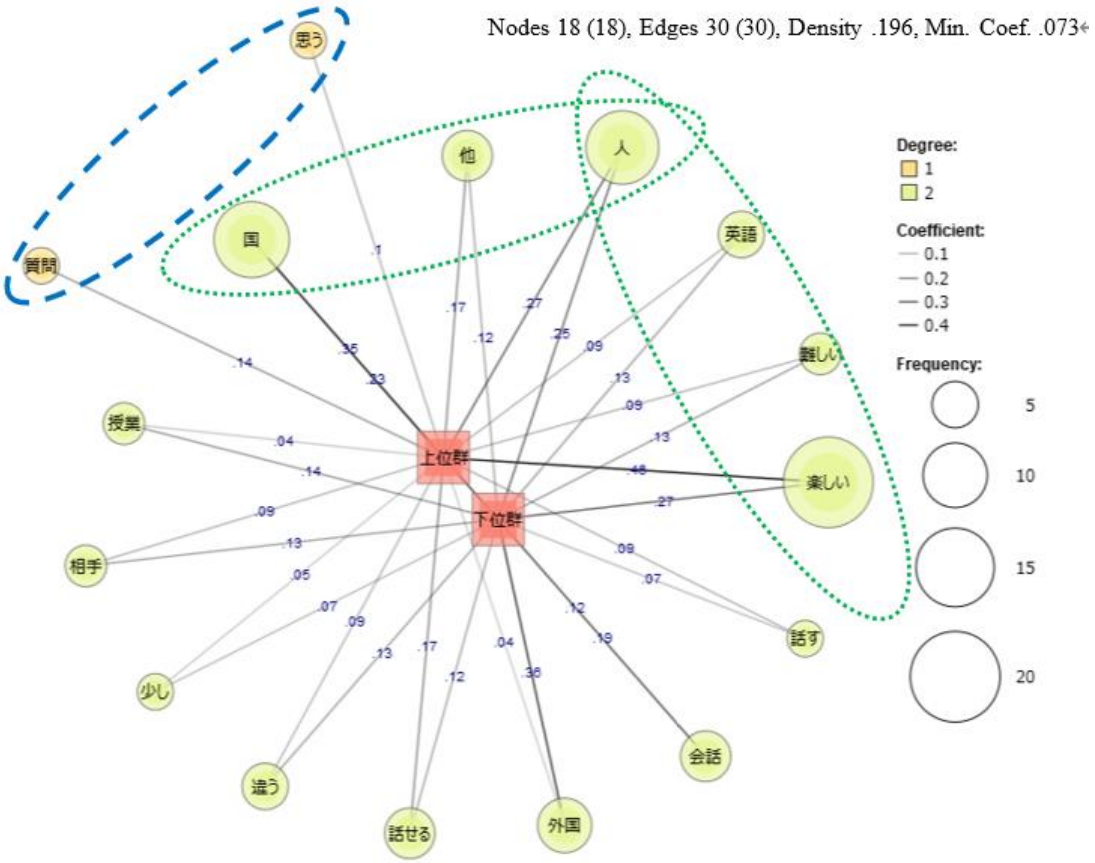


Figure 7.7

Co-occurrence Network of Words and Variables in the Question Item "Noticing and Discovering"

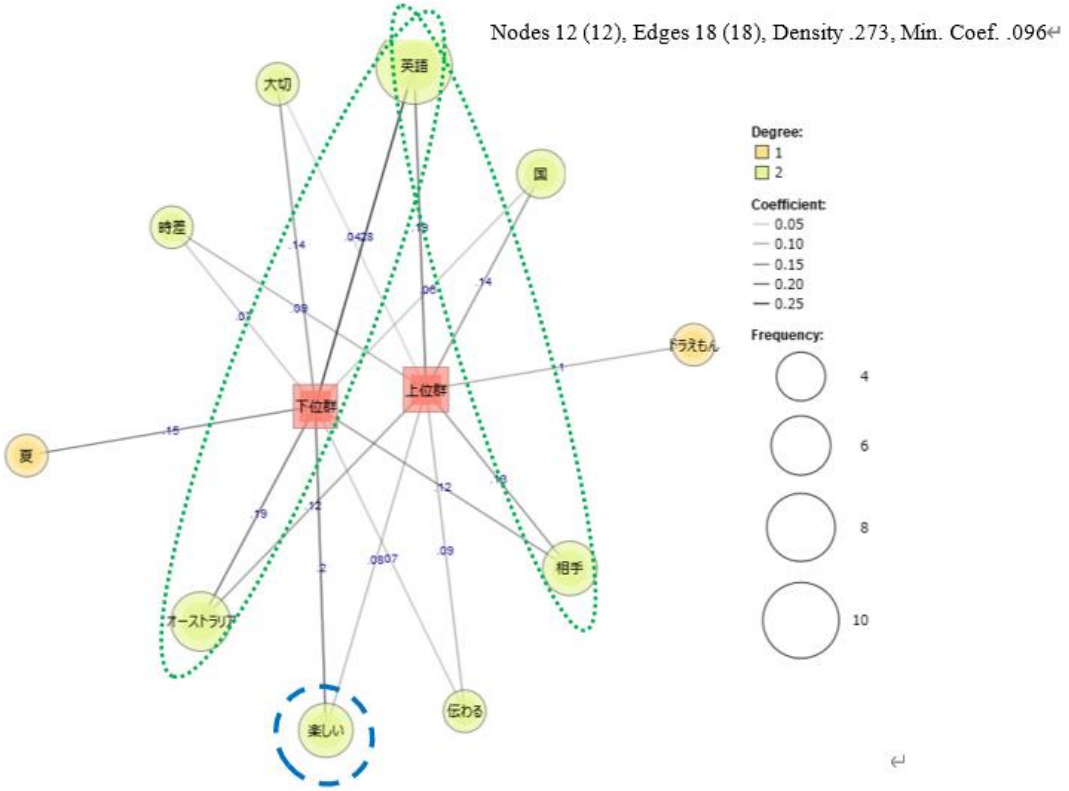


Figure 7.8

Co-occurrence Network of Words and Variables in the Question Item "Important Points"

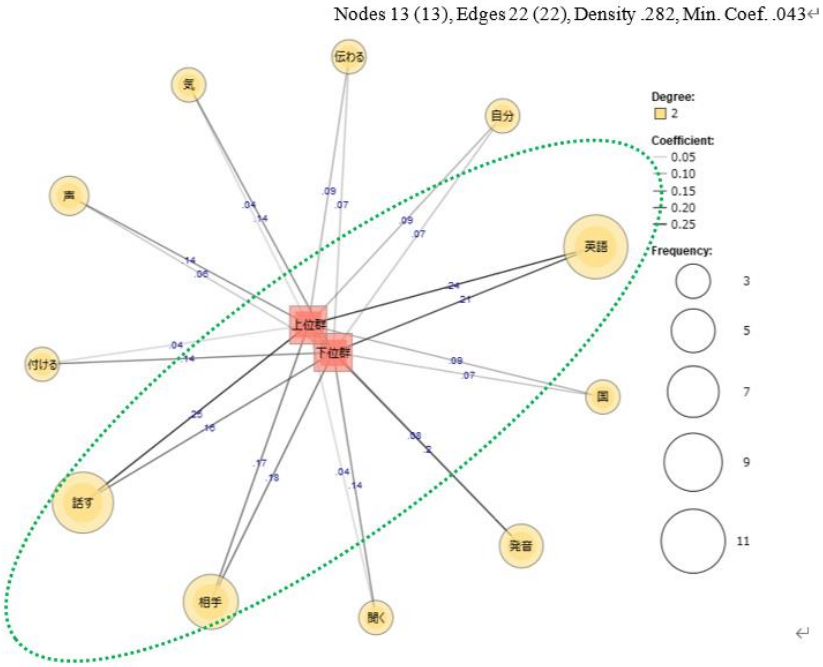


Figure 7.6. shows that the words “他” (other), “国” (country), “人” (people), “英語” (English), and “楽しい” (fun) strongly co-occurred in both the upper and lower groups, indicating that the children generally felt that “it was fun [to do activities] in English with people from other countries.” The words “質問” (question) and “思う” (think) were used only by the upper group. Among these, the characteristic word—“質問” (question)—may have been the result of the upper group reflecting on the activity in detail and focusing on the content of the question.

Free comment from a learner (1) (upper level):
I enjoyed the thrill of asking questions, and it was fun to guess the other person’s country.

Next, Figure 7.7 shows that the words “英語” (English), “オーストラリア” (Australia), and “相手” (partner) frequently co-occurred in the upper and lower groups, suggesting that the students generally demonstrated some kind of awareness or discovery in interacting with “a partner in Australia in English.” Turning to the Jaccard coefficient for the word “fun” co-occurring with the upper and lower groups, the lower group value (.2) is more than double the upper group value (.0807). This suggests that members of the lower group realized that they enjoyed interacting with their Australian partners in English after the activities were completed.

Free comment from a learner (2) (lower level):
I enjoyed talking with my partner.

Figure 7.8 shows that “英語” (English), “話す” (speaking), and “相手” (partner) were frequently used and co-occurred regardless of English proficiency, suggesting that Mystery Skype made the participants aware of their partners and their interactions with each other, regardless of their English proficiency.

Free comment from a learner (3) (upper level):
In the future, I would like to try to speak English with more awareness of my partner.

Free comment from a learner (4) (lower level):
When speaking English, I want to take care to be aware of my partner.

7.4 Conclusion and Issues for Further Study

This study examined how lecture-based video calls between Japanese elementary school students and students in other countries (specifically, classes in Malaysia, Australia, Russia, and India) impacted WTC, unwillingness to speak English, and speaking ability. The study’s three main findings

are summarized as follows:

(a) Engaging in video calls increased the students' interest in listening to and speaking English and their motivation to do so, which was an expected positive impact on their English learning. In particular, the students' WTC was enhanced by repeated Mystery Skype sessions, in which students communicated in English over video calls with students in other countries. However, the students' unwillingness to speak English was low even in the pre-instructional stage and did not really change after the instruction.
(b) Mystery Skype improved the students' abilities to formulate questions. Specifically, they used more question words and increasingly tended to ask questions relevant to both parties in the exchange over the course of the program. These changes suggest that the Mystery Skype program may have enhanced the students' speaking skills.
(c) The results of the children's free-writing questionnaires showed that Mystery Skype increased their awareness of communicating in English and gave them an opportunity to discover new things while enjoying learning. Members of the upper group reflected on specific activities and seemed aware of the content of the questions. Meanwhile, members of the lower group showed a greater awareness of the pleasure of conversing with others in English, suggesting that Mystery Skype may be a good way to practice English regardless of student proficiency levels. Students offered the following comments: "I could understand the importance of English by talking with people from other countries," "I enjoyed talking with foreigners who were about the same age as me," "I thought that if I tried my best to communicate, others may understand my English," "I want to study English more and become good enough to respond when people speak to me in English," "I noticed that cartoon films have different names in other countries," and "I was surprised to know that the seasons are completely different in Australia even though our time zones aren't that different. It is fun to discover the characteristics of each country." These statements indicate that deepening students' understandings of the necessity of learning a foreign language and their knowledge of different cultures can give them a sense of accomplishment and motivate them to learn a foreign language.

Looking back on this study, Mystery Skype allowed all the students, including those who were not good at English, to engage in an exchange with students in another country. Notably, Mystery Skype is simple and can be used in elementary school classrooms after sufficient practice and familiarization. Crucially, it helps students get a sense of the importance of being aware of and listening to other speakers when communicating in English—in the sessions, Japanese students needed to listen to and understand the English of children from other countries, and also had to understand the questions of their Japanese friends. These tasks deepened the students' interest in listening and speaking,

contributed to their interest in English classes, and increased their WTC. These results are consistent with previous findings that pair- and group-based instruction and interactive communicative activities that capture learner interest and attention (Mejías, 2014; Yalçın & İnceçay, 2014) can reduce speaking anxiety, which is associated with L2WTC (Lightbown & Spada, 2013). This suggests that positive group video calls between overseas and Japanese classrooms may improve students' WTC.

Meanwhile, this study had four major limitations:

(a) It was difficult to ensure that each student was given an opportunity to speak in English. As the lecture-based video calls were done in groups in a classroom, the students did not have many opportunities to engage in individual English exchanges with their overseas counterparts. The students provided the following insights: "I was disappointed that it was not my turn to speak, even though I knew my partner's country" and "I couldn't ask them many questions." To respond to this issue, teachers should consider increasing the number of video calls to ensure that all students have opportunities to speak English. Additionally, although group work helped the students successfully come up with questions to ask their overseas counterparts, devising a new method for individual question-and-answer sessions will be necessary in the future to ensure that all students can practice speaking English.

(b) As the study was conducted with a limited number of students at one school, and many of the participating students were eager to learn a foreign language and spoke English without any resistance, this method may be effective for learners with high English proficiency and a strong willingness to learn. Additionally, as a control group was not prepared for comparison and verification, the effect of students' learning in regular classes using textbooks on the results of this study cannot be denied as the contents of Units 8 and 9 in the textbooks were also covered in step with regular classes.

(c) The speaking test only incorporated a one-way approach in which a student looked at pictures and made up questions. Going forward, two-way interactions and, relatedly, student listening skills should be included in the overall evaluation. The ability to create questions alone is not an accurate assessment of a student's ability to communicate with others because it is a one-way transmission; exchange is essential in communication.

(d) Teachers must be able to design lessons using ICT and to communicate well. For example, a teacher should be able to connect with other teachers overseas to facilitate activities such as Mystery Skype. However, few teachers use ICT to interact with classrooms around the world. To plan and implement video calls between Japanese and foreign classrooms, teachers need to share and accumulate sufficient practical knowledge on this program, including through in-school training programs. In the future, scholars should address whether regular opportunities for teaching English through these kinds of exchanges can be facilitated.

Nevertheless, this study showed that Japanese elementary school students enjoyed communicating their thoughts and feelings to each other in an actual English-speaking environment by playing Mystery Skype. Additionally, this study suggested that Mystery Skype may enhance students' WTC and positively impact English language learning. Although the "Important Points" revealed that the respondents had a specific goal of practicing communicating with others in future activities, the students still proactively tried to communicate in English. These results suggest that Mystery Skype, including the practice lessons outlined above, may be a suitable way to meet the goals of the three pillars of foreign language qualities and abilities in the Courses of Study for Elementary School Students.

However, time differences across different regions and varied Internet communication environments can make it difficult to connect classrooms across the world via synchronous video calls. Additionally, the group-based nature of Mystery Skype did not guarantee each student a chance to speak in English. In response, the next study, Study 5, explored the impact of integrating a method that addresses these concerns—ACMC—into English education (Chew & Ng, 2021). Specifically, ACMC approaches can give students an equal opportunity to hear each other's views; free users from the constraints of time differences; and help students who are afraid of speaking in English feel less anxious, giving them an opportunity to think before they speak to the other party (students who are not afraid of speaking in English may be able to negotiate meaning in the immediacy of an SCMC). Meanwhile, combining SCMC and ACMC enables users to communicate through improvised exchanges and prepared expressions. While this benefit is clear, how integrating SCMC and ACMC may impact speaking anxiety among English language learners remains unknown. For example, it is unknown how enabling EFL learners to interact with people abroad after SCMC video calls using an ACMC, such as a virtual learning space like Flipgrid (Lee, 2020), may affect their speaking anxiety. These considerations inspired Study 5, which is reviewed in the next chapter.

Chapter 8. Study 5: Changes in Speaking Anxiety Among EFL Learners: Focusing on Collaborative International Exchange Using ICT

8.1 Purpose

This study examined how an e-collaborative project connecting a Japanese class and an Australian class through lecture-based video calls and Flipgrid impacted learner speaking anxiety. Specifically, this study addressed the research questions listed below:

RQ14: Does combining a real-time video call (SCMC) and Flipgrid (ACMC) reduce college students' speaking anxiety?

RQ15: Does the reduction of speaking anxiety vary with proficiency?

RQ16: If combining a real-time video call (SCMC) and Flipgrid (ACMC) reduces college students' speaking anxiety, what elements of this approach help reduce anxiety?

RQ17: If combining a real-time video call (SCMC) and Flipgrid (ACMC) does not reduce college students' speaking anxiety, what factors contribute to this result?

RQ18: How do the participants feel about interacting with students from other countries?

8.2 Method

8.2.1 Participants

Seventeen students participated in this study: 13 second-year college students majoring in English and four non-English majors from national universities in Japan. The study took place over a week in November 2019. The students who were not English majors were taking the class to improve their English skills. The 13 English majors had passed the Grade Pre-1 Eiken, and the four non-English majors had passed the Grade Pre-2 Eiken. The exchange partners were 13 Australian high school students and one teacher, all native English speakers. Consent for participation and data use (in compliance with confidentiality agreements) was obtained from both the Japanese and Australian participants.

8.2.2 Procedure 1: Video Calls with Overseas Classrooms

Two exercises were conducted in this study: a Skype-based video call session with overseas students and a Flipgrid-based session. The first video call session involved one game of Mystery Skype, which adhered to the rules outlined in Section 7.2.2. However, as the subjects in this study were university students, the video calls were conducted without the preparatory lessons given to the elementary school students in Study 4. Additionally, the teachers decided that the students should be able to name not only the other class's country but also their region. The time limit for the game was 20 minutes. Students were only given a map of the world. Participants on both sides were asked to break into groups of four or five students, take turns asking and answering yes/no questions, and avoid using Japanese. As in Study 4, the sessions were started without video to prevent the students from gathering a sense of where their counterparts were located based on their facial features and classroom decorations. The students asked questions such as "Do you live in the northern hemisphere?" "Do you live close to the equator?" and "Is it morning in your country?" and tried to devise ways to better target their questions in response to the other class's answers.

8.2.3 Procedure 2: Flipgrid

In Session 2, the participants used Flipgrid. The application required them to create a code and password specifically for this session to ensure that it was limited only to them. Once everyone was able to use the app, the students were asked to post videos under 3 minutes in length using a smartphone so that they could continue to interact with each other. The following prompts were given for the videos: "Reflect on our Skype call by answering some of the following questions: What did you enjoy and find difficult about today's lesson? What questions did we/they ask? What questions would you like to ask the students in Japan/Australia?" The students recorded their videos outside of class time during the week between the Mystery Skype session and the next class.

8.2.4 Data Collection and Analysis 1: Questionnaires on Speaking Anxiety

To investigate the effects of the combined use of SCMC and ACMC on speaking anxiety, pre- and post-questionnaires were administered. The questions regarding speaking anxiety were adapted from Motoda's (2000) Psychological Scale Questionnaire for English Language Learners. This study employed the same anxiety scale as the previous studies (detailed in Section 4.2.4). The scores for each questionnaire item were tabulated, and the mean was calculated. Changes in speaking anxiety were analyzed by Wilcoxon's signed rank sum test in the pre- and post-questionnaires.

8.2.5 Data Collection and Analysis 2: Open-Ended Responses on Speaking Anxiety

To determine the factors that reduced the students' speaking anxiety, they were administered a reflection questionnaire after their exchange with the overseas students. As the results of the preliminary speaking anxiety questionnaire indicated that the participants had high levels of speaking anxiety, they were asked to answer the following four items related to their anxiety using an open-ended format. "Q1: For those who felt anxious, what specifically made you feel anxious during Mystery Skype? How do you think you can reduce your anxiety? If you did not feel anxious, please answer 'I did not feel anxious' and explain why you did not feel this way. Q2: For those who felt 'less anxious' after their Mystery Skype experience, what factors caused you to feel less anxious? If your anxiety level remained unchanged, please answer 'My anxiety level did not change' and explain why." Similar questions (Q3 and Q4) were asked for Flipgrid and answered in a free-text format.

8.2.6 Data Collection and Analysis 3: Questionnaires on Video Calls

A survey was conducted to determine how the participants felt about the video call. The questions about Mystery Skype were as follows: "Q1: Did you enjoy learning English with Skype? Q2: Do you think learning English with Skype helps you improve your English? Q3: Has your interest, motivation, or attitude toward English changed after learning English with Skype? Q4: Have you noticed anything new about your English ability after learning English with Skype?" The average of

each result was analyzed using a six-point scale (6: applies well; 5: mostly applies; 4: somewhat applies; 3: applies somewhat poorly; 2: does not apply very well; 1: does not apply at all) and the means of each result were analyzed. Participants were also asked to answer each question by providing a specific reason in an open-ended format.

8.2.7 Data Collection and Analysis 4: Open-Ended Responses on Flipgrid

Additionally, participants were asked to complete an open-ended questionnaire to determine how they felt about Flipgrid. Specifically, they were prompted with the following statement: "As a reflection on what you have learned with Mystery Skype, please discuss (in as much detail as possible) what you felt and thought about using the educational video-sharing tool (Flipgrid)." qualitative data collected from these free-text descriptions were used to conduct a quantitative text analysis using the same analysis method employed in Study 4 (described in Section 7.2.6).

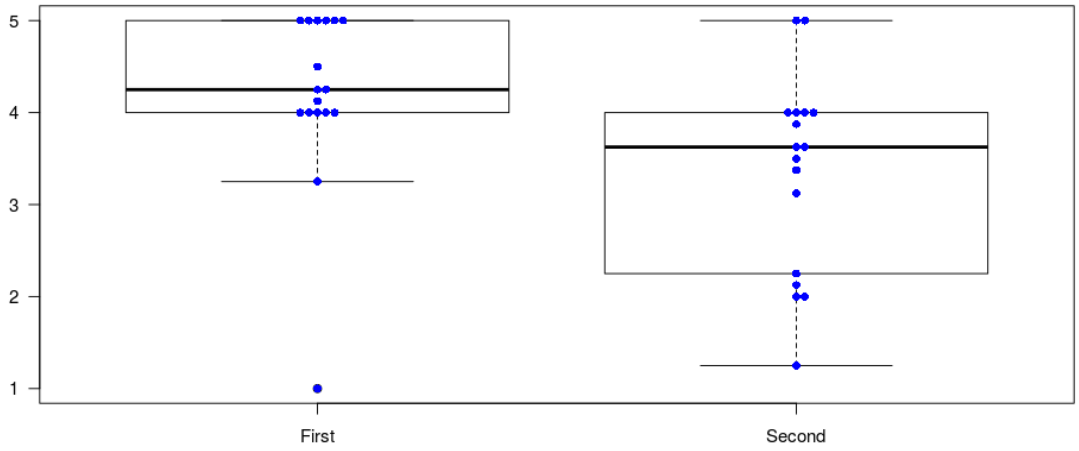
8.3 Results and Discussion

8.3.1 Results and Discussion 1: Questionnaires on Speaking Anxiety

Changes in the participants' speaking anxiety evidenced by the pre- and post-questionnaires are shown in Figure 8.1: $M = 4.20$, $SD = .98$ for the pre-questionnaire and $M = 3.34$, $SD = 1.07$ for the post-questionnaire. The reliability coefficient for the pre-questionnaire on speaking anxiety was $\alpha = .985$, and the reliability coefficient for the post-questionnaire was $\alpha = .985$. The overall trend shows that the post-values were lower than the pre-values, suggesting that speaking anxiety generally decreased. The difference in the means of speaking anxiety between the pre- and post-tests was examined using the Wilcoxon signed rank sum test. The results showed that $z = 3.112$, $p = .002$, and $r = .76$; the difference between these means was significant at the 1% level, and a large effect size was found. These results suggest that combining video calls (a form of SCMC) and Flipgrid (a form of ACMC) to facilitate English conversational exchanges between Japanese and foreign students may reduce speaking anxiety, as statistically significant differences were found between the pre- and post-interactions. In other words, the continued use of Flipgrid after Mystery Skype, which uses ICT, will provide opportunities for impromptu English communication and continued interaction in English, which will be helpful in reducing speaking anxiety.

Figure 8.1

Results of Pre- and Post- speaking Anxiety (N = 17)



Note: The upper and lower lines show the 95% CI.

Next, changes in each participant's speaking anxiety are reported. Table 8.1 shows the values of the changes in the speaking anxiety of the 17 participants from the pre- and post-questionnaires. The results reveal that speaking anxiety decreased among 12 of the 17 participants. To determine whether this change in speaking anxiety was related to English proficiency, the participants' English-related qualifications were checked. This check found that 13 participants had passed the Grade Pre-1 Eiken and that the participants—A, L, N, and O—who felt the same level of speaking anxiety before and after the program had passed the Grade Pre-2 Eiken. These results indicate that the combination of a video call and Flipgrid reduced anxiety among learners who were proficient in English but not among learners who were not.

Table 8.1

Changes in Each Participant's Speaking Anxiety (N = 17)

Participants	Anxiety	
	Pre	Post
A	4.00	4.00
B	4.25	3.63
C	4.00	3.38
D	5.00	4.00
E	5.00	3.63
F	4.00	3.50
G	4.25	2.25
H	4.50	2.13
I	4.00	3.13
J	4.13	2.00
K	3.25	2.00
L	4.00	4.00
M	1.00	1.25
N	5.00	5.00
O	5.00	5.00
P	5.00	3.88
Q	5.00	4.00

8.3.2 Results and Discussion 2: Open-ended Responses on Speaking Anxiety

To supplement the above results and investigate what helped reduce the students' speaking anxiety, the participants' open-ended statements from the questionnaires were reviewed. This section presents excerpts from these original statements that best represent the participants' characteristics.

An analysis of the open-ended statements in the post-practice questionnaire of the four participants—G, H, J, and K—who reported high anxiety (i.e., they selected "5: applies well" or "4: applies" in response to these items) in the pre-practice phase, but low anxiety (i.e., they selected "2: not applicable" to "1: not applicable at all") in the post-practice phase, revealed the following: The students felt (1) a sense of accomplishment when others understood their English and (2) less anxious when working with friends rather than alone. Regarding a sense of accomplishment, G reported, "Once I got through, I felt more confident," and H reported, "I was happy that they understood my English the first time I spoke—this made me feel a little less anxious about speaking English." Meanwhile, regarding group work, J noted, "I was less anxious about speaking English because I was able to check what I didn't understand by working in groups instead of talking one-on-one," and K recalled, "I was able to speak in a group." Taken together, these results suggest that successful experiences with speaking impromptu English and practicing English in groups (in which individuals do not stand out) may serve as scaffolding and reduce anxiety.

The free-text descriptions of Flipgrid revealed that the application's individualized video-sharing function reduced speaking anxiety by allowing participants to prepare before shooting their English videos, review their videos before posting them, and repeatedly view all videos.

Free comment from a learner (G):
"I was too nervous to participate much in the actual Skype conversation, but I found that using Flipgrid to reflect was very useful because it enabled to me fully prepare before sharing my videos."

Free comment from a learner (H):
"Flipgrid is good because it lets me watch things over and over again in the comfort of my own home, which gives me peace of mind."

Free comment from a learner (J):
"At first, I was embarrassed to have others watch my videos and to watch them myself, but once I got used to it, it became a habit for me to look back at my own appearance and find ways to improve, like if I should change how I sound or speak more slowly."

Free comment from a learner (K):
"I was surprisingly less embarrassed than I had expected. I could understand what the other person was saying by watching the video over and over again. It was refreshing and gratifying to actually be able to communicate with the other person."

These results indicate that the combination of video call and Flipgrid, which takes advantage of both SCMC and ACMC, may reduce speaking anxiety among relatively proficient English learners.

However, learners who had difficulty with English—learners A, L, N, and O—did not feel that their anxiety changed with the program. To determine why, their free-text descriptions in the questionnaire regarding the video call were analyzed; The analysis found that these students related anxiety to struggling with listening and vocabulary during improvisation, which hindered their communication. More specifically, A reported, "I felt a little anxious when I did not understand the questions"; L shared, "I felt impatient and anxious that the flow of the conversation would be interrupted when I couldn't understand the other person's English words"; N said, "I felt anxious when I couldn't catch the words"; and O stated, "I couldn't understand or say some words, so I think I would feel less anxious if I had the vocabulary." These results suggest that learners with poor English proficiency may feel less anxious if they can improve their listening skills and increase their vocabulary to express what they want to say in English.

To better support learners, teachers should instruct them on how to request clarification (i.e., ask the interlocutor to repeat things more clearly) and on how to ask for a comprehension check to see if their speech and understanding are correct. Other students may also benefit from practicing their English in advance, as in the case of the elementary school students in Study 4. As this study was conducted over a very short period of time (one week), learners who had difficulty with English were able to recognize their own problem areas but were not able to overcome their problems or experience a sense of accomplishment before the end of the study. This may have been a factor in their inability to reduce their speaking anxiety.

The participants' free-text descriptions about Flipgrid indicated that they felt anxious and burdened by uploading a video of themselves to the sharing service and putting in this effort outside of class. More specifically, A revealed, "I am just a little bit uncomfortable with exposing my face to the other person"; L wrote, "It was hard to shoot a video because I was worried that my family would hear"; N reported, "I feel bad about shooting videos"; and O stated, "I had to work alone outside of class, so I was anxious, and it was a big burden." Given these findings, when targeting learners who have difficulty with English, it may be necessary to give them the opportunity to record videos in groups during class time and to use emojis to hide parts of their faces (a function on Flipgrid) to reduce their resistance to sharing videos and their sense of being burdened by the task.

Only one participant, M, had a post-value for speaking anxiety higher than his pre-value. However, M's speaking anxiety level was low from the beginning of the study. M reported, "I felt a little nervous when I was unsure whether I was accurately communicating my questions. I felt I needed to change the way I asked questions or speak more slowly when the other person did not understand my questions." This participant seemed to realize the necessity of negotiating meaning, which is essential for SLA and can be done through comprehension checks.

8.3.3 Results and Discussion 3: Questionnaires on Video Calls

Participants were then asked to complete a four-item questionnaire to determine how they felt about their video call with the foreign students. Results of the descriptive statistics of these questionnaires are presented in Table 8.2, and the results of having the participants answer the questions using a six-point scale are outlined in Figure 8.2.

Table 8.2

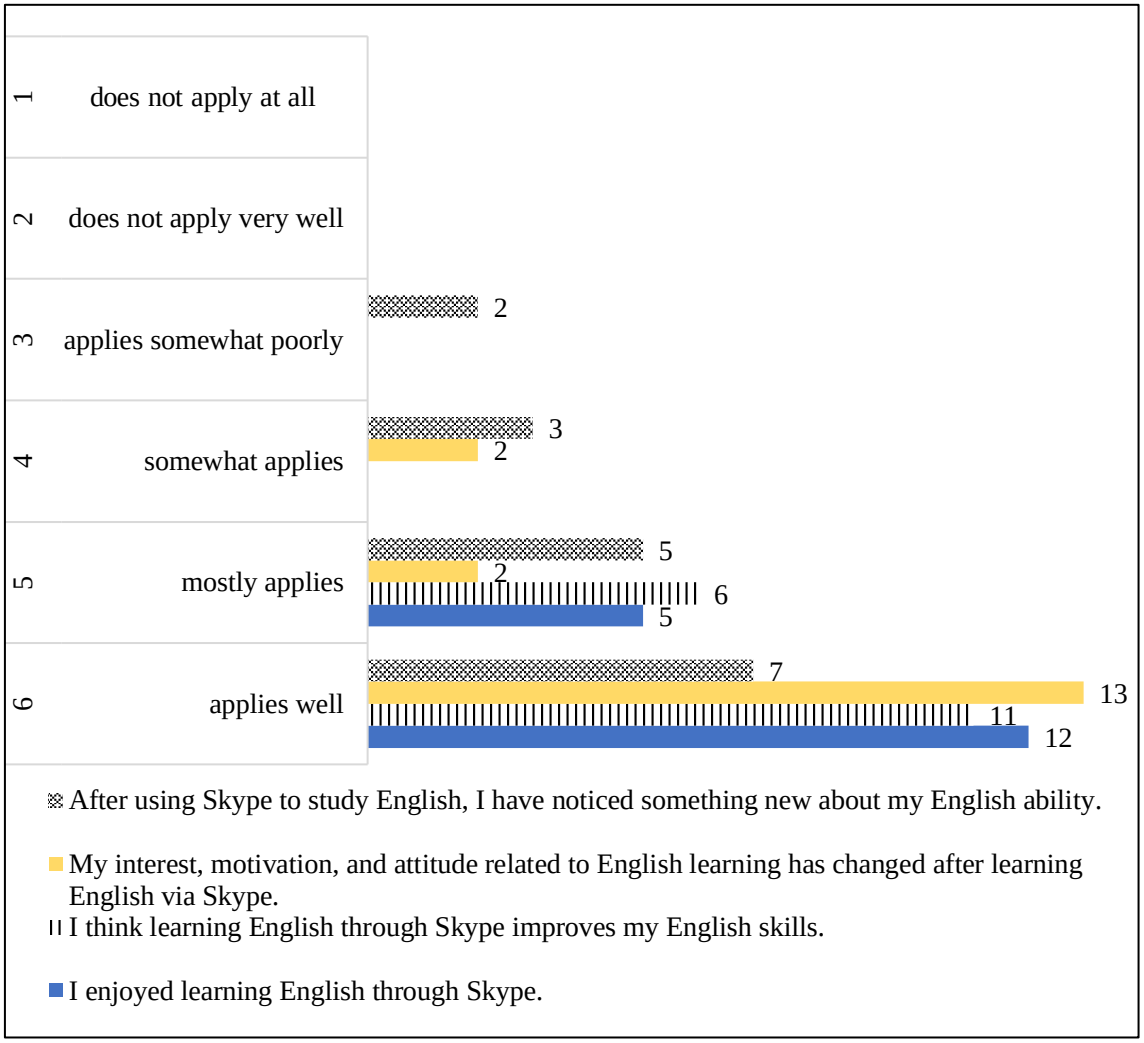
Descriptive Statistics of Video Call on Survey Results (N = 17)

	M	*SD*	Skew	Kurtosis	Min	Max
I enjoyed learning with Skype	5.71	0.47	-0.83	-1.39	5.00	6.00
I improved my English	5.65	0.49	-0.56	-1.78	5.00	6.00
Interest, motivation, and attitude	5.65	0.70	-1.52	0.70	4.00	6.00
Noticed new English abilities	5.00	1.06	-0.59	-1.05	3.00	6.00

All respondents answered that the following statements applied to them: “I enjoyed learning English through Skype” (applies well + mostly applies), “I think learning English through Skype improves my English skills” (applies well + mostly applies), and “My interest, motivation, and attitude related to English learning has changed after learning English via Skype” (applies well + mostly applies + somewhat applies). Meanwhile, 88% of the participants answered that the statement, “After using Skype to study English, I have noticed something new about my English ability,” applied to them (applies well + mostly applies + somewhat applies), and two participants answered that this statement “applies somewhat poorly” to them. These results suggest that all participants enjoyed Mystery Skype and felt that their attitudes toward English had transformed with the program, which suggests that the use of Skype may have increased their motivation.

Figure 8.2.

Impressions After the Video Call (N = 17)



To verify what parts of the program the participants found enjoyable and effective for improving their English skills and whether they experienced any changes in awareness or new insights after learning with Skype, their free-text descriptions were reviewed. First, to explore the specific rationale for their identification with the statement, "I enjoyed learning English through Skype," this study reviewed examples of their original statements that characterized their free-text descriptions for each item, such as "I enjoyed thinking of questions and guessing places," "It was like a game," "I enjoyed guessing the other person's country in the quiz," "This conversation was interesting because of the quiz format," "It was fun because it was a game," and "It was exciting and fun when we could guess each other's region." These statements indicate that many participants enjoyed the game-like form of communication activities (e.g., the yes/no questions and the objective of figuring out the other class's location) of Mystery Skype. Further, they specified that they enjoyed learning English via Skype

because they liked being able to communicate with foreigners. For example, the participants explained, “I had never had the opportunity to talk with children from overseas like this when I was in Japan,” “I did not have much experience communicating with foreign children,” “I was able to learn about things I didn’t know, speak English with foreigners, and have fun while communicating in English,” “I felt that it was a great experience to actually be able to speak English,” and “I liked feeling connected to the world.”

Next, to verify what factors participants felt improved their English, their free-text descriptions were reviewed, which found that they associated increased opportunities to practice their speaking with improved English skills. For example, the participants stated, “I think that actually speaking is the best way to improve my English-speaking ability” and “I feel like I have to do it because the opportunity to speak English is right in front of me.”

Regarding changes in the participants’ attitudes after the Skype-based learning session, the participants’ statements revealed that they developed positive attitudes toward continuing the interactions, which suggests that they may have developed a stronger motivation to speak English. For example, the participants stated, “I believe that I have shifted from feeling that I have to speak English to wanting to speak English,” “Through the activity of listening and thinking about the other person’s questions with interest, my desire to listen to and speak English grew,” “I have become more ambitious,” “I was able to communicate with people from other countries in English, and I think it helped to motivate me,” “The game-like style of the activity makes me want to ask better questions,” and “It makes me want to communicate better and have better conversations.”

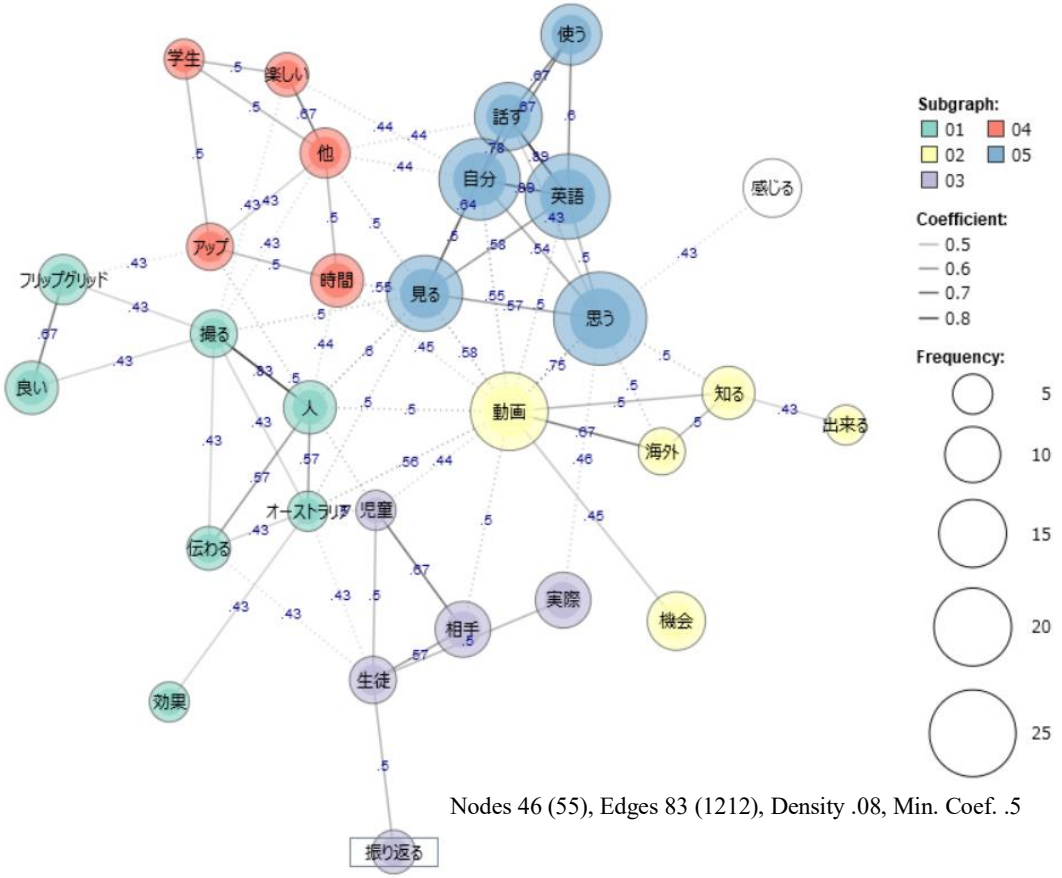
Regarding whether the participants noticed something new about their English language skills, the review revealed that the participants realized the limitations of their own English-speaking abilities. Specifically, the participants shared, “I became aware of sounds I cannot pronounce or pronunciations that I do not recognize,” “I felt I lacked the ability to communicate in English and it took me a lot of time to think and draw on my vocabulary,” “I thought I should study my English speaking and listening skills and vocabulary more carefully,” “I was surprised that I couldn’t find any expressions that I can use in my daily conversation. Check it out! I need to practice!” and “I realized that my speaking ability is not good enough.”

8.3.4 Results and Discussion 4: Open-ended Responses on Flipgrid

Next, the results of the free-text descriptions of Flipgrid were considered. The following results were obtained from preprocessing of the questionnaire data obtained from the 17 participants by KH Coder. The total number of extracted words was 2,933 (1,143), the number of different words was 544 (418), the number of sentences was 113, and the number of paragraphs was 16. To visualize the connections between words, a network analysis was conducted, and a co-occurrence network was drawn (Figure 8.3).

Figure 8.3

Co-occurrence Network of Frequently Occurring Words on Flipgrid (N = 17)



Nodes 46 (55), Edges 83 (1212), Density .08, Min. Coef. .5

The most eye-catching thing about this network diagram is that the word “think” (思う) is the largest word in the diagram and, around it, the word “English” (英語) is associated with the words “use” (使う), “speak” (話す), “myself” (自分), “watch” (見る), and “video” (動画), indicating that participants tended to think they were able to communicate in English through video sharing on Flipgrid. Responses that indicated a sense of accomplishment included, “It was good to watch myself actually speaking in English,” “I am very happy that I was able to use English and communicate with students of my generation living overseas, even if indirectly through video,” and “I watched other videos again and again to see if I received any replies to my video.” The network formed by “others” (他人), “fun” (楽しい), “students” (学生), “uploads” (アップロード), and “time” (アップロード) speaks to students emphasizing the following: “Everyone can learn at their own pace: uploads can be made at their own pace without being tied to time, and students who take time to understand can watch them over and over” and “It was fun because I could watch other people’s videos and it was easy to connect with people overseas because I didn’t have to worry about the time difference when watching or uploading videos.” Meanwhile, the words “foreign” (海外),

“know” (知る), “can” (出来る), and “opportunity” (機会) appear around “video” (動画) and are strongly connected to “think” (思う). These words highlight that the students interpreted Flipgrid as an application that supports personalization and makes it easy to freely review and participate in English exchanges; for example, one participant stated, “It was an opportunity to not only learn on the spot, but also to connect with students abroad later via video to learn more, and to participate at my personal pace in the best possible way.”

Next, regarding changes in attitudes and awareness toward learning English, “student” (生徒) was connected with words such as “actual” (実際), “partner” (相手), and “looking back” (振り返る), indicating that the experience of actually interacting in English through this exchange with students from other countries increased the students’ motivation to learn English. In turn, the students’ responses indicated that they discovered new issues with their English skills through the program, which they interpreted as an opportunity to make further progress. For example, they shared, “After all, I realized once again that being able to see the other person’s face and feel like I want to communicate with that person is a solid motivation for learning English,” “Facing the current situation of not being able to say what I want to say when communicating with a foreigner has increased my motivation to study English,” and “I felt motivated to study English more because I felt frustrated that I could not speak English immediately with a native English speaker.” This result is consistent with that reported by Swain (1995), who showed that students can realize that they need to learn English by experiencing the frustration of not being able to say what they want to say and by understanding their own English abilities and challenges. Another student stated, “The subtitle function was perfect for reflection,” indicating that Flipgrid’s subtitle function, which allows students to play videos with English subtitles, was a scaffolding that encouraged autonomous English learning.

Ultimately, the total number of video views across all students was 8,092—a total of 194 hours of viewing. As there were 17 Japanese and 13 Australian participants, a simple calculation revealed that each participant accounted for 269 views. The researcher plans to continue to create opportunities for communication between these groups by giving them different themes to converse about on an ongoing basis. However, this study made clear that the videos could not always be uploaded successfully due to problems with the application or the connection; in particular, large videos took a long time to upload in poor communication environments.

8.4 Conclusion and Issues for Further Study

This study examined the impact of using both lecture-based video calls and Flipgrid to connect a Japanese classroom and an Australian classroom on Japanese learners’ speaking anxiety. The study’s five key findings are as follows:

(a) A short-term SCMC video call combined with ACMC Flipgrid interactions with students abroad reduced the speaking anxiety of some students.
(b) Anxiety decreased among learners who were proficient in English, but not among learners who were not.
(c) The video call activity reduced anxiety by giving students an opportunity to try to successfully speak English without preparation and by allowing students to work in groups, which prevented each individual from standing out; specifically, these two characteristics of the activity served as a scaffolding. Meanwhile, the Flipgrid activity reduced anxiety by providing students with opportunities to take time to prepare and review their own speaking videos and rewatch others' videos multiple times.
(d) Anxiety may not have decreased among learners with poor English proficiency because they experienced challenges with listening and vocabulary during the video call and felt anxious about and burdened by the Flipgrid activity as they had to prepare and film themselves outside class time and share it with others. These findings suggest that teachers may reduce anxiety among learners with poor English proficiency by helping them improve their listening and vocabulary skills (e.g., through advance instruction, clarification requests, and comprehension checks), allowing students to record their videos during class time, and giving students the option to use emojis to hide parts of their faces (a function on Flipgrid).
(e) The combined program changed students' attitudes toward English learning. All participants developed a positive view of the video calls after the activity, which may have increased their motivation to learn English. Students were also able to recognize gaps in their English skills and the importance of working on their English as a result of getting frustrated over not being able to say what they wanted to say in English during the impromptu exchanges. A quantitative analysis of the participants' reflections on Flipgrid showed that they felt a sense of accomplishment; tended to believe that they were able to communicate in English; and realized that English can be useful, which increased their motivation to learn it.

Ultimately, this study proved that combining the advantages of the SCMC technology of video calls and the ACMC technology of Flipgrid to facilitate English interactions between Japanese and foreign students reduces students' speaking anxiety and increases their motivation to learn English, especially among learners proficient in English. These results are consistent with the previously mentioned finding that positive communication experiences can alleviate anxiety (Yashima, 2019), and that when learners realize that they cannot say what they want to say, they may pay more attention to relevant inputs and try to acquire new language knowledge (Swain, 1995).

The three main issues with this study are as follows:

(a) Future studies should be conducted with more participants and over longer periods of time. As this practical study involved one session of Mystery Skype and one week of Flipgrid with a very small number of university students, caution should be exercised in generalizing its results. It is important to verify the effectiveness of the program by continuing to implement it (continued use may also give learners who have difficulty with English an opportunity to successfully interact in English, which may help them feel a sense of accomplishment).
(b) It is necessary to minimize the influence of differences in participants' English proficiency on the results. As the present study was conducted with students from one university class, the ratio of students with poor and good English skills may not reflect the general population, and this may have been an interfering variable.
(c) Future research should confirm the usefulness of this program by conducting it with a diverse group of learners, including high school, junior high school, and elementary school students.

While these limitations should be addressed, this study remains significant: to date, few studies have actually attempted to uncover how using a combined SCMC- and ACMC-based pedagogical approach impacts student psychology. While this study only involved a very small number of college students and only conducted a video call and Flipgrid exchange with an overseas classroom over a short period, it still offers meaningful insights into how such a combined method impacts student anxiety. Based on the findings of Study 5, it is expected that IP may also increase as students' motivation to learn English increases. In addition, using ICT to interact with students from other countries is expected to enhance IP. However, it remains unknown how such a combined approach may impact IP among students. In light of this gap, several research questions were developed for a subsequent study, Study 6. Notably, Study 6 specifically involved participants who had difficulty with English. Given this sample, the researcher was interested in whether SCMC+ACMC activities that asked these students to interact with overseas classrooms in English increased their IP, and whether they increased their desires to communicate in English.

Chapter 9. Study 6: The Impact of Synchronous and Asynchronous Computer-mediated Communication on International Posture

9.1 Purpose

Following the discussion of the previous study, the current study examined the effects of the different CMC methods on IP among high school students who had difficulty with English. The students were divided into two groups: the SCMC+ACMC group, which combined lecture-based video calls and Flipgrid, and the SCMC group, which only used video calls. The research questions were as follows:

RQ19: Do high school students who have difficulty with English improve their IP by engaging in SCMC video calls?

RQ20: Does continuing Flipgrid (ACMC) use after a synchronous video call improve IP?

RQ21: If IP improves by continuing Flipgrid use after a synchronous video call, then what causes this change?

9.2 Method

9.2.1 Participants

This study's subjects were 158 first-year public high school students from four different classes (two students from these classes were excluded from the sample because they were absent). Participants provided written consent to cooperate in the study and for their data to be used in compliance with confidentiality agreements. Surveys were conducted in May, when the program began, and in July, when it ended.

The participants had just started high school, so they did not yet have well-established friendships with each other. Nevertheless, they demonstrated a calm demeanor toward daily life and school and seemed to care for each other quietly. During their junior high school English classes, the students became accustomed to lecture-style classes in Japanese. They did not seem to have much experience with interactive English-speaking activities.

We asked the participants to complete a questionnaire survey when they started high school to understand their impressions of their junior high school English classes and to make the survey useful for future classes. The results of the descriptive statistics for English proficiency are shown in Table 9.1. The results for favorability and confidence in English are shown in Table 9.2. The results for favorability and positive attitude toward English classes are shown in Table 9.3.

Table 9.1

Results of the Eiken (N = 158)

	None	Grade 5	Grade 4	Grade 3	Grade Pre-2
SCMC/ACMC group (n = 79)	37	7	12	23	0
SCMC group (n = 79)	31	3	14	31	0

Table 9.2

Results for Favorability and Confidence in English (N = 158)

	Like + good at	Like + not good at	Dislike + good at	Dislike + not good at
SCMC/ACMC group (n = 79)	9	35	0	35
SCMC group (n = 79)	14	36	1	28

Table 9.3

Results for Favorability and Positive Attitude Toward English Classes (N = 158)

	Like + positive	Like + negative	Dislike + positive	Dislike + negative
SCMC/ACMC group (n = 79)	22	32	12	13
SCMC group (n = 79)	36	23	9	11

Table 9.1 shows that few participants in both groups were proficient enough to pass the Grade 3 Eiken or above, which is the goal for junior high school graduation. Participants who answered "none" had also taken the test in junior high school but had not obtained the certificate. Table 9.2 shows that 89% of the participants in the SCMC/ACMC group and 81% in the SCMC group had a poor command of English. Table 9.3 shows that 57% of the participants in the SCMC/ACMC group and 43% in the SCMC group were reluctant to take English classes, indicating that a large number of students believed they had a poor command of English.

9.2.2 Procedure 1: Video Calls with Overseas Classrooms (Session 1)

As noted above, students were divided into SCMC/ACMC groups (Groups 1 and 4) and SCMC-only groups (Groups 2 and 3). The SCMC/ACMC groups used both video calls (over Skype) and Flipgrid to interact with students overseas, and the SCMC group only used video calls (over Skype) for these interactions. In September 2020, after the study had been completed, the SCMC group was also allowed to use Flipgrid to interact with foreign students to avoid any ethical problems by ensuring that all students had access to the same instructional methods.

The first session of video calls (Session 1) involved playing Mystery Skype. The rules were the same as those for the video calls in Studies 4 and 5 (detailed in Section 7.2.2); however, because the subjects were high school students, they were given an hour of class time to prepare for the video calls

before they went live. Specifically, every student was randomly assigned a country and asked to research it (Appendix 15). Next, the students worked as a group to create a worksheet with questions for guessing each other's countries (Appendix 16). After that, the students broke into pairs and tried to guess each other's countries using these questions. After this exercise, the students revised the questions and updated the worksheet accordingly to prepare for the next round (Appendix 16).

The researcher selected the partner countries for the video calls in Session 1 by connecting with schools in suitable time zones through a Skype group on Facebook. In total, four video calls were conducted with students from Thailand (Group 1), the Philippines (Group 2), and Australia (Groups 3 and 4). To facilitate the video calls, it was ensured that the classrooms had access to computers (one for the teacher and one for every two students), a projector (one for the whole class), and a screen (one for the whole class). The Thai students' English proficiency was higher than that of the Japanese high school students (the subjects of this study); they asked many questions in plain English.

Only one Mystery Skype session was held in each class. The time limit was set at 30 minutes. Students were divided into groups of four, and each class was divided into 10 groups. During the video call, each group took turns asking questions to students from the other country. The questions included "Is it a big country?" "Does your country have a coastline?" and "Do you speak English as a first language?" (Appendix 16). During the calls, students got creative and tried to think of more questions to obtain further information on things such as geography, time differences, and language. The students took notes of the questions and their answers on a worksheet (Appendix 17) and tried to use the information to determine their counterparts' location by researching maps and cultural information on their laptops. When groups could not agree on a possible location, they were asked to discuss their different opinions to verify their bases. To encourage students to figure out the location as quickly as possible, the group members were each asked to focus on different roles. Some groups also used translators on their computers to create questions. Through these activities, the groups gradually narrowed down their counterparts' locations (Figure 9.1).

Figure 9.1

Video Call Class Scene

9.2.3 Procedure 2: Flipgrid (Session 2)

After the video calls in Session 1, the SCMC/ACMC groups continued to communicate with their counterparts using Flipgrid. In the first class, the students broke into groups of four to five and uploaded videos in which they introduced themselves (1–1.5 minutes) in step with guidelines on a worksheet (Appendix 18). The teacher advised that their posts should align with the following prompts: "Say hello. Share two fun facts about yourself. Ask three questions you would like your friends to answer" (Appendix 19). In the second class, the students watched each other's uploaded videos and replied to them. The first group uploaded 34 videos and watched them 6,535 times (a total of 82 hours); the fourth group uploaded 64 videos and watched them 8,135 times (a total of 100.7 hours).

9.2.4 Data Collection and Analysis 1: Questionnaires on International Posture

Questionnaires were used to compare the participants' IP from before and after the programs to uncover whether any changes occurred based on the different instructional methods. The surveys were conducted in May (when the program began) and July (when the program ended). The questionnaire was based on Yashima's (2009b) questionnaire, which assessed the relationship between the L2 self and IP among high school students. Respondents were asked to answer 28 questions on IP using a six-point scale, ranging from 1—"It does not apply to me at all" or "I strongly disagree"—to 6—"It applies to me perfectly" or "I strongly agree." The overall IP scale used in this study is shown in Appendix 20. The researcher tabulated the scores of each questionnaire item, calculated the means, and conducted a two-way ANOVA with repeated measures to uncover any changes with the program.

9.2.5 Data Collection and Analysis 2: Open-Ended Responses on Video Calls

To determine whether there were distinctive descriptions in the free-response statements depending on the teaching method, the results for the SCMC/ACMC and SCMC groups were analyzed separately. Participants were asked to complete an anonymous questionnaire survey by answering the question, "What did you feel and think about your experience with Mystery Skype?" in an open-ended format. This design was chosen to identify how the students felt about their video calls with overseas students and what factors may have resulted in changes in their IP. In the past, the students regularly had time to reflect after class and write their impressions using the free-writing method, so they were accustomed to filling out such a reflection form. A quantitative text analysis was conducted using the qualitative data of the open-ended responses. This study employed the same analysis method as the previous studies (detailed in Section 7.2.6).

9.2.6 Data Collection and Analysis 3: Open-Ended Responses on Flipgrid

Participants in the SCMC/ACMC group were asked to provide open-ended responses in an

anonymous questionnaire survey to determine how they felt about interacting with foreign students over Flipgrid and the causes of the changes in their IP. Specifically, the students were asked what they felt and thought about using Flipgrid and to reflect on what they had learned. A quantitative text analysis was conducted using the qualitative data of these open-ended responses. This study employed the same analysis method as the previous study (detailed in Section 7.2.6).

9.3 Results and Discussion

9.3.1 Results and Discussion 1: Questionnaires on International Posture

Regarding the 28-item questionnaire on IP, this study calculated the reliability coefficient, α, and examined the internal consistency. Four items (14, 15, 17, and 18) had adjusted total item correlations of less than .020 and contributed little to reliability; therefore, these items were removed. A two-way ANOVA with repeated measures was conducted for the remaining 24 items. The reliability coefficient for the pre-questionnaire was α = .89 and that for the post-questionnaire was α = .89. The results of the descriptive statistics for both groups are shown in Table 9.4.

Table 9.4

Descriptive Statistics of Pre- and Post-Questionnaires for the SCMC/ACMC Group and SCMC Group on IP (N = 158)

Pre				Post			
SCMC/ACMC group (79)		SCMC group (79)		SCMC/ACMC group (79)		SCMC group (79)	
M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
3.27	.62	3.42	.60	3.52	.60	3.35	.61

These results reveal that there were no significant differences between the SCMC/ACMC and SCMC-only groups before the exchanges with foreign students from abroad. IP was not very high in either group. However, the IP of the SCMC group slightly decreased after the program, and the IP of the SCMC/ACMC group improved after the program. To uncover why IP slightly decreased in the SCMC group, participants who demonstrated a significant decrease in IP in the post-test were identified; after analyzing their results, it was found that they had a negative attitude toward English class and were not good at English. Consider, for example, the following excerpts from the free-text descriptions of the participants, labeled with their personal identification numbers: “I was nervous to speak with people from a country I had never visited before” (12), “It was difficult and nerve-wracking to speak in English” (46), and “I felt I had to practice my speaking and listening skills because I could not understand the other students” (72). These statements are evidence that the students were nervous about speaking English with foreigners they had never met and struggled with their speaking and

listening skills. Thus, conducting only one video exchange may make participants nervous, especially if they are not good at English, and cause them to realize that they have difficulty communicating with each other. Therefore, repeated practice and continuous guidance may be necessary.

Next, a two-way ANOVA with repeated measures with the two groups' results from the two time points (pre and post) was conducted to examine differences in IP by the instructional method. For the ANOVA, groups (based on the two teaching methods and the two time points) were set as independent variables, and the questionnaire was set as the dependent variable. The results are shown in Table 9.5 and Figure 9.2. Mauchly's sphericity test showed that the assumption of sphericity was not satisfied; therefore, the degrees of freedom were adjusted using the Greenhouse-Geisser method.

Specifically, the analysis showed that the main effect of the instructional method before and after instruction was not significant at the 5% level. The main effects of the times were also not significant at the 5% level. Next, the interaction effects between the method and time proved significant at the 5% level. As the interaction effects were found to be significant, a simple main effect test was conducted. The results of the simple main effect of the instructional methods showed a significant trend in the post-questionnaire (F (1, 156) = 3.04, p = .08, ηp2 = 0.02). The results confirm that although there was no statistical difference between the SCMC/ACMC and SCMC groups in the pre-survey (p = .13), there was a trend toward a significant difference between the two groups in the post-survey. The results of the simple main effect of time were found to be more significant at the 0.1% level in the SCMC/ACMC group at the post time point than at the pre time point (F (1, 78) = 7.26, p = .01, ηp2 = 0.09). Multiple comparisons using Holm's (sequentially rejective Bonferroni) method, which is adjusted for Bonferroni's method, showed that the SCMC/ACMC group demonstrated significant improvement based on the post-questionnaire (p < .01), while the SCMC group did not improve significantly (p = .49). The actual values were slightly lower. The fact that the main effect of time on IP was not significant indicates that the interactions with students abroad were not very effective in improving the participants' IP. However, the interaction effects of both factors were significant, and the SCMC/ACMC group demonstrated significant improvement. Ultimately, these findings suggest that combining synchronous video calls with Flipgrid (ACMC) may enhance IP in interactions with students abroad.

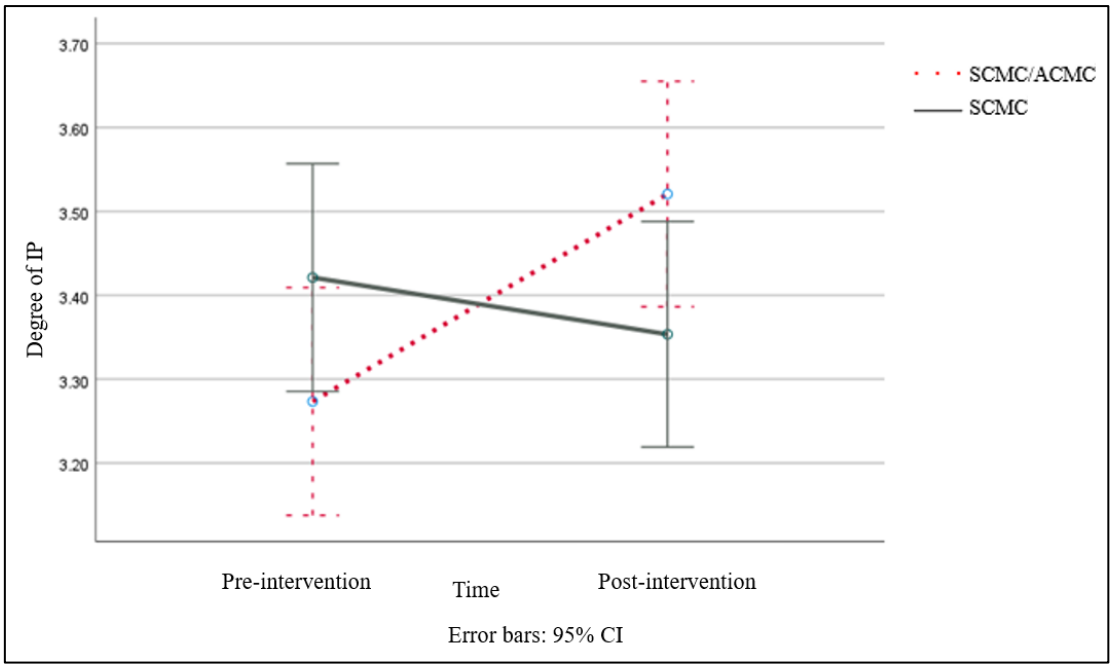
Table 9.5

Results of the Two-Way Repeated-Measures ANOVA (N = 158)

Source	Type Ⅲ sum of squares	Degrees of freedom	Mean squared	*F*	Significance	Partial η^2
Method	.008	1	.008	.020	.889	.0001
Time	.636	1	.636	1.786	.183	.0113
Method × Time	1.972	1	1.972	5.537	.020	.0343
Error	55.532	156	.356			

Figure 9.2

Results for the Method (SCMC/ACMC vs. SCMC) and Time (Pre- vs. Post-intervention)



9.3.2 Results and Discussion 2: Open-Ended Responses on Video Calls

To quantify the results of the qualitative analysis of the video calls, all data obtained from the open-ended questionnaire were preprocessed using KH Coder. The total number of extracted words was 5,888 (2,431), the number of different words was 588 (445), the number of sentences was 257, and the number of paragraphs was 178. Table 9.6 shows the top -15 most frequently used words and their frequency of occurrence. To visualize the connections between words, a network analysis was conducted, and a co-occurrence network of the first open-ended statements was drawn (Figure 9.3).

Table 9.6

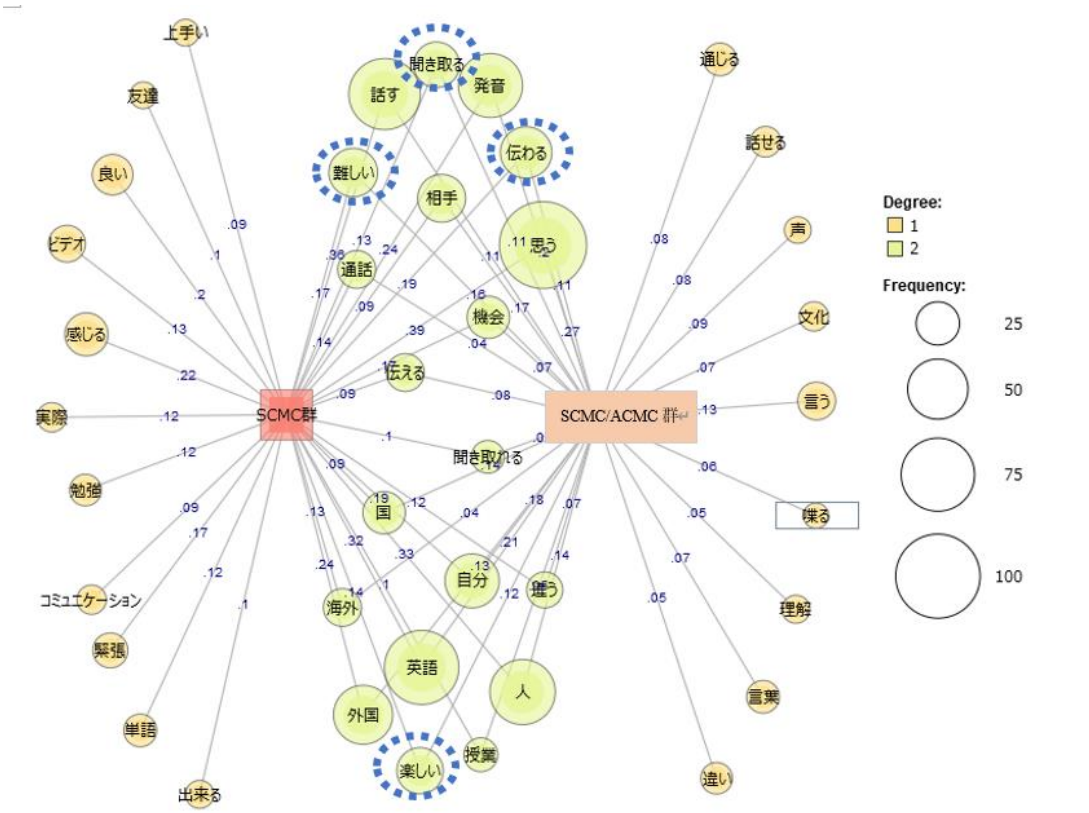
List of 15 Most Frequently Used Terms on Mystery Skype

Rank	Extracted Word	Frequency
1	思う (think)	107
2	英語 (English)	77
3	話す (speak)	71
4	人 (people)	59
5	発音 (pronunciation)	57
6	外国 (foreign country)	48
7	自分 (myself)	40
8	伝わる (communicate)	36
9	難しい (difficult)	32
10	相手 (partner)	31
11	楽しい (fun)	29
12	聞き取る (understand)	28
13	感じる (feel)	25
14	機会 (opportunity)	24
15	国 (country)	24

Figure 9.3

Co-occurrence Network of Frequently Occurring Words on the Video Calls

Nodes 42 (80), Edges 60 (152), Density .07, Min. Coef. .091



To determine how the participants felt about the video calls and how the instruction helped them change their IP, their open-ended statements about the synchronous approach were unpacked. Table 9.6 shows that “think” (思う), “English” (英語), “speak” (話す), “people” (人), “pronunciation” (発音), “foreign country” (外国), and “myself” (自分) were the most frequent responses. The actual free-text descriptions were as follows: “This was the first time I had communicated with a foreigner in English, so I had a lot of fun. I would like to do it again if I have the chance”; “I believe English is very important when talking with people living in foreign countries, and I would like to study English more and speak with people from other countries in English”; and “I realized that my English is not yet good enough, and I will try to improve it by myself.” Generally, the students’ responses were positive and indicated that they were aware of the need to learn English. These results suggest that giving students opportunities to converse in English with overseas classrooms through video calls may increase their motivation to learn English. Along these lines, other students shared, “When I speak English with my friends, I can be understood even if my pronunciation is not so good, but when I speak with people from other countries, I have to speak louder and with better pronunciation to be understood” and “I was surprised that my own English could be understood.” It is possible that the

students became more aware of their pronunciation by gaining experience in communicating—including, finding themselves unable to communicate—in English with foreigners.

To visualize the connections between the SCMC/ACMC and SCMC groups and the words used in the question (Impressions), a network analysis was conducted. Next, a co-occurrence network was drawn (Figure 9.3) to visualize the co-occurrence between the extracted words and the external variables of the SCMC/ACMC group (n = 79) and SCMC group (n = 79). The depicted circles represent extracted words, and the squares represent external variables. The minimum number of occurrences was set to 5, and the number of edges representing co-occurrence relations was set to 60, which was the top number (in terms of the strength of co-occurrence relations).

Figure 9.3 shows that the words "communicate," "difficult," "enjoy," and "understand" frequently co-occurred in both groups; this indicates that the students generally felt, as they put it, that "it is fun to communicate with each other" and "it is difficult to understand unfamiliar English." It is also evident that the students enjoyed interacting with other high school students. In Japanese classes, students usually only hear English in the form of teacher talk (i.e., the range of language the teacher uses with the learners), in which the teacher pronounces each word slowly and clearly according to their students' levels. Even though students are sometimes able to speak English with a foreign teacher in their English classes, they rarely have the opportunity to communicate at the natural speed spoken by students their own age. The following are some of the students' free-text descriptions on this matter, which suggest that their impressions resulted from authentic interactions that stimulated their intellectual curiosity:

- "When I actually tried to speak with them, I had a difficult time understanding their English because they spoke a little too fast. However, it was fun when I could understand the words I knew and the general meaning of the words. I was also happy when I could convey my intentions to the other person, and it was fun to be able to understand what we were saying to each other, so I wanted to do it again." (A student from the SCMC/ACMC group)
- "I had a hard time understanding them because their English pronunciation was too good, but I enjoyed talking with them on the video call because I don't have many opportunities to talk with people from other countries. It was also good to be able to hear what I wanted to know directly from foreigners. It was good to be able to convey what I wanted to say about Japan through the video, and it was fun to listen to foreign people of about the same age talk. I would like to do it again." (A student from the SCMC group)

9.3.3 Results and Discussion 3: Open-Ended Responses on Flipgrid

Next, KH Coder was used to preprocess the data obtained from the SCMC/ACMC group's responses to the open-ended questionnaire to quantify the results of the qualitative analysis on Flipgrid

(Session 2). The total number of extracted words was 2,240 (939), the number of different words was 370 (268), the number of sentences was 119, and the number of paragraphs was 84. Table 9.7 shows the top 15 most frequently used words and their frequency of occurrence. To visualize the connections between words, a network analysis was conducted, and a co-occurrence network was drawn for the responses to the second open-ended question (Figures 9.4). The minimum number of occurrences was set to 4, and the number of edges representing co-occurrence relations was set to 60, which was the top number (in terms of the strength of co-occurrence relations).

Table 9.7

List of 15 Most Frequently Used Terms on Flipgrid

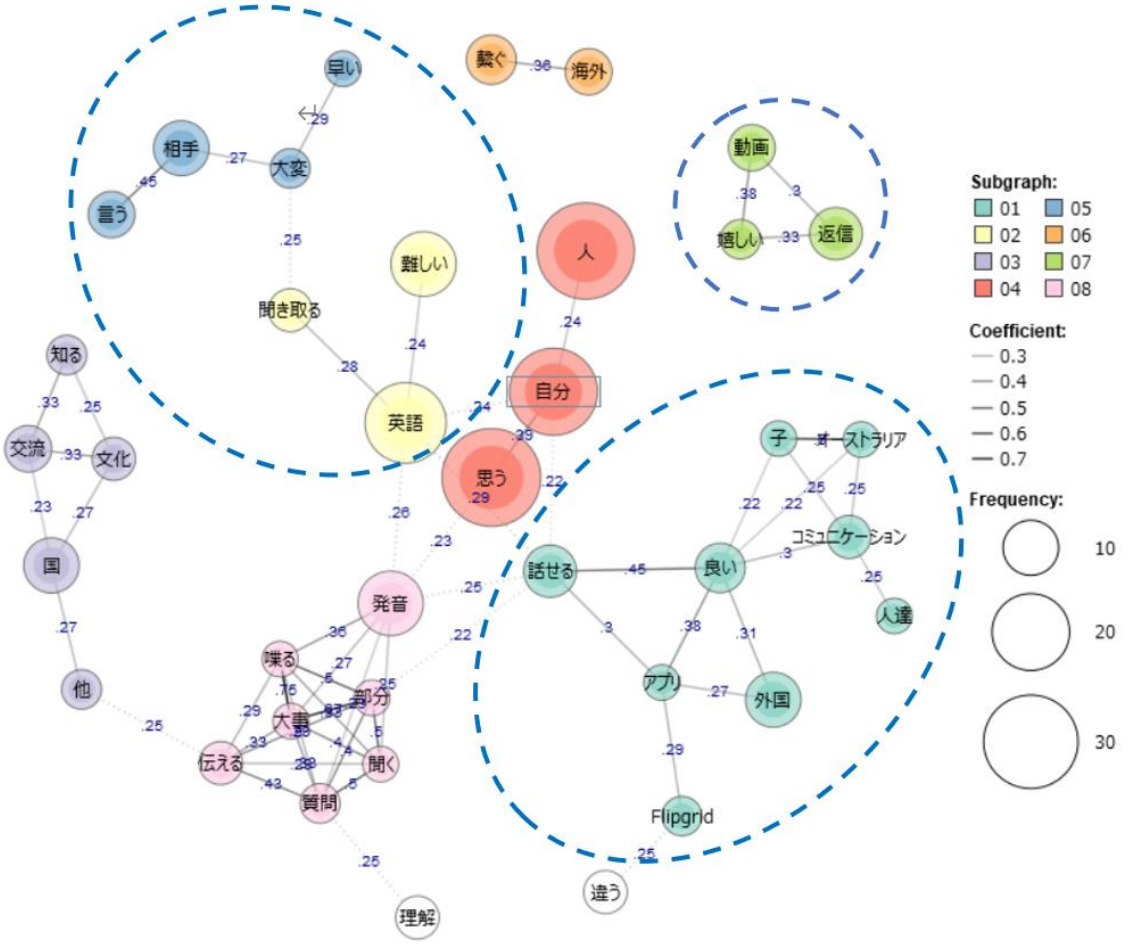
Rank	Extracted Word	Frequency
1	思う (think)	33
2	人 (people)	32
3	自分 (myself)	26
4	英語 (English)	22
5	難しい (difficult)	14
6	発音 (pronunciation)	14
7	外国 (foreign country)	10
7	国 (country)	10
7	相手 (partner)	10
7	話す (speak)	10
8	楽しい (fun)	9
8	返信 (reply)	9
8	話せる (can speak)	9
9	繋ぐ (connect)	8
9	良い (good)	8

Next, this study considered the co-occurrence networks (Figure 9.4) and the students' descriptions of their experiences with Flipgrid to establish how they felt about the asynchronous Flipgrid instructional approach and what factors may have improved their IP. The results in Table 9.7 are similar to those in Table 9.6. "Think" is in first place, and many common words appear, such as "myself," "difficult," "pronunciation," "partner," and "fun." Overall, it appears that using Flipgrid asynchronously allowed the participants to enjoy and continue interacting in English, and this experience of positive communication with others improved their IP.

Figure 9.4

Co-occurrence Network of Frequently Occurring Words on Flipgrid

Nodes 38 (46), Edges 60 (432), Density .085, Min. Coef. .215



The three main results are as follows. First, the words that strongly co-occurred with "think" were "myself," "English," "pronunciation," and "can speak." "Can speak" co-occurred with "good," around which a network of "communication," "application," and "foreign country" formed, which suggests that the students enjoyed communicating with foreign students through the Flipgrid application. Second, the Jaccard coefficients were high for the words "reply," "happy," and "video," indicating that the participants felt pleasure when communicating with a partner. The results show that the participants were happy to receive replies from their partners, enjoyed exchanging messages, and were willing to learn English voluntarily. Third, the "English," "difficult," and "listening" networks, and the "fast" and "hard" responses, indicated that some students had difficulty hearing and understanding the fluent English of Australian high school students and responding to them in English. However, this practice helped the students recognize that they needed to improve their listening and speaking skills and their vocabularies. However, Flipgrid can give students many opportunities to practice their listening by

enabling them to play videos as many times as they want and to use subtitles if necessary. The following are some examples of the students' free-text descriptions:

- "I thought Flipgrid was a great app that made it easy to talk to people in other countries that I normally wouldn't be able to connect with."
- "I enjoyed getting replies to my videos and replying to other videos so much that I decided to reply to others more. I've never been very good at talking, but these apps made it a lot easier."
- "The Australian kids all had such cool pronunciation that I wanted to be able to speak English myself. It was very good because it stimulated me to do my best in communicating in English from now on."
- "I was able to reshoot the video, unlike a video call, so I felt safe. It was fun to reply."
- "I thought it was difficult to understand fluent English, but I could listen to it over and over again."
- "I had a hard time responding to my partner's questions in English. I felt I didn't learn enough."
- "I had a hard time listening to the fast English of people from overseas. There are many words I don't understand, so I have to study them."
- "I was happy that even if I didn't understand what they were saying, I could catch on after listening a few times."

9.4 Conclusion and Directions for Further Study

This study examined the effects of different CMC methods on IP among high school students with low English skills. The students were divided into two groups: the SCMC+ACMC group, which combined lecture-based video calls and Flipgrid, and the SCMC group, which only used video calls.

This study yielded the following three notable findings:

(a) A single SCMC video call did not enhance IP. Participants who were reluctant to take English classes and who had a poor command of English still felt nervous and found it difficult to communicate in English after only one videocall.

(b) Using Flipgrid's asynchronous features to continue English exchanges with foreign students after interacting with them in English on a synchronous video call may improve students' IP.

(c) Combining a video call with Flipgrid gave students more significant experience with interacting in English with foreign students and stimulated their intellectual curiosity. The students seemed to enjoy communicating with each other, were aware of their counterparts, and were willing to learn English. Students also recognized that they might need to improve their English skills in terms of listening, speaking, and vocabulary, and suggested that they may overcome these problems by more frequently listening to English using Flipgrid's asynchronous playback and

subtitling functions.

These results are consistent with the previously mentioned finding that "the experience of positive communication with counterparts from different cultures leads to IP and learning motivation" (Yashima, 2004). Therefore, continued interaction in English in both synchronous and asynchronous environments may give students more positive communication experiences with foreign counterparts, which may enhance their IP and motivation to learn.

Meanwhile, this study had five main issues:

(a) It only examined how different instructional methods impacted IP and did not examine speech. As this study revealed overall trends and effects of IP, which is only one of the affective aspects, examining objective English-speaking ability as well would enhance the significance of this study.
(b) As the study was conducted over a short period (two months), the results may be difficult to generalize.
(c) The SCMC-only and SCMC/ACMC groups had very different amounts of exposure to English videos (the latter group had over 100 hours of video viewing time); this may have impacted the meaningfulness of the results.
(d) This study did not determine what kind of video or reply content affected IP.
(e) This study did not involve an ACMC-only group; therefore, it is not clear how the SCMC/ACMC group may have been differently affected by the video call and Flipgrid.

Nevertheless, this study is one of the first to consider how Mystery Skype and Flipgrid impact student psychology. Notably, it uncovered that the combined use of Mystery Skype and Flipgrid can improve IP in students who struggle with English. This result offers insights useful to help teachers determine how they may best use ICT to nurture English language skills. Although introducing students to new ICT equipment may be difficult at first and cause some anxiety, using networks that allow students to easily communicate with students in other countries may help them become aware of the gaps in their own English abilities and, relatedly, motivate them to learn English. Moving forward, it will be necessary to continue to conduct studies on the impact of ICT-based pedagogies on student psychology and performance. For example, it is important to comparatively verify the impacts of a synchronous–asynchronous approach, asynchronous-only approach, and other ICT-based approaches on the participants' interactions with each other.

Chapter 10. General Discussion

This chapter discusses the findings of Studies 1–6 to offer new insights into the use of SCMC—which enables real-time interactions—and ACMC—which facilitates interactions across time zones—in English language education.

Broadly, this doctoral dissertation focuses on how the use of SCMC and ACMC technologies within and beyond the classroom can impact the affective aspects (in particular, speaking anxiety, WTC, and IP) and speaking abilities of English language learners in Japanese schools. Based on the approaches to SLA suggested by SCT, the ZPD, CSCL, the interaction hypothesis, and the output hypothesis, this research investigated how various applications of SCMC and ACMC affected students' psychologies and speaking skills. Specifically, six empirical studies were conducted to examine how one-on-one online English conversations involving improvisation and lecture-based video calls may have influenced students' speaking anxiety, WTC, and IP and speaking skills and whether combining synchronous video calls with the asynchronous features of Flipgrid may reduce speaking anxiety while improving IP. Regarding synchronous ICTs, Studies 1–3 focused on one-on-one online English conversations among high school and university students with both strong and weak English skills. Meanwhile, Study 4 involved real-time, lecture-based video calls between Japanese and overseas elementary schools. Studies 5 and 6 involved lecture-based video calls and ACMC interactions between Japanese and overseas high school and university classes.

In unpacking the outcomes of these studies, this chapter elaborates on how the studies' findings answer this doctoral dissertation's three general research questions. Next, this chapter focuses on how each study answered its own more specific, driving research questions.

10.1 General Discussion on Research Question 1

10.1.1 Overview of Findings on General Research Question 1

This section begins by elaborating on how the findings respond to the first general research question and then turns to how they speak to the specific research questions of the first four studies.

General Research Question 1

How does the use of synchronous ICT affect the affective aspects—anxiety, WTC, and IP—and speaking skills of English language learners from different types of schools?

a) This research revealed that the individualized instructional format of one-on-one online English conversations, in which students do not have to worry about what their friends and others think of them, made it easier for them to improvise and challenge themselves to speak in English. Additionally, their anxiety decreased as a result of becoming accustomed to interacting in English with foreigners through repeated one-on-one online English conversations.

This research revealed that anxiety about speaking in English among Japanese students can be related to a lack of practice in speaking English without preparation and worries about receiving negative feedback (a finding which previous research has also reported). Some learners in Japan have

not had previous opportunities to improvise in English; often, this is because they have not yet had a need to use English to communicate with foreigners. One-on-one online English conversations can give such learners a chance to practice impromptu English interactions. However, the one-on-one format of such conversations can make students nervous about trying to speak English because they may worry that they may not be able to maintain the conversation if their skills are not strong enough to understand or respond to their interlocutors or express themselves; for example, they may be afraid of being silent because they cannot express themselves, which may make them feel awkward. Nevertheless, when faced with these fears, students in one-on-one conversations may push themselves to speak English to avoid such awkward moments. Furthermore, foreign instructors in such conversations were accustomed to speaking English with beginner English learners and were able to respond immediately; this seemed to increase the number of conversational turns and allowed the exchange to continue. By practicing such exchanges, the learners became accustomed to speaking in English, which may decrease their speaking anxiety.

b) Participants with both good and poor English skills were able to recognize their challenges with English through impromptu exchanges during one-on-one online English conversations. They were able to negotiate meaning to overcome these challenges and build confidence by having such successful experiences, which in turn reduced their speaking anxiety and improved their speaking abilities.

This point offers crucial insights useful for improving the current situation of English language learning in Japanese schools. Today, the goal of English learning tends to be for students to accumulate English knowledge; for example, pedagogies are largely rooted in teacher-led knowledge transfers and a lot of time is spent on input. Accordingly, students are not afforded many opportunities to practice the output necessary to communicate in English, which help them develop their speaking skills. This research found that even participants who were good at English recognized that it was difficult to communicate in English without preparation and accordingly tended to rely on prepared manuscripts. Participants who were not good at speaking English were afraid to improvise and tended to avoid speaking English because they lacked confidence in their own English abilities. The one-on-one online English conversation programs implemented in the studies in this work reduced students' fears of speaking English without prepared manuscripts and improved their speaking abilities by giving them practice with improvising in English. Over time, successful experiences speaking English enhanced their confidence in their English abilities and reduced their speaking anxiety.

c) Video calls between an overseas classroom and a classroom in Japan that facilitated interactions between groups of students from each region improved student WTC and speaking skills. Students

across proficiency levels found video call activities (e.g., Mystery Skype) enjoyable. However, the results showed that students' WTC and IP cannot be expected to improve after only one video call session, indicating that repetition is important to promote effectiveness.

Even without the one-on-one individualized instructional format, repeated group engagement in video calls allowed students to ask and answer questions and interact in English with their counterparts on the spot, even in a simultaneous classroom situation. These findings suggest that using video calls to teach English in this way improves WTC and speaking skills. The reason for this may be that the students enjoyed the activity itself; specifically, students spent their video calls with the overseas class playing Mystery Skype, a quiz-style question-and-answer activity. These results suggest that such engaging uses of video call technologies (e.g., to play Mystery Skype) can help students develop a positive attitude toward learning. Specifically, they can adopt a positive approach to using English and the skills they need to successfully communicate in English with others independently—key expectations of the Courses of Study of Elementary, Junior High, and High Schools.

However, as suggested above, engaging in only one session of Mystery Skype did not have a positive impact on the students' English learning. In fact, this first video call ended in tension, making it difficult for participants to feel a sense of accomplishment regarding their English. Moreover, because the group question-and-answer session was conducted in turns, individual participants had few opportunities to actually speak English and thus few chances to identify the limits of their own English skills. Students should be given opportunities to realize their areas of difficulty and to challenge themselves to overcome these issues; doing so will eventually lead to successful experiences that will build their confidence.

10.1.2 Overview of Findings on the Specific Research Questions of Studies 1, 2, 3, and 4

This section responds to the specific research questions of Studies 1, 2, 3, and 4 and synthesizes these responses to more fully answer the first general research question. Specifically, in Study 1 (Chapter 4), 34 high school students who were proficient in English were divided into two groups: an improvisation group (17 students who did not prepare a manuscript) and a script group (17 students who prepared a manuscript). The online English conversation sessions were conducted 20 times between May and October. The teaching methods were then switched for each group, and one-on-one online English conversation sessions were conducted 17 times from November to February for comparison and validation. The results demonstrated that even high school students who were proficient in English had high levels of speaking anxiety before the one-on-one online English conversations (RQ1), and that long-term repetition of one-on-one online English conversations can reduce speaking anxiety (RQ2). However, when conducted over a longer period, no differences were observed between the decreases in speaking anxiety across the improvisation and script groups (RQ3).

This suggests that continued long-term speaking practice in the form of one-on-one online English conversations can be expected to reduce speaking anxiety with or without a manuscript.

This finding offers an important insight: Even proficient English learners with high speaking anxiety can be encouraged to participate in their first one-on-one online impromptu English conversations, without preparing a script beforehand. In the context of Japanese education, in which learners tend to rely on manuscripts and are afraid to engage in impromptu English conversations because of speaking anxiety, these findings suggest that teachers may help their students become more comfortable in speaking English by facilitating one-on-one online English conversations, which can offer students a non-threatening environment (where individuals do not stand out) in which to practice English exchanges without manuscripts.

In Study 2 (Chapter 5), four university students with good English skills were divided into an improvisation group and a preparatory group and asked to engage in one-on-one online English conversations over a short period (one month) to test how these different instructional approaches impacted their speaking anxiety and speaking skills. The results showed that engaging in one-on-one online English conversations over this short period reduced speaking anxiety among these students. Notably, the reduction in anxiety was especially pronounced for students who did not prepare for their conversations—the preparatory group only demonstrated a slight improvement in speaking anxiety (RQ4). While there were few differences in the effects of the different methods on speaking accuracy, fluency and complexity tended to be facilitated more by improvisation (RQ5).

The results suggest that preparation plays a role in whether online English conversations reduce speaking anxiety and improve some markers of speaking ability: Speaking anxiety significantly decreased with the program in the improvisation group and fluency and complexity improved with the program in the improvisation group; ultimately, these results suggest that impromptu one-on-one English conversations may improve speaking anxiety and some elements of speaking ability in university students with relatively high proficiency more than conversations for which the students prepare a manuscript, even over a short time period. This may be because, although the students felt some anxiety while engaging in improvisational English conversations and sometimes struggled to express themselves in English, they received feedback from their instructors, which worked as a scaffolding that helped them gradually become more comfortable with speaking English and therefore feel that they were able to continue the exchange. Given these results, it is believed that participants will come to realize the benefits of one-on-one online English conversations, during which, unlike presentations, they can interact with another person and realize the need to practice negotiating meaning.

In the case study of Study 3 (Chapter 6), one university student who had difficulty with English was asked to engage in impromptu one-on-one online English conversations (organized as in Study 2) over the course of one month to verify how their speaking anxiety and speaking ability changed with the

instruction. The student's speaking anxiety greatly decreased (RQ7); meanwhile, her speaking ability—measured by fluency, complexity, and accuracy—improved and remained strong months after she had finished the program (RQ8). Notably, this finding clarifies that even learners who are uncomfortable with English or who have poor English skills may gradually reduce their speaking anxiety and improve their speaking ability (and subsequently maintain a relatively strong speaking ability) by repeatedly practicing impromptu English exchanges.

Thus, in both Study 2 (Chapter 5) and Study 3 (Chapter 6), the university students, regardless of their levels of English proficiency, improved their speaking anxiety and speaking skills by continuously practicing speaking English in one-on-one online conversations over a short period. Importantly, these results suggest that impromptu English conversations can reduce speaking anxiety and improve speaking skills in students with varied levels of English proficiency, even when conducted only eight times over the course of one month (i.e., even when not conducted over the long term). In particular, the results discussed above convey that learners who are not good at English tend to underestimate their ability to communicate in English because they have little experience doing so; however one-on-one online English conversations can offer students a relatively easy and low-pressure way to practice and develop their English skills. Even though students may at first find it difficult to practice their English in spontaneous one-on-one conversations with overseas instructors, consistently engaging in such conversations with ALTs may help students learn to enjoy expressing their own opinions in English; this may improve their motivation to speak English and lower their speaking anxiety, which may make them more comfortable interacting in English with their classmates in regular English classes. In other words, asking students to consistently engage in real-life, impromptu conversations that make using English inevitable may lower their anxiety about speaking English and enhance their English skills. Even if it is challenging to have students participate in actual impromptu conversations, when teaching speaking in a regular class, it would be significant to increase opportunities for speaking by first moving from a paired instructional format to a group instructional format, such as 3- or 4-person groups, to ensure opportunities for pushed output. In addition, since the illustrations used as hints in the photo description task in this study functioned as scaffolds, it may be efficient to use visualized three-frame cartoons as hints in speaking activities along with keywords and key sentences.

Meanwhile, Study 4 (Chapter 7), investigated the effects of using a synchronous ICT in a lecture-based simultaneous classroom situation. Fifty-six elementary school students in Japan were connected with an overseas class via a video call to play a game called Mystery Skype, which involved asking questions and listening to answers in English to guess the other class's location. As a preliminary exercise, they practiced with an ALT and conducted a mock Mystery Skype before playing a real game of Mystery Skype with an overseas class. During the study, the students played two games of Mystery Skype, each with a different foreign class. Notably, the aim was to test this strategy to see if it may be

successfully replicated in many educational settings. The results indicated that playing only one game of Mystery Skype did not increase the students' WTC, but that repeatedly practicing and playing the game did improve their WTC. However, it is notable that the students' levels of unwillingness to speak English were low before they engaged in this program and did not change much after it (RQ11). However, the students developed a better ability to create questions in English after completing the activity, which developed their English-speaking ability; specifically, after two games of Mystery Skype, the students increased their use of question words and began to ask more questions that were mutually relevant to the parties on the call (RQ12).

Therefore, this study demonstrated that Japanese elementary school students can improve their WTC and speaking ability by communicating with overseas students over multiple video calls (here, by playing Mystery Skype). This study therefore offers another ICT-based approach to improving students' English language abilities aside from one-on-one online English conversations. In Study 4, group work served as scaffolding. The Introduction to this doctoral dissertation pointed out that many English teachers tend to be reluctant to ask their students to engage in impromptu interactions and think that they will find them difficult. However, importantly, the results of this study suggest that Mystery Skype can be implemented to enhance English language learning, even among beginners. Accordingly, as a synchronous ICT-based pedagogical strategy that involves improvisation, Mystery Skype can address the current lack of English instruction rooted in impromptu interactions in Japanese classrooms.

10.2 General Discussion on Research Question 2

10.2.1 Overview of Findings on General Research Question 2

Based on the results of General Research Question 1 above, this section now turns to General Research Question 2. In addition, it reflects on the results of the specific research questions for Studies 2, 3, and 4 to synthesize the specific mechanisms influencing learners' affective and speaking skills.

General Research Question 2

What factors influence learners' affective aspects—anxiety, WTC, and IP—and speaking skills? Specifically, what factors determine how synchronous ICT can be used to improve learners' affective aspects—anxiety, WTC, and IP—and speaking skills?

a) The one-on-one online English conversation environment enabled students to produce pushed outputs without fear, because there was no need to worry about errors, embarrassment in public by classmates, or negative evaluations. As students with both low and high English proficiency engaged in more on-the-spot interactions, they more frequently negotiated meaning and worked to interact in English.

These results are important because they are consistent with the results of previous studies that have shown that anxiety may be reduced (1) in a non-threatening environment that does not require individuals to perform in front of other learners (Crookall & Oxford, 1991), (2) by engaging learners in moderately risky activities in a fear-free environment, and (3) by allowing learners to have experiences that can help them learn to tolerate ambiguity (Oxford, 1999). One-on-one online English conversations can provide such an environment. As already mentioned, previous studies show that teachers often avoid asking students to practice their English through impromptu interactions or ask them to prepare or memorize a manuscript and then present it because they are concerned about making their learners anxious (British Council, 2020; Chino, 2018; Chino & Mineshima, 2016; Kawashima, 2019; Kobayashi, 2020a). However, this strategy not only prevents students from experiencing impromptu exchanges, but also largely fails to improve their speaking anxiety or help them acquire speaking skills. This study found that asking students to engage with an interlocutor by describing their thoughts about a scene in a picture encouraged them to speak by compelling them to realize that they can tolerate ambiguity and communicate with others in English even if their English is not grammatically correct. Therefore, this study is significant because it clarifies that using one-on-one online English conversations in a fear-free environment can improve speaking anxiety by challenging students to engage in the moderately risky activity of impromptu English communication in a way that gives them experience in tolerating ambiguity by prompting them to negotiate meaning.

b) The chat box function facilitated meaning negotiation between students and instructors and thus served as a scaffolding. Meanwhile, by repeating similar tasks, students became familiar with speaking English in improvised situations, successfully communicated with others, gained confidence, and reduced their anxiety.

Importantly, these results demonstrate that the chat box function can help a student understand the instructor's verbal expressions, especially their feedback, because it gives the student the opportunity to engage this information in a text-based format. This is expected to improve comprehension and facilitate meaning negotiation. In other words, even in situations where the participants are not confident in their listening skills and cannot understand their instructors' English, they can still continue the conversation. Even if a student does not know the English expression presented in the chat box, they can ask their instructor about its meaning or look it up in a dictionary. Furthermore, because the contents of the chat box can be checked at any time after the online English conversation, participants can refer to it for review and reflection, which will help them to consolidate their English expressions. Until now, it has been difficult for students to review and reflect on the content of conversations and English expressions used in F2F interactions—the chat box function can resolve such issues.

c) When the instructor spoke slowly, had a gentle disposition, and gave brief feedback, the students' speaking anxiety decreased.

This finding is significant because it emphasizes the importance of the instructor's behavior on the students' anxiety; this suggests that instructors should treat learner errors, such as mispronunciation, in a friendly manner and help learners negotiate meaning to facilitate understanding, thereby giving them a sense of security. Slow speech and brief feedback from the instructor indicate that the instructor adjusted their approach according to their student's abilities, suggesting that it is important to individualize online English conversations for each participant. Scholars have reported that providing opportunities for learners to experience a sense of accomplishment (Matsuda & Goble, 2004) and, relatedly, regular experiences of success are important for reducing anxiety (Dörnyei, 2001). As they can facilitate such positive experiences, slow speech and short feedback from the instructor, even during impromptu English interactions, may reduce students' speaking anxiety.

d) In order to improve their students' speaking abilities, teachers should create opportunities for them to speak in English with instructors in an impromptu manner to make the students aware of their own English language challenges, to allow the instructors' spoken English to serve as a model for the students' ideal L2 selves, and to give the students opportunities to frequently negotiate meaning to overcome challenges.

However, when communicating in English without any advance preparation, students became frustrated when they could not express themselves and thus could not communicate with others in English. Nevertheless, this experience improved their speaking abilities. These results support the claim that unstable language use when attempting to express new meanings contributes to language acquisition (Tin, 2013). In other words, these moments of frustration made students aware of their inability to express themselves in English, and their instructors' English served as a model to help them learn appropriate English expressions. Therefore, students should repeatedly negotiate meaning to solve challenges faced during impromptu English conversations.

e) Studying the synchronous ICT-based pedagogical practice of using video calls between overseas classrooms and Japanese classrooms to enable groups of students to practice their English demonstrated that group work served as a scaffolding and that repeated video calls were a positive experience that improved WTC and speaking skills.

These results are consistent with existing findings that pair- and group-based instruction and immersive, interactive communicative activities that stimulate learner interest (Mejías, 2014; Yalçın

& İnceçay, 2014) can reduce anxiety. Moreover, they also confirm a previous study's report that learner L2WTC is associated with anxiety (Lightbown & Spada, 2013). During the parts of the video call activity associated with group work, group members consulted each other in Japanese, but asked the foreign students questions in English. The moderate balance between the use of Japanese and English created a safe classroom space, which facilitated the participants' WTC and helped them improve their speaking skills. A previous study has shown that such a strategy can create a classroom environment where learners cooperate and relax and engage in activities (Phillips, 1999). Furthermore, another study (Yashima, 2009) found that a good classroom atmosphere can encourage students' interest in foreign languages and cultures and strengthen their English abilities, which affects WTC. The Mystery Skype video calls made the participants in this study aware of the need to use English by requiring them to use it to figure out which country the other students were from (through yes/no questions); ultimately, the students had a positive experience with this activity, and it improved their WTC and speaking abilities.

10.2.2 Overview of Findings on the Specific Research Questions of Studies 2, 3, and 4

This section reviews the results of the specific research questions of Studies 2, 3, and 4 and synthesizes them to respond to the second general research question. Study 2 (Chapter 5) investigated whether improvisational and preparatory approaches to English interaction differently affected students' speaking anxiety and speaking ability and the factors that may have contributed to such differences. To do so, university students with good English skills were divided into improvisation and preparatory groups to study how their levels of speaking anxiety and speaking abilities changed over the course of the study. The results indicated that repeatedly practicing improvisational one-on-one online English conversations reduced student anxiety by making students familiar with speaking without preparation, which gave them a sense of security with the task; moreover, the results showed that using the chat box increased the students' confidence and reduced their anxiety by enabling them to have more successful experiences with speaking English (RQ4).

Although the preparatory method also gave students a sense of security, it was less effective in reducing speaking anxiety because students used to speaking with scripts were thrown off when their instructors suddenly asked questions as part of the natural flow of conversation. However, when preparatory learners encountered words they did not understand or unfamiliar expressions during their conversations and accordingly had difficulty communicating with their instructors, using the chat box function to present textual information still served as a scaffolding to help them negotiate meaning to improve their comprehension. These findings suggest that repeatedly practicing impromptu English conversations may help students gain experience with tolerating ambiguity and negotiating meaning, which may improve their English skills, build their confidence, and reduce their anxiety.

Regarding the factors that helped participants improve their speaking abilities, the results revealed

that it was important for participants to realize that their speaking abilities were limited, especially through the frustration of not being able to say what they wanted to say and, relatedly, the experience of not being able to communicate with others in English through impromptu exchanges (RQ5).

The results suggest that the frequent use of strategies to negotiate meaning, such as clarification requests and comprehension checks, during the one-on-one online English conversations may facilitate student understanding, which is essential for SLA. Furthermore, English spoken by the instructor became a model for the student's ideal L2 self; accordingly, the students began to set specific goals and work on them, which activated their English skills and helped them communicate successfully in English with others.

The improvisation participants experienced a sense of accomplishment after their online English conversations, while the preparatory participants did not show much satisfaction, indicating that the methods resulted in different levels of awareness. Both the improvisation and preparatory participants found that practicing improvisation provided more opportunities to negotiate meaning and was more effective for improving speaking skills than speaking after preparing a manuscript (RQ6).

The reason for this was that the participants felt that if they prepared a draft of what they would say in advance, they would read it out loud (even if they tried to look at it as little as possible); this hindered the activation of their English-speaking skills. This suggests that, because having a manuscript in hand may give participants a sense of security, they may take the easy way out unless they are forced to speak English without a manuscript—the second preparatory participants encountered the slightest difficulty in communicating, they used their manuscripts to get through the situation. Accordingly, actually speaking in English in an impromptu manner and experiencing success in eventually being able to communicate by getting used to tolerating and working with ambiguity can build confidence and reduce speaking anxiety. These findings suggest that the participants themselves realized that they cannot expect to make much progress in English simply by preparing a manuscript and then interacting with each other using it. Having participants experience both the method of having a manuscript prepared and the method of improvising to see which is more effective for improving their English skills may encourage them to realize the benefits of improvised English exchanges. Notably, because the preparatory participants had prepared appropriate expressions in advance, they did not have many opportunities to negotiate meaning or receive corrective feedback, which suggests that preparation may be less likely to improve speaking fluency and complexity. Crucially, this suggests that students themselves must notice their own limits with English to improve their speaking skills, and that this requires them to engage in impromptu exchanges. Furthermore, these findings convey that meaning negotiation and corrective feedback improve speaking skills, and that simply practicing English with a prepared manuscript may deprive students of the opportunity to realize where they need to improve or may leave them dependent on the manuscript.

Study 3 (Chapter 6) examined the factors contributing to speaking anxiety—especially those that

reduce speaking anxiety—and investigated what elements of one-on-one online English conversations improved the speaking abilities of a university student who struggled with English. The results demonstrated that speaking anxiety was caused by factors related to both the learner and the instructor. Regarding the learner, factors included not being able to say what she wanted to say in English and silent periods. Regarding the instructor, factors included limited responses and only providing verbal feedback, indicating that the learner feels speaking anxiety when she cannot understand her instructors' English (RQ9).

In other words, hindered communication may increase learner anxiety. Therefore, it seems important to break out of such situations to reduce speaking anxiety. First, regarding learner-related factors, such situations may be avoided by teaching learners how to use fillers, make clarification requests, ask for comprehension checks, and use communication strategies. These abilities will prevent such communication problems by teaching the learner how to ask their instructor questions when they encounter situations in which they may otherwise fall silent because they are unable to say what they want to say in English. Second, regarding instructor-related factors, such situations may be avoided by asking the instructor to react to the learner's expressions and provide short, easy-to-understand feedback to help learners feel comfortable.

The following factors proved particularly helpful in reducing speaking anxiety: repeated one-on-one online English conversation sessions, which allowed students to gain experience and become accustomed to communicating in real-life situations; slow speech from the instructor; a friendly disposition from the instructor; brief feedback; and the use of the chat box to convey information, including feedback, through text (RQ9).

These findings matter because they show that learners who have difficulty with English often do not know how to negotiate meanings with others, suggesting that when there is a moment of silence during a conversation, the instructor must take the initiative to rephrase what they are trying to say into an easier English expression, ask different questions, or take control of the situation to help the learners understand English and participate in the conversation. In other words, changes to the instructor's approach, such as their attitude and the way they give feedback, can affect the learner's speaking anxiety.

Speaking skills were also improved by giving the student opportunities to create pushed outputs and negotiate meaning—both features of one-on-one online English conversations. Brief feedback from the instructor and opportunities for hypothesis testing were shown to facilitate the participant's speech and semantic understanding; in particular, the instructor's examples of English speech served as a scaffolding from which the student built modified outputs (RQ9). In addition, the participant was able to gain confidence in her speaking skills and develop the capacity to make requests and ask questions of the other party to solve problems when communication became difficult (RQ10).

These results may be because, as the number of one-on-one online English conversations in which

the participant felt safe and received short feedback from her instructors increased, the number of English expressions the participant could understand and express gradually increased, which helped her realize her own potential. In this study, the interactions between one participant and instructors were qualitatively investigated and it was proved that concrete feedback in the form of both written text and verbal comments had an effective impact on improving the participant's speaking skills. The participant was also able to observe the development of her own English abilities by realizing that she could successfully communicate to foreigners in English by negotiating meaning. This helped the student develop a more positive attitude toward English learning. Even a student who was not very good at English was able to improve her speaking ability in a short period of time because she developed an attitude of trying to somehow convey what she wanted to say to others by thinking of easy expressions she could say in English (rather than trying to exactly translate what she wanted to say in Japanese to English), which increased the volume of what she was able to say.

In Study 4 (Chapter 7), Mystery Skype video calls were conducted to examine what factors of such a synchronous ICT-based pedagogy could be used to improve student WTC and speaking ability. The results indicated that, although one video call alone did not improve WTC, repeated video calls made the interaction an enjoyable experience, which positively impacted WTC and speaking ability.

The reason for this is that by experiencing the video call twice, the participants were able to build on their experience of not being able to communicate in English to the other party or understand the other party's English the first time and have a successful experience the second time. By repeating the same task multiple times, the participants gradually learned what kind of questions to ask and became able to understand the questions asked by their counterparts; these developments motivated them to learn English, which may have enhanced their WTC. In addition, it is notable that if a student could not understand the other party's English on the video call, then the teacher repeated the other party's question more slowly to help the students successfully communicate with each other—this may have positively impacted student outcomes.

Comparing the free-text descriptions in the upper and lower groups, the results demonstrated that the upper group reflected on the activities in detail and was conscious of the content of the questions that they asked, while the lower group realized the joy of speaking with others in English after the second Mystery Skype session. These findings indicate that it is especially important for elementary school students who are not good at English to repeat such activities (RQ13). Notably, this suggests that learners with different levels of proficiency may notice the pleasure of communicating at different times and experience differences in awareness regarding the interaction. Both groups of children reported that they enjoyed interacting in English through Mystery Skype and discovered that they were able to communicate with others. Repeated video calls increased the amount of free-text descriptions of feelings, thoughts, and ideas among both the upper and lower groups, suggesting that the repeated use of video calls activated the students' cognitive processes. As even children who were not good at

English enjoyed interacting in English through Mystery Skype, requiring students to use English in such ways will likely increase their motivation to participate in English classes. In sum, this study showed that connecting an overseas classroom with a Japanese classroom via a video call for a game of Mystery Skype (after practicing in advance) helped students across proficiency levels to deepen their understanding of the need to learn a foreign language and about different cultures (e.g., different time zones, seasons, and names for similar interests such as anime) and gave them experience in communicating successfully in English, which may have increased their motivation to learn it.

10.3 General Discussion on Research Question 3

10.3.1 Overview of Findings on General Research Question 3

Finally, the third general research question is addressed in consideration of the results related to the specific research questions for Studies 5 and 6. In particular, these questions were interested in the mechanisms related to the use of ACMC- and SCMC-based pedagogies that increased learner anxiety and IP. In Studies 5 and 6, Mystery Skype video call sessions with overseas students served as a synchronous ICT, while Flipgrid was used as an asynchronous ICT.

General Research Question 3

Does the combined use of synchronous and asynchronous ICT improve speaking anxiety and IP? If so, what factors contribute to this effect?

a) One video call, followed by one week of Flipgrid, reduced speaking anxiety in college students who were proficient in English.

This point is significant because it complicates the findings of Study 4. Specifically, Study 4 revealed that WTC did not improve after only one video call, but it did improve after two video calls; meanwhile, Study 5 reported that the continued use of Flipgrid after one video call reduced speaking anxiety. These results suggest that learners' affective aspects may be similarly improved by either using Flipgrid after only one video call or conducting two video calls. Further, the use of Flipgrid after a video call can address some of the disadvantages of synchronous video calls; for example, where synchronous video calls can be difficult to coordinate across time zones, Flipgrid enabled students to continue to communicate regardless of time differences. Further, where Mystery Skype video call sessions may not give every participant an equal opportunity to speak, Flipgrid gave each participant a platform to speak English.

b) The results of the Mystery Skype activity revealed that group work that allows individuals to be inconspicuous works as a scaffolding that encourages participation. Moreover, they showed that

the enjoyment of actually communicating with a foreigner and the successful experience of being able to communicate in English reduced speaking anxiety. In addition, Flipgrid's asynchronous, individualized video-sharing and subtitling functions served as scaffolding that helped students successfully communicate, which gave them a sense of accomplishment that motivated them to learn English. However, among university students who were not good at English, no change in speaking anxiety was observed because they were unable to communicate well due to having poor listening and vocabulary skills. Accordingly, this group did not overcome their challenges related to English or, relatedly, feel a sense of accomplishment. Nevertheless, this approach may reduce speaking anxiety among participants who are proficient in English.

The reason for this is that the Mystery Skype activity asked students to focus on carrying out a clear mission—guessing the other class's country. Put differently, the Mystery Skype activity is an information gap activity focused on content and meaning; in this context, group work proved to be a fun way for students to help each other achieve a common goal. The Q&A session was also conducted in turn, and because the rule was to answer each other's questions with yes/no answers, it was not difficult for the university students to answer the questions. However, the act of thinking of a question and asking it seemed to involve a moderate amount of tension, as they were worried about whether the other students would understand their questions and English pronunciation. Correctly guessing their partner's country helped participants feel like they had had a successful experience, as it was obvious that they had used English well enough to accomplish the task. In the case of the university students, the interaction was improvised from the beginning without any advance preparation, so they probably experienced a sense of accomplishment when they could communicate in English, but also a sense of failure when they were not able to communicate. The impromptu English interaction provided an opportunity for participants to identify their own issues and notice the need to improve their listening, pronunciation, and English expressions. In particular, the participants became aware that they had problems with their speaking skills, conveyed a positive attitude toward continuing the interaction in order to overcome their problems, and demonstrated an increased motivation to speak.

Another asynchronous Flipgrid feature that reduced college students' speaking anxiety was the ability to use Flipgrid outside of class, which allowed it to be optimized for individual use. For example, participants could view videos freely and repeatedly, giving them many opportunities to understand what others were saying. Meanwhile, students could record their videos at any time and in any place and review them multiple times before uploading them. This feature may have helped students feel less anxious because they did not have to worry about the presence of others and could rehearse their speech in advance and improve the content of their videos before uploading them. Additionally, the subtitle function may also have reduced participant anxiety by enabling them to use it to facilitate their understanding in situations where they could not comprehend what was going on based on audio alone.

However, the university students in this study who had difficulty with English tended to avoid communicating in English and had a negative attitude toward English during the synchronous video call situation. Therefore, when they worked asynchronously with Flipgrid, the experience did not lead to a sense of accomplishment, and the results did not indicate a change in their speaking anxiety. This may be because many of the other participants were English majors—the four participants with poor English skills were the minority, which may have affected the speaking anxiety results. Although the English majors were very friendly and did not show any negative attitudes toward the students who struggled with English, fear of being negatively evaluated by others and low self-evaluations of their English abilities may have contributed to the anxiety of the students who were not good at English; along these lines, their anxiety may also have been triggered by watching videos of English majors speaking fluent English. These results are consistent with those of a previous study (Fujii, 2020). It is possible that a similar approach with only a group of learners who are not proficient in English would yield different results.

c) In the case of high school students who had difficulty with English, one video call followed by one month of continuous Flipgrid use stimulated their intellectual curiosity through repeated exposure to authentic English, and the asynchronous nature of the program helped them listen to English repeatedly and promoted semantic understanding. Furthermore, even learners with poor English skills had positive experiences, noticed the need to learn English, and increased their IP with the program.

Importantly, even though the same video calls and Flipgrid practices used in Study 5 were used in Study 6, the results were different. In Study 5, speaking anxiety did not decrease among college students with poor English skills, but in Study 6, the students' IP improved. This difference may be due to differences in the Flipgrid use period: Students who used Flipgrid for only one week did not overcome challenges or develop a sense of accomplishment and did not have enough time to reduce their anxiety; meanwhile, students who used Flipgrid for one month had positive communication experiences, which seemed to improve their IP. Of course, the results of Studies 5 and 6 cannot be simply compared owing to differences in the number of subjects and the affective aspects of speaking anxiety and IP. However, the fact that even participants who have difficulty with English changed their attitudes toward communicating in English and improved their IP suggests that it is important to continue to use Flipgrid.

These results suggest that using Flipgrid in class and then freely at home for 30 days improves asynchronous interactions even among learners who are not good at English. This suggests that such ICT-based activities can be used to increase students' interest and engagement, enhance learning activities, and improve teaching efficiency. All in all, this study suggests that using this kind of ICT

can yield excellent opportunities for high school students to communicate their thoughts and feelings and improve their IP, even if they are not good at English. Therefore, using Flipgrid to facilitate English language learning may help students better meet the expectations of the current courses of study on learning English, such as developing an attitude of proactive engagement with the world.

10.3.2 Overview of Findings on the Specific Research Questions of Studies 5 and 6

This section explores the results relevant to the specific research questions for Studies 5 and 6 and synthesizes them to offer an answer for the third general research question. Specifically, in Study 5 (Chapter 8), 13 university students majoring in and good at English and four university students who did not major in English and who had difficulty with English were connected with a high school classroom in Australia via a videoconferencing system. The students were asked to first interact synchronously with the Australian high school students through one game of Mystery Skype and then continue their interactions with these students through one week of asynchronous Flipgrid exchanges. The ultimate aim was to measure whether this program impacted their speaking anxiety. The results demonstrated that using these synchronous and asynchronous ICTs together generally reduced the students' speaking anxiety (RQ14). When it was examined whether changes in speaking anxiety were related to English proficiency, it was found that combining a synchronous video call with asynchronous Flipgrid reduced anxiety in learners who were proficient in English, but not in learners who struggled with English (RQ15). Specifically, successfully communicating in English without preparation over a video call and working in groups, which prevented individuals from standing out, created a scaffolding that reduced speaking anxiety (RQ16). Furthermore, Flipgrid's individualized video-sharing features, such as the ability to take time to prepare and review videos before uploading them and the ability to watch videos repeatedly, reduced speaking anxiety (RQ16).

However, factors that did not alleviate speaking anxiety among learners who were not good at English included (1) the impromptu nature of interactions during Mystery Skype video calls—these participants struggled to understand their partners' questions on the spot and did not have the vocabulary needed to effectively speak English—and (2) the fact that some participants were anxious about and burdened by making and sharing their own English videos outside of class (RQ17). However, regarding overall impressions through interactions with foreign countries, the students recognized that Mystery Skype video call sessions were enjoyable because of their game-like style, yes/no questions, and the fact that they connected students with foreigners. They also noticed that Mystery Skype gave them opportunities to practice their English, which improved their English skills. Moreover, the experience of speaking extemporaneously with a foreigner increased their motivation to speak, helped them notice their own speaking issues, and helped them develop a more positive attitude toward continuing the interaction (RQ18).

These results suggest that the combination of video calls and Flipgrid may be useful in reducing

speaking anxiety, especially when Flipgrid's subtitling function can serve as a scaffolding that can help students experience a sense of accomplishment and increase their motivation to learn English. However, since the Flipgrid program was only implemented for a very short period of time (one week), learners who had difficulty with English were able to recognize their problems but were not able to overcome them or develop a sense of accomplishment. Therefore, Flipgrid may be more effective if it is used over a longer period.

Meanwhile, this study also suggested that students' speaking anxiety may be reduced by teaching them how to make clarification requests and ask for comprehension checks, in addition to improving their listening and vocabulary skills. Moreover, to reduce the resistance of low-proficiency learners to posting videos on Flipgrid, it may be necessary to devise a way to make individuals less conspicuous; for example, teachers could ask students to record videos as a group during class or encourage participants to hide parts of their faces by using emojis, one of Flipgrid's features, which would ensure privacy. Furthermore, steps should be taken to reduce the burden on home study, such as limiting video recording to in-class sessions. Since the students recognized that gaining practical experience with communication can improve their English skills, they may be willing to use ICT to engage in impromptu English interactions, even though this approach has previously been difficult to implement in the classroom. For university students who are good at English, interactions with overseas classrooms using Mystery Skype video calls and Flipgrid may serve as opportunities to uncover how they may improve their English-speaking abilities.

In Study 6 (Chapter 9), 158 first-year high school students in four classes, many of whom were reluctant to take English classes and had difficulty with English, were divided into two groups: the SCMC+ACMC group, which consisted of one video call and the use of Flipgrid with overseas students, and the SCMC group, which consisted of only one video call. The results of the study were compared and examined to uncover the effects of the different CMC methods on IP over the course of two months. The results demonstrated no improvement in IP for participants who completed only one video call (RQ19) but an improvement in IP for participants who completed the video call and Flipgrid program (RQ20). The combination of video calls (SCMC) and Flipgrid (ACMC) stimulated intellectual curiosity and improved IP by providing students with more opportunities to actually interact in English with foreign classrooms and to gain experience with authentic English both inside and outside the classroom. In addition, it was found that the students seemed to enjoy communicating with foreign students because it gave them a sense of partnering with others and that they became more willing to learn English through spontaneous communications (RQ21).

One reason IP may not have increased may be that the participants, especially those who were reluctant to take English classes and had a poor command of English, may have felt nervous and found it difficult to interact with students overseas after only one video call. Some of the foreign students, who were the same age as the Japanese students, spoke English fluently, and the Japanese participants

seemed surprised at the difference in their English abilities. In addition, the Japanese participants could not keep up with the speed of the foreign students' speech and could not understand them; this prevented them from becoming their ideal L2 selves, which may have been another reason their IP did not improve.

Although a single video call may not be enough to change IP, especially for participants who are not good at English (as they may feel nervous and find it difficult to interact), continued English interactions using both synchronous and asynchronous technologies may give students more positive English communication experiences, which may enhance their IP and learning motivation. In addition, the results suggest that the SCMC+ACMC program may give students an opportunity to recognize issues with their English, such as insufficient listening, speaking, and vocabulary skills, and to overcome these issues. This may be facilitated by Flipgrid's playback and subtitling functions, which give students the opportunity to repeatedly listen to English. These results are in line with Schmidt's concept of "noticing the gap," which suggests that students who find themselves unable to say what they want to say in the target language are motivated to pay attention to the relevant input and acquire new language knowledge (Swain, 1995). In this study, the students' experiences of frustration over not being able to say what they wanted to say in the target language and their understanding of their own English language skills and issues made them aware of the need to learn English through video calls. Moreover, continuing to interact with foreign students through Flipgrid after the video call helped students who had difficulty with English improve their IP; specifically, they were able to confirm what they did not understand, which led to a sense of accomplishment, suggesting that continuous instruction using both synchronous and asynchronous methods is necessary. These results are consistent with the previously mentioned result that "the experience of positive communication with counterparts from different cultures leads to IP and learning motivation" (Yashima, 2004), suggesting that continued interaction in English in both synchronous and asynchronous environments may give students more positive communication experiences, which may enhance their IP and learning motivation.

Chapter 11. Conclusion

11.1 Limitations

This chapter first addresses four limitations of the studies reported in this doctoral dissertation. Next, it summarizes the findings of each study and presents their pedagogical implications. Finally, it outlines directions for future research.

First, as mentioned in Chapters 4–9, because these studies were of an exploratory nature and focused on a specific population in a local setting, the intention was not to generalize their findings to any other L2 teaching circumstances unless they had similar target populations and teaching contexts.

(a) Sample size

Studies 1–3 focused on one-on-one online English conversations. They examined how these conversations impacted students' speaking anxiety (Studies 1–3) and speaking ability (Studies 2 and 3) in 34 high school students who were proficient in English (Study 1), four college students who were proficient in English (Study 2), and one college student who had difficulty with English (Study 3). As the number of participants in each study was small, the number of participants varied from study to study, and some case studies did not reveal statistically significant differences, such as effect sizes (Studies 2 and 3), it may be possible to say that the observed effects should be limited to the subjects in these studies and not overly generalized.

Meanwhile, Studies 4–6 focused on video calls (Studies 4–6) and Flipgrid (Studies 5 and 6). The results of these studies are difficult to generalize because these case studies verified how these different instructional approaches transformed WTC and speaking ability (Study 4), speaking anxiety (Study 5), and IP (Study 6) among a limited number of participants, namely, 34 elementary school students (Study 4), 17 university students (Study 5), and 158 high school students who had difficulty with English (Study 6).

(b) Implementation period

As Studies 1–3 took place over both a long period of 10 months (Study 1) and a short period of one month (Studies 2 and 3), it is unknown whether the long duration in Study 2 positively impacted speaking anxiety and speaking ability in the preparatory group. Study 3 also does not clarify to what extent a longer implementation period can be expected to promote effectiveness (e.g., increase the degree to which one-on-one impromptu English conversations may improve speaking anxiety and speaking ability for a beginner learner). Furthermore, because Study 4 involved only two video calls and Studies 5 and 6 also only had students engage in one video call before practicing their English with Flipgrid for a short period of time, the possibility of improvement within the scope of the novelty effect (i.e., increase in motivation due to novelty) cannot be ruled out.

(c) Instructor

It is undeniable that individual differences, such as the English proficiency levels of one-on-one online English conversation instructors, may have affected participant performance. Furthermore, in Studies 1 and 3, one-on-one online English conversations took place with Filipino instructors, whereas in Study 2 they took place with a native English-speaking instructor. Students may have had an easier time developing ideal L2 selves based on the examples set by native English-speaking instructors than by Filipino instructors, largely because the native English-speaking instructors provided a higher quantity and quality of feedback and demonstrated better pronunciation.

(d) Subject matter

Regarding the subject matter of the one-on-one online English conversations, ease of speaking varied based on whether participants were asked to express their own opinions and thoughts on a topic (see Activities in Appendices 2 and 3) or whether they were asked to describe a photo and engage in a Q&A about the photo (see Appendices 5, 6, and 7). The amount of output may also have been affected by the task. With these limitations in mind, the findings of the six studies and, subsequently, their pedagogical implications have been summarized below.

11.2 Summary of the Main Findings

This doctoral dissertation demonstrates that ICT-based SCMC and ACMC can improve the affective aspects—speaking anxiety, WTC, IP—and speaking abilities of English language learners across various types of schools. Using the ZPD and scaffolding of SCT and the interaction and output hypotheses of SLA as theoretical pillars, it was expected that the SCMC practice of one-on-one online English conversations would positively impact comprehensible input, pushed output, and meaning negotiation. This research found that this practice had a positive effect on the speaking anxiety of high school students who were proficient in English and the speaking anxiety and speaking abilities of college students who were both proficient and not proficient in English. It also found that video calls helped beginner English learners in elementary school improve their WTC and speaking skills. Furthermore, it found that continuing the ACMC practice of Flipgrid improved the speaking anxiety of college students who were good at English and the IP of high school students who were not so good at English.

From a practical standpoint, the study demonstrated that in an SCMC-based, one-on-one online English conversation environment, individuals are less conspicuous. This lowers psychological hurdles to learning English and makes it easier for them to try practicing impromptu English interactions. This study also found that repeating similar tasks helped students become accustomed to speaking in English and that successful experiences with communicating in English increased confidence and reduced speaking anxiety. Furthermore, the studies with video calls (SCMC) between Japanese and overseas classrooms, which incorporated an improvisational element, showed that even with such a simultaneous classroom instruction format, group work can serve as scaffolding. Moreover, these video call studies demonstrated that repeatedly practicing Mystery Skype improves WTC and speaking skills. Additionally, it was found that students should continue to communicate with the students they connect with over synchronous video calls by using Flipgrid because this technology gives them opportunities to practice speaking and listening outside of class, which helps ensure that they have speaking opportunities, reduces their speaking anxiety, and improves their IP.

During the long-term one-on-one online English conversation sessions, both the improvised and preparatory methods helped reduce speaking anxiety and did not differently affect speaking anxiety.

However, when implemented over a short period of time (one month), the improvisational method promoted a greater reduction in speaking anxiety than the preparation method. In other words, the length of the implementation period and the instructional method influenced speaking anxiety. Furthermore, speaking in English in an impromptu manner made participants more likely to notice issues with their own English language skills through the frustration of not being able to say what they wanted to say and, relatedly, not being able to communicate in English to the other person. The experience suggested that the instructors' English offered a model for the students' ideal L2 selves, which helped them set and work toward specific goals. Notably, doing so may encourage students to negotiate meaning (e.g., they may make clarification requests or ask for a comprehension check) to overcome issues, which improved their speaking skills.

In the case of learners who had difficulty with English, a month of impromptu one-on-one online English conversations on the same content indicated that such students could practice speaking English regardless of their proficiency level; specifically, these studies showed that written feedback and individualized instruction through the chat box could help learners with poor proficiency understand the instructor and, relatedly, develop their English. The study also found that repeating similar tasks helped the students become more comfortable with interacting in English, facilitated meaning negotiation and confidence, and greatly reduced their speaking anxiety. Furthermore, the study conducted with only one student showed that she began to negotiate meaning to overcome her issues by referring to her instructor's feedback and asking her instructor to clarify or check her comprehension. This activated her English ability and markedly improved her speaking ability over the course of the instruction; indeed, she continued to demonstrate these speaking skills two months after the program had ended. Therefore, it was found that giving learners the opportunity to speak English in impromptu one-on-one online English conversations, even for a short time or a small number of times, may increase their pushed output and meaning negotiation and enable them to receive more corrective feedback from instructors, which are essential elements for improving speaking ability.

Regarding the use of SCMC- and lecture-based video calls in a simultaneous class situation, the research found that repeated sessions of Mystery Skype activated the students' cognitive processes and helped them become aware that they enjoyed interacting with others in English. Additionally, it found that asking the students to prepare questions and completing a practice session of Mystery Skype before connecting with an overseas classroom through a video call helped all Japanese students, regardless of their levels of proficiency, work together during the game of Mystery Skype with the overseas students. The results also indicated that Mystery Skype can motivate students to learn a foreign language by deepening their understanding of different cultures and the necessity of learning a foreign language and by giving them experience with communicating in English with others, which nurtures a sense of accomplishment.

However, it became clear that synchronous video calls alone did not provide each student with an

opportunity to speak, and that these calls involved the difficult task of coordinating classrooms across time zones. Nevertheless, it was found that participants who were not able to communicate well on the spot owing to a lack of time or understanding were able to continue practicing their English after the video call using Flipgrid (an ACMC technology); specifically, Flipgrid gave them opportunities to ask questions about things they had missed during the video call, to speak English, and to listen to others speak in English. Moreover, Flipgrid allowed participants to participate at their own pace. Thus, this kind of ACMC technology can compensate for the shortcomings of an SCMC technology like a video call in ways that reduce speaking anxiety and improve IP.

Based on the above, this research concludes that in an SCMC-based, one-on-one online English conversation environment, different participation conditions, such as whether students use a prepared manuscript to communicate and how long they engage in these conversations, differently affected the speaking anxiety and speaking abilities of L2 learners. Ultimately, engaging in these conversations without preparation in a short period of time decreased speaking anxiety and improved speaking abilities. No differences in these effects were observed across English proficiency levels; put differently, one-on-one online English conversations do not differently impact the speaking anxiety and speaking abilities of learners with poor English proficiency and learners with good English proficiency. Through repeated one-on-one impromptu online English conversations, students can become accustomed to speaking without preparation—even if these conversations only take place for a short time and a few times. This practice will give students opportunities to receive and use feedback and examples from their instructors as scaffolding, which can help them improve their skills and eventually successfully communicate in English with a foreigner. Such personal growth can boost their confidence, which in turn reduces their speaking anxiety and further improves their speaking ability.

In addition, repeatedly conducting sessions of Mystery Skype over a synchronous video call between a Japanese classroom and an overseas classroom improved WTC and speaking skills, suggesting that the use of such ICTs to facilitate communication may have a positive impact on learners' affective aspects and speaking abilities, regardless of the instructional format (i.e., one-on-one online English conversation instructional formats, e.g., those used in Studies 1–3, and simultaneous video call instructional formats, e.g., the Mystery Skype sessions in Studies 4–6). Furthermore, it was found that interactions between Japanese and overseas students that combined both video calls (a form of SCMC) and Flipgrid (a form of ACMC) reduced the speaking anxiety of college students who were proficient in English and improved the IP of high school students who were not proficient in English. These results suggest that using Flipgrid after a video call may help Japanese students continue their interactions with foreign students, while reducing their speaking anxiety and improving their IP, regardless of their proficiency levels.

No previous ICT-based studies have investigated the effects of impromptu English interactions with a foreigner on speaking anxiety. Furthermore, few studies have compared and examined the effects of

two different types of instructional methods (e.g., manuscript-prepared and improvised) or the effects of different participation conditions (e.g., the presence or absence of a manuscript), on learners' speaking anxiety and speaking abilities. In addition, very few studies have examined the specific use of ICT in simultaneous classroom situations and the effectiveness of using SCMC and ACMC technologies together. This doctoral research responded to these gaps by conducting SCMC-based (one-on-one online English conversations and video calls) and ACMC-based (Flipgrid) learning activities with English students from various types of schools, investigated how they impacted the students' affective aspects—namely: anxiety, WTC, and IP—and speaking abilities from various perspectives, clarified the conditions that caused these approaches to impact student psychology and English skills, and discussed and proposed effective ICT approaches.

11.3 Pedagogical Implications

The main educational implications of the findings are as follows:

(a) One-on-one online English conversation

Incorporating one-on-one online English conversations into English language pedagogy is desirable regardless of the students' proficiency levels. Specifically, the findings revealed that an instructional format based on synchronous one-on-one online English conversations using ICTs ensures a psychologically safe learning environment in which students feel they can take risks without worrying about others' evaluations, which reduces their speaking anxiety and thereby enables them to challenge themselves to interact in English.

(b) Pushed output

When using a one-on-one online English conversation format to teach English, it is better to provide students with repeated pushed output opportunities—this will make them realize the necessity of communicating in English, make them aware of their own issues and work to overcome them, and help them become accustomed to speaking in English.

(c) Chat box function

If the input is through short corrective feedback or textual information, it is better for instructors to use an online chat to give students feedback or clarify oral feedback in text. This can help learners who have difficulty with English better negotiate meaning, which can motivate them to speak.

(d) Successful experiences

Impromptu English interactions compel students to negotiate meaning more frequently and make it easier for them to notice issues with their English learning. In doing so, it helps them use English better, which enables them to gradually accumulate positive experiences. Such positive experiences can make them more confident and less anxious about speaking. Therefore, it is important for learners to repeat modified outputs so that they can successfully communicate in English to realize these benefits.

(e) Opportunities to improvise and repeatedly interact in English

If students prepare for a conversation in advance by writing down what they will say in a manuscript, they will be dependent on their manuscripts and have few opportunities to notice and correct their errors and negotiate meaning, which may hinder the activation of their English skills. Therefore, it is preferable to have students repeatedly interact in English in an improvisational manner to facilitate their learning and motivate them to learn English, which will also improve their speaking skills.

(f) Experience with negotiating meaning with foreign instructors

Students should experience negotiating meaning with foreign instructors because foreign instructors can serve as models for the learners' ideal L2 selves, which motivates students to learn and enhances their speaking abilities.

(g) Connection with overseas classrooms via video calls through Mystery Skype activities

Even in a simultaneous instruction format, exchanging English over a video call with an overseas classroom is expected to deepen students' understanding of the necessity of learning a foreign language and about different cultures, increase their WTC, and enhance their motivation to learn a foreign language and speak English. Therefore, it is desirable to incorporate English exchange activities, such as Mystery Skype.

(h) Group work in which individuals do not stand out and that incorporates game-like elements

Beginner English learners will enjoy engaging in Mystery Skype activities because they involve game-like elements. In addition, they involve group work in which individuals do not stand out, which provides a scaffolding that makes it easier for students to feel successful in their impromptu English interactions. For this reason, Mystery Skype should be used in different types of schools.

(i) Use of asynchronous Flipgrid

It is desirable to incorporate Flipgrid, an asynchronous ICT-based application, after synchronous video calls because it allows students to continue interacting with overseas students without worrying about time differences through video sharing. Moreover, it enables students to rehearse freely before posting a video, which can reduce speaking anxiety.

(j) Video calls and Flipgrid

Even for learners who have difficulty with English, the experience of getting frustrated when they find themselves unable to say things in English over SCMC technologies, like video calls, due to their immediacy and the positive experience of communicating in English over ACMC technologies, like Flipgrid, will improve their motivation to learn English and enhance their IP. Therefore, it is best to take advantage of the benefits of both video calls and Flipgrid by using them together to facilitate interactions between Japanese students and foreign classrooms.

11.4 Suggestions for Future Research

Six directions for future research are outlined as follows:

(a) Long-term implementation

In order to provide an opportunity for sustained use, one-on-one online English conversations and video call practices should be implemented over a long period of time to verify their effectiveness. Given that Study 4 confirmed the effectiveness of two repeated video calls with elementary school students, it is necessary to investigate the impact of the number of times the practice is conducted to see if further repetitions promote this effect.

(b) Support for participants who have difficulty with English

It is necessary to consider specific steps and methods for participants who have difficulty with English. Mystery Skype's gameplay, pre-practice, and group work served as scaffolding, but further qualitative work is required to determine what specific steps made the experience successful and what kinds of interactions the participants had with each other during their group work in Japanese. The essential specific supports must be determined; moreover, teachers should give students guidance on how to make clarification requests and ask for comprehension checks in advance to give students who have difficulty with English tools for success. The effectiveness of this guidance should also be verified in a future study.

(c) Verification of speaking skills (interaction)

Speaking ability tests were conducted by employing photo description questions (Studies 2 and 3) and questions in which participants were asked to create questions by looking at pictures (Study 4). However, it is also necessary to investigate speaking ability during interactions. Therefore, it is desirable to objectively verify the speaking abilities (interactions) of the participants by conducting a speaking test using an external test, such as the International English Language Testing System or TOEIC.

(d) Investigation of how simultaneous classroom video calls and Flipgrid use impact speaking skills

Studies 2 and 3 were scored based on fluency, complexity, and accuracy measures (Iino & Yabuta, 2016), which allowed for a detailed examination of the contents of the participants' speech. However, because the speaking ability was not measured in Studies 5 and 6, which used video calls and Flipgrid, the researcher plans to administer a speaking test using the same measures employed in Studies 2 and 3 to verify their effectiveness in a future study. Speaking ability must also be assessed in detail during the interactions.

(e) Qualitative survey regarding asynchronous Flipgrid practices

As students used Flipgrid mainly outside of class (Studies 5 and 6), it was not possible to accurately determine their attitudes. It is expected that the degree of use will vary among participants in terms of the number of video views, number of uploaded videos, video content, content of replies to others, and number of replies. It is necessary to investigate video content in detail to determine what kind of video content will increase participants' interest in learning English and how it may stimulate or discourage mutual exchange. In addition to investigating the impact on affective aspects, it is necessary

to investigate whether using Flipgrid alone may improve speaking skills.

(f) Ideal combination of synchronous and asynchronous approaches

It is necessary to uncover the ideal combinations of synchronous and asynchronous teaching practices by studying how different combinations differently affect students' affective aspects—anxiety, WTC, and IP—and speaking skills. Specifically, the following four combinations should be examined in future research:

(1) Synchronous, 2 sessions

(2) Asynchronous, 2 sessions

(3) Asynchronous after synchronous

(4) Synchronous after asynchronous

Specifically, the researcher plans to investigate the interactions that characterize each approach, how each approach impacts the students' affective aspects—anxiety, WTC, and IP—and speaking skills, how the effects differ across learner characteristics (e.g., proficiency levels), and how the effects differ across the number of forms of participation.

In the field of L2 and foreign language learning, empirical studies on SCMC and ACMC have only recently emerged. Although some limitations exist, pedagogical approaches that effectively employ SCMC and ACMC are both necessary and beneficial to improving Japanese students' English proficiency. SCMC and ACMC technologies complement each other by filling in each other's gaps. As the affective aspects and speaking performance of Japanese EFL learners in this study were consistent with the effects indicated by SLA studies, more research is needed that considers real English teaching practices in Japan. Such an approach could promote the effects of affective and speaking skills and provide valuable insights into cooperative learning and ICT-based educational models necessary for today's knowledge society.

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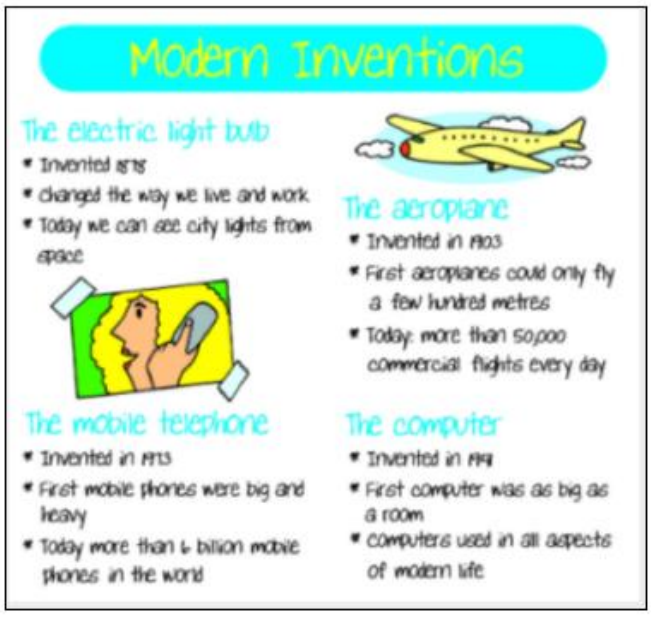
Appendices

Appendix 1

Aptis, a computer-based test developed and managed by the British Council (2017) (Study 1)



Appendix 2

A handout from the intermediate-level textbook provided by the Benesse Educational Research and Development Institute (2017a) (Study 1)

Intermediate SAMPLE A

Talk about what is hard or easy for you to do.

Read

Elliott and Mai are talking about an upcoming chorus contest.
Practice the dialogue with your teacher.

Elliott: I'm enjoying practicing for the chorus contest. It's not easy for me to remember the Japanese lyrics, but the melody is good.
Mai: Yeah, I like the song, too. But it's difficult for me to sing it.
Elliott: You, too?
Mai: I'm a soprano, but some notes are too high for me.
Elliott: I see. Let's just do our best, and maybe we'll win the contest!

Helpful Words

□ chorus contest「合唱コンクール」 □ lyrics「歌詞」 □ melody「メロディー」
□ soprano「ソプラノ」 □ note「(音符の)音」

Grammar Focus ……It is… (for + 人) + to 不定詞

It's important to listen to others. ……「他人の言うことを聞くのは重要です」肯定文
It's not easy for him to get up early in the morning. ……「彼にとって、朝早く起きることは簡単ではありません」否定文
Is it hard for her to finish everything on time? ……「彼女にとって、全部を時間通りに終わらせるのは大変ですか」疑問文

Practice 1

Talk about what is fun for you to do.

あなたにとって、何をすることが楽しいかを話そう。

For example It's fun for me to learn new things.

Idea Box

1 make sweets
2 go to baseball games
3 read my favorite actor's blog

Practice 2

Read the dialogue and talk about what you think is important to do.

会話を参考に、あなたが重要だと思うことについて話そう。

For example

Elliott: Do you like your school?
Mai: Yes, I do. I especially enjoy talking with my friends every day. I think it's important to have many friends.
Elliott: That may be true, I'd rather have a few close friends.
◂ Talk about what you think is important to do. (重要だと思うことを話そう)
Mai: That's good, too.
Elliott: I don't think people have to have many friends. I prefer quality over quantity. ◂ Give the reason. (その理由を話そう)

Helpful Words

□ prefer「…を好む、選ぶ」 □ quality over quantity「量より質」

Conversation Tips

□ That may be true, but… 「それは正しいかもしれないけど、…」
□ I'd rather… 「…する方がよい」

Idea Box

1 study[work / practice] hard
「一生懸命に勉強する（努力する／練習する）」
2 help other people[students / members]
「他の人々（生徒／部員）を助ける」
3 prepare and review for class
「授業の予習・復習をする」
4 try something difficult[new]
「難しい（新しい）ことに挑戦する」

Activity

Talk about what is easy or hard for you to do.

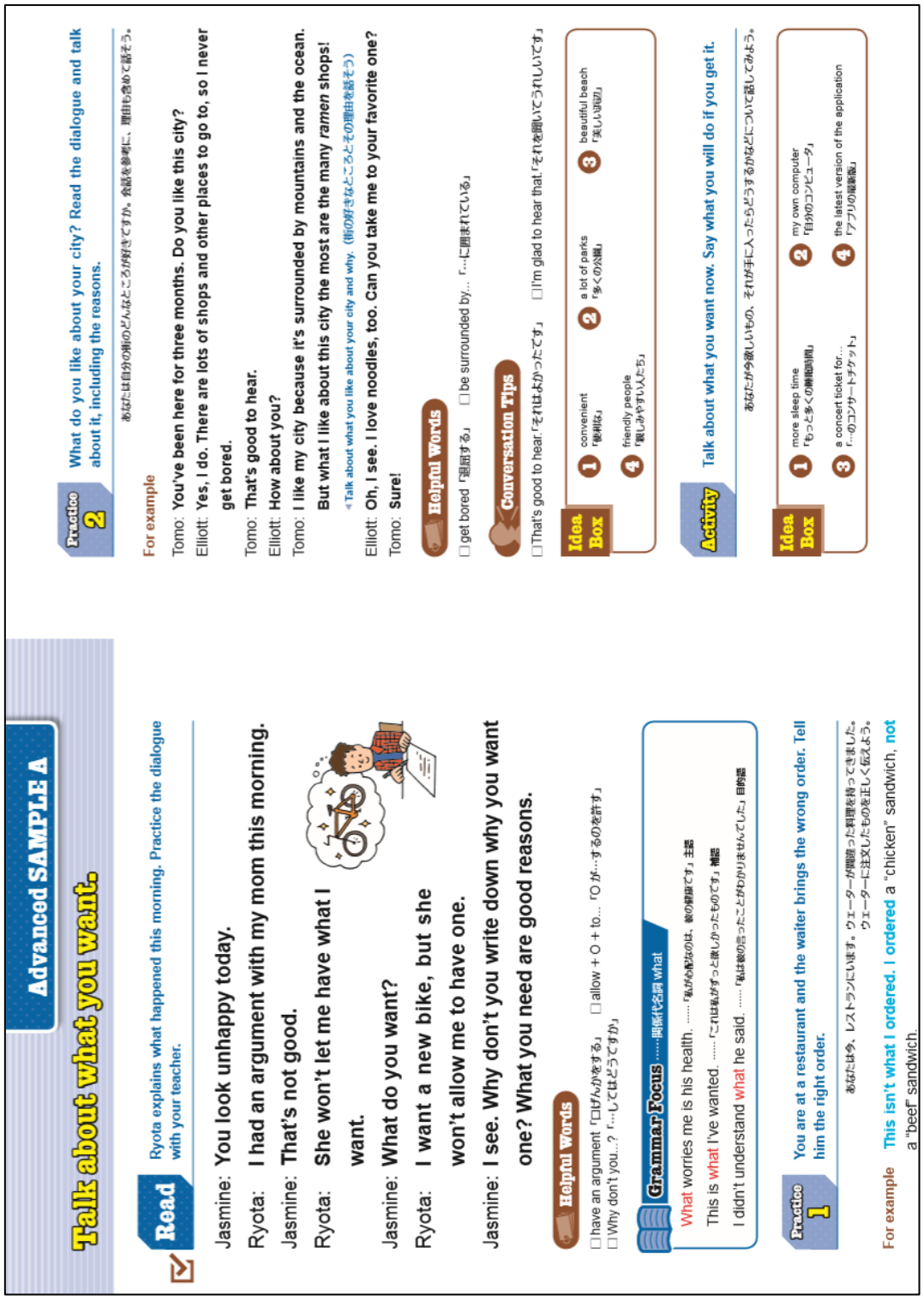
あなたにとって楽しいこと、あるいは難しいことを話そう。

Idea Box

1 go to morning practice
「朝練に行く」
2 make a speech in front of others
「人前でスピーチをする」
3 learn new English words
「新しい英単語を覚える」

Appendix 3

A handout from the advanced-level textbook provided by the Benesse Educational Research and Development Institute (2017b) (Study 1)



Advanced SAMPLE A

Talk about what you want.

Read

Ryota explains what happened this morning. Practice the dialogue with your teacher.

Jasmine: You look unhappy today.
Ryota: I had an argument with my mom this morning.
Jasmine: That's not good.
Ryota: She won't let me have what I want.
Jasmine: What do you want?
Ryota: I want a new bike, but she won't allow me to have one.
Jasmine: I see. Why don't you write down why you want one? What you need are good reasons.

Helpful Words

□ have an argument 「口げんかをする」 □ allow + O + to... 「Oが…するのを許す」
□ Why don't you...? 「…してはどうですか」

Grammar Focus ……関係代名詞 what

What worries me is his health. ……「私が心配なのは、彼の健康です」主語
This is what I've wanted. ……「これは私がずっと欲しかったものです」補語
I didn't understand what he said. ……「私は彼の言ったことがわかりませんでした」目的語

Practice 1

You are at a restaurant and the waiter brings the wrong order. Tell him the right order.

あなたは今、レストランにいます。ウェーターが間違った料理を持ってきました。ウェーターに注文したものを正しく伝えよう。

For example This isn't what I ordered. I ordered a "chicken" sandwich, not a "beef" sandwich.

Practice 2

What do you like about your city? Read the dialogue and talk about it, including the reasons.

あなたは自分の街のどんなところが好きですか。会話を参考に、理由も含めて話そう。

For example

Tomo: You've been here for three months. Do you like this city?
Elliott: Yes, I do. There are lots of shops and other places to go to, so I never get bored.
Tomo: That's good to hear.
Elliott: How about you?
Tomo: I like my city because it's surrounded by mountains and the ocean. But what I like about this city the most are the many *ramen* shops!
◂ Talk about what you like about your city and why. (街の好きなところとその理由を話そう)
Elliott: Oh, I see. I love noodles, too. Can you take me to your favorite one?
Tomo: Sure!

Helpful Words

□ get bored 「退屈する」 □ be surrounded by... 「…に囲まれている」

Conversation Tips

□ That's good to hear.「それはよかったです」 □ I'm glad to hear that.「それを聞いてうれしいです」

Idea Box

1 convenient 「便利な」
2 a lot of parks 「多くの公園」
3 beautiful beach 「美しい海辺」
4 friendly people 「親しみやすい人たち」

Activity

Talk about what you want now. Say what you will do if you get it.

あなたが今欲しいもの、それが手に入ったらどうするかなどについて話してみよう。

Idea Box

1 more sleep time 「もっと多くの睡眠時間」
2 my own computer 「自分のコンピュータ」
3 a concert ticket for... 「…のコンサートチケット」
4 the latest version of the application 「アプリの最新版」

Appendix 4

Questionnaire adapted from Motoda (2000) (Studies 1, 2, 3, and 5)

【 5 → よく当てはまる　4 → 当てはまる
3 → どちらでもない
2 → 当てはまらない　1 → 全く当てはまらない 】
の中から選んでください。

成績とは関係ありませんので、周囲と相談せず、正直に答えてください。
＊すべて同じ番号を選んだりせず、問いごとに、よく考えてください。

1. 何回言っても、外国人が私の英語をわからないとき、焦ります。
   5　4　3　2　1
2. 外国人との会話で、言いたいことが英語でうまく言えないとき、不安になります。
   5　4　3　2　1
3. 外国人が私の英語を聞いて、わからないという顔をしたとき、不安になります。
   5　4　3　2　1
4. 外国人が私の英語を聞いて、「え？」と聞き返したとき、不安になります。
   5　4　3　2　1
5. 外国人の英語がわからなくて、どう反応してよいかわからないとき、不安になります。
   5　4　3　2　1
6. 外国人との会話で、知っている英語が思い出せないとき、焦ります。
   5　4　3　2　1
7. 初めてあった人と話すとき、英語がうまく話せるかどうか不安です。
   5　4　3　2　1
8. 外国人と話しているとき、英語を間違えないか不安です。
   5　4　3　2　1

Appendix 5

A handout from the advanced-level textbook provided by the DMM English Conversation Division (2019) (Studies 2 and 3)

Appendix 6

A handout from the advanced-level textbook provided by the DMM English Conversation Division (2019) (Studies 2 and 3)

Exercise2: Answer the questions:

Appendix 7

A handout from the advanced-level textbook provided by the DMM English Conversation Division (2019) (Studies 2 and 3)

Exercise 2: Answer the questions:

Q1: What jobs do you think these people have?

Q2: How would you say the people in these pictures are different, personality wise?

Q3: What is the social impact of each of the two jobs on a person's life?

Q4: What about the impact on their health and life style?

Q5: What can you say about the productivity and the tendency to procrastinate, regarding these two jobs?

Q6: What can you say about the motivation and stress levels regarding each of the two jobs?

Q7: Overall, what are the advantages and disadvantages of the two jobs? Which one would you choose, and why?

Appendix 8

Speaking test adapted from Eiken (Eigokenteikyokai, 2013a) (Study 2)

《Sample》

You have **one minute** to prepare.

This is a story about a woman who wanted to stop people from smoking on the street.

You have **two minutes** to narrate the story.

Your story should begin with the following sentence:

One day, a woman was on her way to work.

Six descriptive points: 1) A man in front of a woman was smoking and he burned her jacket with his cigarette. 2) She took part in a campaign to stop people from smoking on the street. 3) The campaigns were asking people walking by to sign a petition to support. 4) Some workmen were making a special smoking area. 5) A sign had been put up to warn people that if they smoked while walking on the street, they would be fined 1,000 yen. 6) However, she walked past the smoking area and saw a lot of smoke coming from it and some people were coughing.

Appendix 9

Speaking test adapted from Eiken (Eigokenteikyokai, 2013b) (Study 3)

《Sample》

A New Service for Parents

It can be troublesome for parents with young children to go shopping in crowded places. For this reason, more shopping centers have started offering their customers childcare services. Some customers with children choose shopping centers that provide these services. In this way, they do their shopping more easily. Such services are becoming available even in places such as theaters and hospitals.

Your story should begin with this sentence: **One day, the Sasaki family went to an art museum that offered childcare services.**

Five descriptive points: 1) Mr. Sasaki said to his wife, “They’ll take care of our baby while we look around.” 2) He was putting his bag onto a locker. 3) Mrs. Sasaki was looking forward to seeing the paintings with her husband. 4) He was choosing a toy for their baby. 5) She was worried that their baby might be crying.

Appendix 10

A handout used in video calls with overseas classrooms (Study 4)

Questions about school life

1. When does the school year start in your country?
2. Do you have classes on Saturdays?
3. How many classes do you have each day?
4. Do you wear a school uniform?
5. How do you go to school?
6. What time do you come to school?
7. What time do you leave school?
8. What school events do you have?
9. How many students are there in your class (school)?
10. How long is the summer vacation?
11. How much homework do you have each day?
12. Do you bring indoor shoes to school?
13. Do you eat lunch at school?
14. Where do you eat your lunch?
15. How often do you have the tests?
16. When did you start studying English?
17. Do you have a sports day?

Appendix 11

Questionnaire on WTC and unwillingness to speak English adapted from Isoda (2007) (Study 4)

英語についてのアンケート

成績などには一切関係ありません。友達と相談せず、質問ごとによく考えて、正直に答えてください。
次のそれぞれの質問に、【４→よくあてはまる　３→あてはまる　２→あてはまらない　１→全くあてはまらない】の中から選んでください。

１	英語の授業が好きです。	４	３	２	１
２	英語の授業に進んで参加しています。	４	３	２	１
３	英語を話すことは楽しいです。	４	３	２	１
４	英語を聞くことは楽しいです。	４	３	２	１
５	英語を話せるようになりたいです。	４	３	２	１
６	英語を聞けるようになりたいです。	４	３	２	１
７	私は人と英語で話す時，緊張します。	４	３	２	１
８	私は人と英語で話す時，ドキドキします。	４	３	２	１
９	私が話す英語は，相手に意味が伝わらないと思います。	４	３	２	１
１０	私は，今の英語力では英語で話すことはできないと思います。	４	３	２	１
１１	私は，できれば人と英語で話したくありません。	４	３	２	１
１２	私は，人と英語で話すことは避けたいです。	４	３	２	１

Appendix 12

Directions for the speaking test (Study 4)

聞いている先生は、聞かれたことにだけ答えます。あなたに質問はしません。

場面

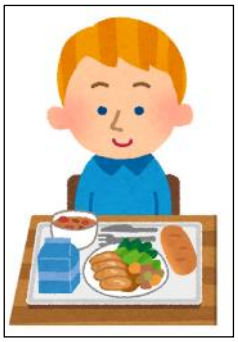
・あなたのクラスに新しい外国人の友達が転校してきました。
・あなたの近くの座席になりました。
・給食の時間になりました。

MISSION

・あなたの前にいる外国の子と仲良くなれるように
できるだけたくさん質問しましょう。

Appendix 13

A picture card for boys used in the speaking test (Study 4)

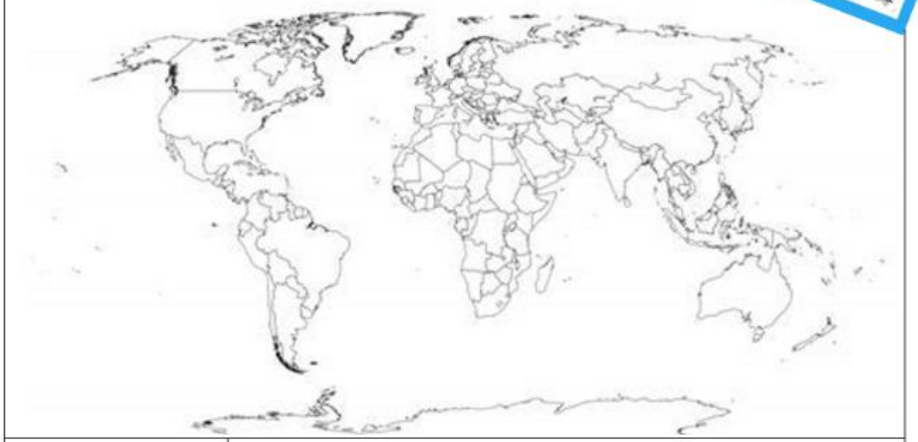


Appendix 14

A picture card for girls used in the speaking test (Study 4)

Appendix 15

A handout used in Session 1: Video Calls with Overseas Classrooms (Study 6)

The name of the country: 	
	
Capital city	
National language	
Other Features (Cuisine, Festivals, Culture, Education etc.)	

Appendix 16

A handout used in Session 1: Video Calls with Overseas Classrooms (Study 6)

Pre-Mystery Skype

Mystery Skype

Mystery Skype is a 30-minute critical thinking challenge that your class takes part in while Skyping with another class somewhere else in the world. Your goal is to guess the other school's location (country, state, city, school name) before they guess yours. We do this by asking yes and no questions.

■ Possible Mystery Skype Questions:

1	Is your continent in the Eastern/Western Hemisphere?
2	Is your continent in the Northern/Southern Hemisphere?
3	Is your continent near the Atlantic/Pacific/Indian/Arctic Ocean?
4	Is your continent N. America/S. America/Africa/Europe/Asia/Australia/Antarctica?
5	Is it a big/small country?
6	Do you speak English as a first language?
7	Is it very hot in summer and cold in winter?
8	Is it north/south/east/west of……..?
9	Does your country border another country?
10	Are there mountains in your country?
11	Does your country have a coastline?
12	Is ……..the capital of your country?
13	Does your state/province border?
14	Is your country/state/province north/south/east/west of?
15	Is your city in the north/south/east/west of your country/state/province?
16	Is your city the capital of your country/state/province?
17	
18	
19	
20	

■ Possible Clues:

1	The time is…
2	The season is…
3	We are north/south/east/west of…
4	The beginning letter is…
5	We also speak French/German/Spanish/Mandarin etc…
6	
7	

Appendix 17

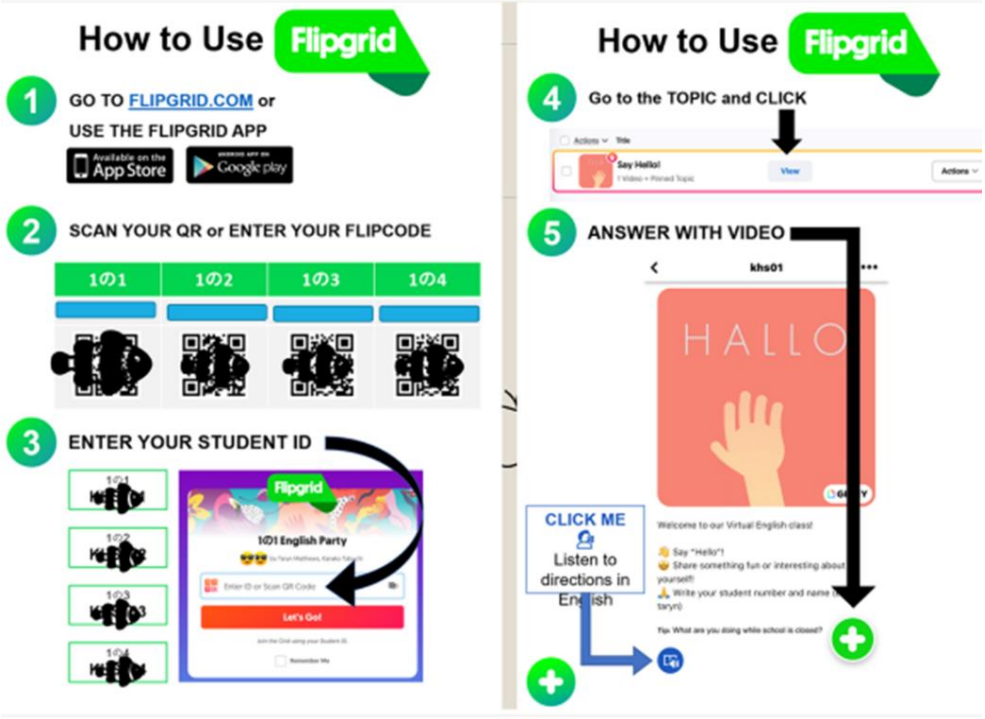
A handout used in Session 1: Video Calls with Overseas Classrooms (Study 6)

- Note taking:
  - ✓ 1st round

Your questions	Their questions

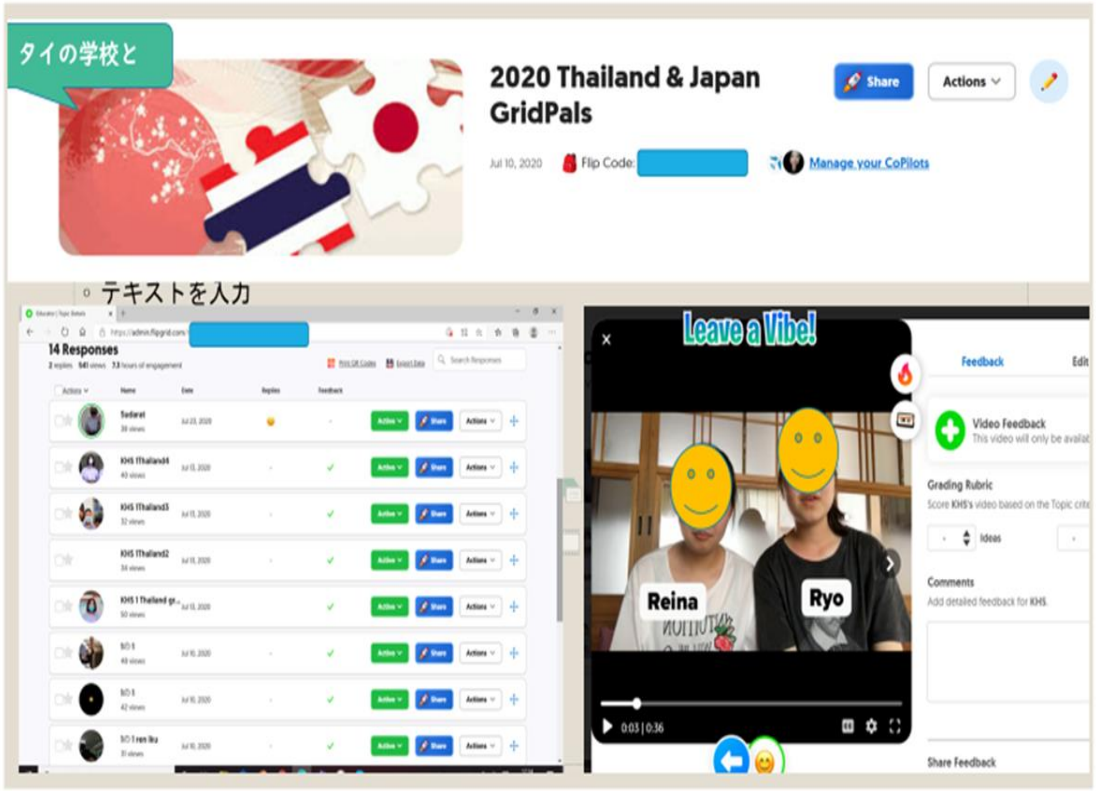
Appendix 18

A handout used in Session 2: Flipgrid (Study 6)



Appendix 19

An example of the Flipgrid student submission screen used in Session 2: Flipgrid (Study 6)



Appendix 20

Questionnaire on IP adapted from Yashima (2009b) (Study 6)

Intercultural approach (-avoidance) tendency (身近な異文化へのリアクション)

1) 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。
2) 外国の人と話すのを避けられれば避ける方だ。*
3) 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。
4) 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。
5) 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。
6) 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*
7) 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。

Interest in international vocation

8) 故郷の街からあまり出たくない。*
9) 外国で仕事をしてみたい。
10) 国連など国際機関で働いてみたい。
11) 国際的な仕事に興味がある。
12) 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。*
13) 海外出張の多い仕事は避けたい。*

Ethnocentrism (違いに対する反応 Reaction to different customs/ values/ behaviors)

14) 外国の人の言動に違和感を感じることがある。
15) 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。
16) 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。
17) 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。
18) 習慣や価値観の異なる人は苦手だ。

Interest in foreign affairs

19) 外国に関するニュースをよく見たり、読んだりする。
20) 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。
21) 国際的な問題に強い関心をもっている。
22) 海外のニュースにはあまり興味がない。

Having things to communicate (Willingness to communicate to the world)

23) 世界の人々と話したい内容を多くもっている。
24) 世界に向かってアピールしたいことがある。
25) 環境問題や南北問題などについて意見をもっている。
26) 世界の人々と話すとなると何を話してよいかわからない。*
27) 国際的な諸問題について特に意見はもっていない。*
28) 外国人の友人と話したいことがたくさんある。