

*SECOND
LANGUAGE
STUDIES*



Volume 41 Issue 1

TABLE OF CONTENTS

1	<i>Mizukami</i> – A Student Led Publication	1
2	<i>Roos</i> – Language Use of Japanese-English Bilingual Families and Association with Children’s Oral Proficiency in Heritage	5
3	<i>Itakura</i> – Audience Members as Language Brokers in Live Streamed Gaming Session	54
4	<i>McGehee</i> – Test Review: Occupational English Test	38
5	<i>Larkin & Miller</i> – A Short Paper Arguing for Working Papers as a Platform for Scholarly Debate	113
6	<i>Miller</i> – Annotated Summaries of Second Language Studies Graduate Work at the University of Hawai‘i at Mānoa, 2022-2023	116

SECOND LANGUAGE STUDIES – A STUDENT LED PUBLICATION

MICAH MIZUKAMI

University of Hawai‘i at Mānoa

Again, we embark on a new beginning with *Second Language Studies*. On behalf of the editorial board, we are excited to share our latest 2023 issue, the first to be fully produced by an all-graduate student editorial team. This is a major transition in how our departmental working papers, *Second Language Studies*, is run and produced and has provided the editors with valuable experience in publishing a journal. This is an exciting time for *Second Language Studies*, and we hope to expand moving forward.

STUDENT STEWARDSHIP AND NEW DIRECTIONS

After Dr. JD Brown retired, Dr. Dustin Crowther took over editorship of *Second Language Studies* with the vision to incorporate graduate students into the production of the journal. In 2020, SLS PhD students Ha Nguyen, Kristen Urada, and myself, Micah Mizukami, worked closely with Dr. Crowther to envision what *Second Language Studies* would look like moving forward. We welcomed three additional PhD students to assist with the 2022 issue: Rickey Larkin, Michol Miller, and Hitoshi Nishizawa. These issues were managed and edited primarily by Dr. Crowther, but he passed the baton to us PhD students with the publication of the 2022 issue and transitioned into an advisor role. Since becoming fully student-run, we have established an editorial board structure and expanded the scope of *Second Language Studies*. This year, we had a chief editor, two review editors, a submission editor, a summary editor, and a copy editor comprising our editorial board.

Together, we also worked to update the breadth and scope of submissions accepted to *Second Language Studies*. Although not all of these types are represented in the current issue, we hope to maintain the quality of our working papers while increasing the variety of submissions. We accept the following:

1. Empirical Articles: Original research that involves collecting and analyzing either qualitative, quantitative, or both types of data. An empirical article is usually organized into Introduction, Literature Review, Methods, Findings and Discussion sections. IRB approval must be obtained prior to data collection.
2. Theoretical Papers: Papers that discuss theoretical perspectives in second language teaching, second language learning, second language use, and second language analysis.
3. Research Proposals: Research proposals are research plans that describe the research question(s), methodology, plan for data collection and how the data will be analyzed. Authors are strongly encouraged to submit data collection tools (e.g., interview questions, testing materials, etc.), IRB is not required.
4. Language Test Reviews: Papers that critically survey existing language tests, which includes general descriptions of the test, purposes, uses, and appraisal.
5. Pedagogical Materials (with development notes): Pedagogical materials include lesson plans and teaching activities/ideas that target specific language skills. The authors are encouraged to include actual materials with descriptions of targeted audience (e.g., learners, teachers, teaching contexts).
6. Research Materials (with development notes): Research Materials include Interview protocols, list of interview questions, experimental materials, or any other materials that could be used for research purposes.
7. Scholarly Interviews (e.g., visiting scholars, Brown Bag presenters): Video or audio-recorded conversations with experts in the field. The interviewer must obtain a media release form for the interview to be published in *Second Language Studies*.
8. Short Essays: Brief papers advancing an opinion relevant to the field of Applied Linguistics. Opinion pieces should be no more than 3,000 words inclusive of references. The piece ought to present well developed arguments and be topical to current scholarship. They should be interesting, engaging, and may stimulate new ideas and provoke debate.

THE CURRENT ISSUE

In our current issue, we present four papers that showcase the scholarly achievements, critical reviews, and opinions of our graduate students in the Department of Second Language Studies. In line with previous issues, we highlight exemplary student coursework and MA scholarly papers. We have also expanded to include short essays, a new format for *Second Language Studies* that we hope will encourage thoughtful scholarly provocations that are less cumbersome to write than a full article, yet push us in exciting scholarly directions or encourage us to be critically reflexive about our field. In addition to these four papers, we once again provide an overview of recent SLS MA/AGC scholarly papers and PhD dissertations.

The first paper, written by SLS MA graduate Sachiko Roos, which was selected for a Harry Whitten Prize for Scholarly Excellence. This paper examined the heritage language development of children in Japanese-English speaking bilingual households in Hawai'i and Washington State, and analyzed consistency in language use, links between use and vocabulary proficiency in children, and any potential differences between both regions. This paper served as her MA scholarly paper.

Our second paper was written by SLS MA graduate Naoki Itakura and served as his MA scholarly paper. Analyzing a multilingual videogame livestream, this paper used multimodal Conversation Analysis to demonstrate how audience members served as language brokers through live chat, helping the live streamer orally communicate with his teammates.

The third paper, written by SLS MA student Maggie Nakamura McGehee and demonstrates the quality of work being produced in class. This paper, which was written for SLS 490: Second Language Testing, reviewed the Occupational English Test which was developed in Australia and is used to assess the English proficiency of healthcare professionals and make decisions on their ability to work, study, or seek professional development in English speaking settings.

The fourth paper, written by SLS PhD students Rickey Larkin and Michol Miller, is our first short paper. Looking at other examples in applied linguistics, they argued for how working papers can serve as a platform for professional scholarly debate. They highlight seven reasons why short papers should be utilized more in working papers and encourage others to submit short opinion pieces to push our field forward.

On behalf of the editorial board, we hope that you enjoy the first student-led issue of *Second Language Studies* and thank you for reading. For those interested in publishing in *Second Language Studies*, we are always open to submissions, including empirical articles, theoretical papers, research proposals, language test reviews, pedagogical or research materials, scholarly interviews, and short essays. We also welcome any SLS graduate students interested in joining our editorial team. We thank you again for reading our 2023 issue of *Second Language Studies*.

Mahalo nui!

Micah Mizukami, Chief Editor

Ha Nguyen, Review Editor

Hitoshi Nishizawa, Review Editor

Rickey Larkin, Copy Editor

Michol Miller, Summary Editor

Kristen Urada, Submission Editor

**LANGUAGE USE OF JAPANESE-ENGLISH BILINGUAL FAMILIES AND
ASSOCIATION WITH CHILDREN'S ORAL PROFICIENCY IN HERITAGE
JAPANESE**

SACHIKO ROOS

University of Hawai'i at Mānoa

ABSTRACT

The maintenance and development of heritage language (HL) has been influenced by various factors surrounding heritage speakers; however, it is unclear what factors could closely impact children's oral proficiency. In this exploratory study, I examined the relationships between proximal and distal input factors, and children's oral lexical proficiency in the heritage and community language, among Japanese-English speaking bicultural families in the U.S. Twenty-one children from bilingual families in Hawai'i and Washington completed an oral picture naming task in both Japanese and English (HALA, adapted from O'Grady et al., 2009) and a semi-structured interview about their family language use. Mothers and fathers separately completed an online survey containing questions about the language use and other potential language-related factors. The analysis of the collected data explored their language use consistency among the family members, the association between the language use and the children's vocabulary proficiency, and the potential differences in factors between the two regions. The results from the children's and parents' reports indicated consistency in reciprocal language use among parents and children, found positive correlations between the quantity of parental language outputs to their child and children's oral lexical proficiency. Additionally, no notable differences were found between the two regions in the U.S. besides non-native Japanese parents' HL use that was promoted with the heritage community's support.

Keywords: heritage language, heritage speakers, language use, oral proficiency

BACKGROUND

The world is now more connected than ever, and globalization has become normalized in modern society. As social and economic ties have increased across the globe, families have also become much more diverse. Consequently, transcultural, multiethnic families have emerged where multiple languages are consistently used within the family domain. For young children, their family is the first social unit where they naturally learn languages being used by the parents and other family members (including their siblings), and the degree to which these languages are spoken in frequency may vary. As the children grow older, their surrounding influences and environment become more complicated as they expand beyond their immediate and familial surroundings to encompass their schools and local communities. Due to expanding opportunities for social interaction, the chances that bilingual children hear languages more commonly used in the wider social context would gradually increase. The language commonly heard and used in daily social interactions is likely to become the dominant language, while the other language, mainly used within the family domain, will assume the role of a heritage language, regardless of whether it is the individual's first or second language (Sun et al., 2020). Among the school-aged children in multicultural families, the quantity of home language input can be a potential predictor of how well children can maintain and develop their heritage language (Dixon et al., 2012; Sun et al., 2020).

Heritage languages are seen as minority languages that the young children acquire naturally at home and are different from the primary language used in their core social environment (Montrul & Polinsky, 2021). In the United States, the term Heritage Language (HL) first began to appear in fields of research, policy, and practice in the 1990s. During the same period, pedagogical implications for HL learners were also analyzed (Hornberger & Wang, 2008). Since then, HL research has gained popularity in various fields such as bilingual language acquisition, sociolinguistics, psycholinguistics, as well as HL teaching and pedagogy with studies highlighting more individualized perspectives.

There are different conceptualizations of HL speakers; however, HL speakers are arguably different from HL learners, who are explicit learners in educational settings. HL speakers, whether native or foreign-born, refer to the individuals who are raised in a bilingual home and naturally obtain a certain degree of knowledge and proficiency in their HL (Montrul & Polinsky,

2021). HL speakers have a family or ancestral connection to a particular language other than the societal language, which is a dominant language used in society [A3] [A4] (Hornberger & Wang, 2008). The HL speakers are often regarded as the bilinguals raised by one or both immigrant parents in multilingual environments where they can naturally be immersed in the minority language, which differs from the one prevalent in society (Gharibi & Boers, 2019). The HL speakers are neither monolingual nor second language learners, and often categorized as a special group among native speakers (Montrul & Polinsky, 2021). Research on HL speakers has covered a wide range in various viewpoints. They can be children's HL learning, development and maintenance. Dixon et al. (2012) investigated socioeconomical and political factors of HL children's HL learning. Other studies explored family's HL use from parents' perspectives. Farr et al. (2018) investigated immigrant mothers' ethnic identity transitions through struggles using Spanish as a HL with their children. This was a reflection of the mother's language ideology, with which mothers wanted to pass on the traditional and cultural values situated in HL to their children, while sustaining conversations with their children in English as a societal language. Although the linguistic and cultural values of HL are generally acknowledged today, HL speakers are at risk of language attrition [A5] [A6] and even the possibility of language loss due to the limited availability of the HL in their everyday environments and the limited opportunities for their usage. In the psycholinguistic framework, O'Grady et al. (2009) assessed the loss of heritage Korean language among the English-Korean bilingual college students residing in Hawai'i. The study measured the reaction time of lexical retrieval for HL speakers in both languages, using the Hawai'i Assessment of Language Access (HALA), a lexical access test that used words of body parts, categorized into three levels of frequency of use. The task measures dominance, which is the relative language proficiency between two languages. The authors reported a high correlation between frequency of word use and reaction time of lexical retrieval.

Studies related to children's HL vocabulary knowledge and possible predictors have also gained its popularity in the HL literature (Dixon et al., 2012; Unsworth et al., 2019; Sun et al., 2020; Verhagen et al., 2022). In the United States, there are international couples with Japanese and American spouses that are raising bilingual children. Since English is the official language, Japanese is perceived and used differently in regions and local societies. These regional differences may be a distal factor of language input for bilingual children's HL maintenance and development (Noro, 2008). In regions where Japanese language is socially regarded as a

minority language, heritage Japanese children often do not have many opportunities to use their HL outside of the home. Therefore, the family's HL use at home could be a proximal factor for HL maintenance and development.

Considering these potential distal and proximal language [A7] [A8] input factors, the present study examines how Japanese and English languages were used by parents and children within the family contexts, and the extent to which overt regional differences were observed in Japanese-English bilingual families. The primary goal of this study is to identify factors that affect the HL lexical proficiency, in order to gain more insight on the children's HL learning and development in multilingual societies.

Family's Language Use and Family Language Policy (FLP)

Parents in bilingual families have diverse language ideologies about their children's bilingualism, the languages they should speak to facilitate learning, or the most effective ways to teach their children two languages (Said, 2021). These language patterns may emerge naturally or be intentionally created as a language rule, known as Family Language Policy (FLP) (King & Fogle, 2013). FLP is a set of language rules, typically defined by parents to implicitly or explicitly allow for the practice patterns of family members' language choices and language use when at home. (King & Fogle, 2013; Said, 2021). FLP examines a child's language learning and use at home, which may reflect parental decisions that convey their language ideology and the social and cultural values underlying the language (King & Fogle, 2013; Said, 2021).

Recent research has focused on links between FLP and family members' emotions. Using an ethnographic approach, Curdt-Christiansen and Iwaniec (2022) explored how home language was used in the digital and non-digital daily conversations exchanged within Chinese families and Polish families in the UK. The study found a link between family members' emotional expressions (such as emojis in HL) with family bonding and affective relationships. Moreover, the authors claimed that the verbal and non-verbal emotional repertoires contributed to the establishment of implicit FLP.

FLP has been deemed a manifestation of parent's language ideology and language practices that children should adhere to; however, it is not unidirectional. Both parents and children are decision-makers, and play an active role in approving, negotiating and adhering to the rules (Said 2021). Moreover, considering Schermerhorn and Cummings' (2008) Transactional Family

Dynamics theory, FLP is not spatiotemporally fixed, but rather, is reciprocally fluid in accordance with parental language ideologies and expectations, as well as a reflection of these children's responses.

The use of FLP in the present study is defined not as a unidirectional parent-to-child language rule, but as a manifestation of language use that is reciprocally agreed upon by both parents and children. In other words, each family member's language use is treated as the language input and output that is governed by the mutually agreed FLP. [A9] It is crucial to investigate how language use at home is understood by each family member. If they all mutually agree on the rules, it indicates that the FLP is valid and functions successfully. Conversely, if inconsistencies are found, it suggests that the language rule may not be well established.

This study, thus, examines language use at home from the perspectives of mothers, fathers, and children respectively. A study was conducted to examine language use of each family member and investigate any association in between them. In prior literature, survey questions to guardians were commonly used as a method to learn more about the language being used at home within bilingual families with young children (Lauwereyns, 2011; Dixon et al., 2012; Unsworth et al., 2019; Sun et al., 2020; Verhagen et al., 2022). However, no examples were found in which both fathers and mothers provided separate responses on the language use at home. In most cases, mothers were treated as the child's primary caregiver and only their responses were meant to represent both parents' perceptions (Scheele et al., 2010). This may leave the question whether fathers' opinions were accurately reflected in regard to survey responses. The present research addresses the potential issue by asking mothers and fathers to respond to the survey separately.

Children's Vocabulary Proficiency

Bilingual children's language maintenance and development have been extensively studied; however, the focus has been more on the societal language proficiency rather than on the HL proficiency (Unsworth et al., 2019). Among the research focusing on the HL language development, there are many factors which could affect bilingual children's HL proficiency including the quantity of each parent's HL use, socioeconomic status (SES), HL community, and HL resources from television (Dixon et al., 2012). Additionally, the factors for the HL children's proficiency can also vary based on the type of HL speakers they are. For example, Gharibi and

Boers (2017) conducted a study among the Persian-English bilingual children aged 6 to 18 living in New Zealand, as well as a counterpart group of Persian monolinguals to examine their Persian lexical richness from demographic and sociolinguistic factors by using vocabulary tests. The bilingual group consisted of simultaneous heritage Persian children (born in New Zealand or emigrated before age 3) and sequential heritage Persian children (emigrated to New Zealand after age 3). The study found that the bilingual group did not have as much vocabulary as the monolingual group. The key factor for the lexical richness depended on the family language use and parents' attitude toward HL (a sociolinguistic factor) for the simultaneous bilinguals, while for the sequential children, it depended on the age at arrival (AoA) (a demographic factor). In a more recent study, Gharibi and Boers (2019) further investigated the richness in linguistic expression of HL speakers among the same population by examining children's narratives to find out whether the family language use and the parental attitude could be primary factors. The study did not find any notable association between the children's lexical proficiency and the sociolinguistic factors. However, it concluded that their ages at the time of interview, for both simultaneous and sequential children, and AoA (for the sequential children) are the key factors for their lexical richness. Although a statistical correlation was not found in family language use and parental attitude toward children's language development with bilingual children's HL proficiency, the study implied that there was an indirect effect of the parental input on the heritage children's lexical development.

More studies about HL development were conducted among younger children. Verhagen et al. (2022) conducted a study focusing on preschool children's HL proficiency with 136 Dutch-English bilingual families in the Netherlands. A language background questionnaire and a Peabody Picture Vocabulary Test (PPVT) were administered to the parents and their children respectively, in addition to the parent's rating of English language outcomes of their children. Based on the parents' survey, they categorized three language use patterns: One Parent One Language (OPOL), mixed languages, and minority language only. Contrary to previous studies, they did not find clear evidence of a correlation between the particular patterns and the children's oral language proficiency when the input properties (input quantity, parental proficiency, and parental language mixing) were controlled. The study concluded that the input from parents was the true factor, instead of the broadly defined language use patterns. Similar results were found in Sun et al. (2020); the study participants were 457 bilingual families in Singapore, speaking a

combination of English and either Mandarin, Malay or Tamil as a HL. The study analyzed the responses from parents' and preschool teachers' questionnaires, evaluated the children's non-verbal skills with Raven's Colored Progressive Metrics, assessed children's working memory with the Backward Digit Recall test, and tested children's receptive vocabulary proficiency by using the Bilingual Language Assessment Battery (BLAB). Sun et al. (2020) concluded that, among potential factors (including age, gender, cognitive abilities, input quality and SES), the significant factor for the preschool children's vocabulary development was the input quantity from family and preschool teachers.

As previously mentioned, there are a variety of bilingual families with HL children. Lauwereyns (2011) conducted a parental survey among two types of families with bilingual children aged between 3 and 19 in New Zealand: 31 families with both Japanese parents vs. 57 families with one native and one non-native Japanese parents. The study explored parental attitude towards their children's bilingual development between these family types and found that families with both Japanese parents were more satisfied with their children's heritage Japanese skills than the couples with one native and one non-native Japanese parents.[A10] [A11] The study also revealed that acquisition of the societal language (English) was easier than that of HL (Japanese), indicating that HL input at home was crucial for the children's HL development. In this respect, the study concluded that non-native fathers' HL proficiency played an important role as well.

Considering this, it is commonly accepted that language input can play an important role in bilingual children's language development; however, some literature has suggested that HL input could negatively affect a child's language development interacting in the greater society. Scheele et al. (2010) compared three groups of 3-year-old children living in the Netherlands, including the Dutch monolingual, Moroccan-Dutch and Turkish-Dutch bilinguals from immigrant families. This study investigated the potential influence of their SES, their cognitive skills, and the family language input in regard to the children's overall language development. Their results found no differences in the children's non-verbal intelligence. Instead, they found that the family language input was the crucial factor along with the SES as a secondary factor that affected bilingual children's language proficiency. In other words, they concluded if more HL was used at home, the children's HL proficiency improved, while their Dutch development deteriorated. The researchers found that the immigrant bilingual children's L2 Dutch proficiency was not as high

as the monolingual Dutch children. They claimed that the bilingual children's low SES deprived the opportunity for Dutch language input, resulting in a negative impact on their L2 development.

Dixon (2011) provided a slightly different stance on the role that language input plays with a project that took place in Singapore using kindergartners from bilingual families as subjects. While Singapore English is considered to be the societal language, the families of children in this study had Chinese, Malay, and Tamil as HLs. Multiple regression analyses were conducted between the parents' language background reports as independent variable and children's scores from a translated version of the PPVT-III as the dependent variable. The results showed that HL parents' language input was significantly correlated with children's vocabulary in not only their HL, but also, English as the societal language if the mother's education (which originally had a positive correlation with children's language proficiency) was controlled. Furthermore, Dixon et al. (2012) conducted a study more focused on the association between the home factors and the community factors [A12] [A13] and the bilingual children's language development (community factors will be discussed in the next section). The study was conducted among the same population and instruments as in Dixon (2011). They found a highly significant positive correlation in children's HL vocabulary scores and the parent's HL use to children when the condition of children's age was controlled. They also detected a positive effect of the heritage community support regarding the children's HL proficiency, although the degree of effect varies across different heritage communities in size and SES.

Heritage Community and Regional Differences

Heritage Community. As for other factors which could have an influence on children's language lexical proficiency, one would be the heritage community. Heritage communities provide heritage children with opportunities in HL learning by reinforcing heritage culture and ethnicity, and assisting in increasing HL vocabulary through language practices (Dixon et al., 2012). As a heritage community is the adjacent outer layer of family as a unit, it could indirectly, yet significantly contribute to children's HL maintenance and development. Noro (2009) examined the two groups of Japanese heritage school children aged 3 to 15 from Vancouver and Victoria in Vancouver B.C., Canada in order to examine any association between the family environment, children's ethnic identity and their oral HL proficiency. The results from the

parental interview and the children's HL narratives indicated that the bilingual children living in Vancouver, which offers a larger Japanese heritage community, had a higher Japanese oral proficiency and stronger heritage Japanese identity. Furthermore, this study indicated the importance of non-native Japanese fathers' active involvement in HL, as it contributed to children's HL development and their heritage identity establishment. In detail, the non-native Japanese fathers' experiences in living in Japan before their child's birth, as well as the fathers' Japanese language use affected their children's HL development and formation of ethnic identity. Dixon et al. (2012) also found evidence of a heritage community providing a positive effect on the children's heritage vocabulary proficiency.

Based on these findings, I became interested in investigating whether variations in the perception of the Japanese language in different regions could affect a child's language use at home, as well as on parental language ideology, expectations, and satisfaction with their children's HL proficiency.

Two Contrasting Regions. In the present study, I explore Japanese-English speaking multicultural families living in two regions in the United States where Japanese language as HL is generally perceived differently. The selected two regions are Greater Honolulu (GH) in the state of Hawai'i and Greater Seattle (GS) in Washington State. The Hawaiian islands have a long history of Japanese immigration for plantation labor since the late 1800s, over time, Japanese culture and traditions practiced by the immigrants were adapted into Hawaiian and local customs. Many Japanese words were implemented as-is, or merged with other words, into the Pidgin language used by Hawai'i locals today. Additionally, Hawai'i is a very popular resort destination for Japanese tourists from Japan, as reflected in the numerous signs and displays in downtown Waikiki and other tourism sites where Japanese language is commonly spoken and heard.

Table 1 shows data from the 2021 United States Census' American Community Survey Demographic and Housing Estimates on the Japanese population in the United States, reported at 0.2%, or 760,412 people that year. The population of Japanese in the state of Hawai'i was 11.9% (173,351), which was much higher than the national average. In contrast, the Japanese population in Washington State was only 0.5% (36,248), slightly above the national average.

Therefore, it is worth comparing these two distinctive regions: GH where Japanese language is more common vs. GS where Japanese is less common.

Table 1

Japanese Population from United States Census 2021

	Estimate	Margin of Error	Percent	Percent Margin of Error
U.S.	760,412	±11,065	0.2%	±0.1
Hawai‘i	173,351	±3,778	11.9%	±0.3
Washington	36,248	±1,695	0.5%	±0.1

To date, there has been little literature exploring regional differences in children's HL proficiency, parental ideologies, and their HL expectations and satisfaction with their children's language development. The regional differences can provide indirect evidence of value placed on heritage community, which could be a potential factor in the bilingual children's HL development.

RESEARCH QUESTIONS

The present study addresses the following three research questions:

1. To what extent do the language use reports from mothers, fathers, and their children align with one another?
2. To what extent does family language use at home correlate with lexical proficiency in Japanese, and English, as well as contribute to language dominance?
3. Between two distinctive regions, are there any notable differences in each family's language use, their language proficiency, and their ideology about language?

In regard to RQ1, I hypothesize if each of the reports from the family members about their language use at home are consistent, then there is evidence of FLP being mutually established (regardless of being implicit or explicit) and practiced successfully in the family context. As for RQ2, HL use from both mothers and fathers may contribute to HL input for bilingual school

aged children at home, and that may assist them improve their vocabulary in both languages synergistically. Regarding RQ3, regions where HL is accepted as a major community language will likely have many more heritage communities where they are more likely to be socially accepted; whereas regions where HL is regarded as a minority language will have fewer heritage communities, and few opportunities may be available to use HLs. In this respect, I hypothesize that the regional variabilities would show a significant degree of difference in the language use at home and family members' HL proficiency, as well as parental HL ideology.

METHOD

Participants

The inclusion criteria for the target families were, heterogamous married couples consisting of a native Japanese speaker and a native English speaker, residing in the U.S. with at least one child, and the child's age range is between 6 and 12 years old.

The target families were recruited by flyer distribution and word of mouth through local Japanese community networks in two different locations: GH and GS. Families were informed that they would participate in the present study as a family unit, which indicates both parents and their children were expected to participate in individual tasks separately. Ten families from GH and eight families from GS were invited to the study on a first-come-first-serve basis. Among the participating families, five families nominated two children who were later interviewed separately. After the nomination, one family in GH decided not to participate in the entire study. One GS family canceled the child's interview due to their schedule conflict. As a result, the data which was collected from 17 pairs of parents for the survey and 21 children for the individual interview were used for analysis. Regarding the parent participants, although it was neither conditional nor intentional, all the mothers were native Japanese speakers, while all the fathers were native English speakers across the two location groups.

Table 2 shows the child participants' demographic information. The mean age was 9.2 years ($SD = 2.19$, $min-max = 6-12$). All but one child participant had at least one sibling ($N = 20$ 95.2%).

Table 2*Children's Descriptive Statistics - Parent's Survey*

	All Participants ($N = 21$)
Children's age, mean	9.2 ($SD = 2.19$)
No. of children born in Japan	2
No. of first-born children	9
No. of boys (vs. girls)	14 (7)
No. of children with siblings	20

Table 3 and Table 4 show the parent participants' demographic information. The average ages for mothers and fathers were 44.1 ($SD = 4.8$) and 46.6 ($SD = 7.6$) respectively. All of the mothers were born and raised in Japan, while 14 out of 17 fathers were born and raised in the United States. Additionally, 91% of the parents received higher education.

Table 3*Mother's Descriptive Statistics, Self-evaluation*

	Total Participants ($N=17$)
Birth country:	
Japan	17
Highest Education:	
High school	1
Community college	5
Undergraduate	9
Graduate	2
	All Participants, $M (SD)$
Age	44.1 (4.8)
Living years in Japan	25.2 (6.1)
Living years in the US	17.6 (5.4)
Japanese Proficiency	
1=Not at all, 7=Perfectly	6.9 (.24)
English Proficiency	
1=Not at all, 7=Perfectly	5.3 (.96)

Table 4
Father's Descriptive Statistics, Self-evaluation

Total Participants (N=17)	
Birth country:	
The US	14
Other	3
Highest Education:	
High school	2
Community college	1
Undergraduate	8
Graduate	6
All Participants, M (SD)	
Age	46.6 (7.6)
Living years in Japan	1.7 (3.1)
Living years in the US	44.5 (8.3)
Japanese Proficiency 1=Not at all, 7=Perfectly	2.3 (1.64)
English Proficiency 1=Not at all, 7=Perfectly	6.8 (.38)

All the participating families were encouraged to participate in both the online survey and interview. After completion, each family received a 20-dollar Amazon gift card via email. For the single family that participated in the survey only, a 10-dollar gift card was provided.

MATERIALS

Language Background Questionnaires

The questionnaire was adapted from Lauwereyns (2011), which explored the association of parental attitudes toward children's bilingualism in both English and Japanese, and regarding children's oral and literacy proficiency. The questionnaire was designed for parents to reflect on their children's language background. It was comprised of questions about their perceptions on their children's bilingual development in both Japanese and English using a combination of 3- and 4-point Likert scales and open-ended question constructions. I chose the questionnaire as the basis for the present study because the content was relevant to the objectives of the study in

terms of quantitatively collecting bilingual children's language background based on parents' perceptions. By modifying the questionnaire for the present study, I developed an online survey using Google Forms for fathers and mothers to complete separately in order to keep them from affecting each other's response. It also included additional items asking about each family member's language use, a standardized the Likert scale in 7 points to make the comparison easier and more precise. The intent of the modifications was to better understand family members' thoughts on language choice and language use at home for Japanese-American intercultural families. The survey consisted of 33 items and 13 subitems (see Appendix A for the English version, and Appendix B for the Japanese version). There were four sections that were categorized as the following: (1) basic information about the child, (2) basic information about the parent, (3) language use and policy at home, and (4) links to Japan. Sections 1 and 2 covered the parent's demographic information, education level, self-evaluation of Japanese and English language proficiency, language uses within family, parents' language ideology and expectations toward their child's heritage language use, as well as their perceptions of competence. In Section 3, regarding the mother and father's perspectives, the language use patterns (between the parents themselves, mother and child, father and child, and among the child's siblings) were explored respectively using a 7-point Likert scale (1=*Always Japanese*, 7=*Always English*). Additionally, a few items asked whether the parents had ever discussed language rules or had a disagreement about those rules. Additional items asked about parent's bilingualism awareness, expectations and satisfaction toward their child's heritage language skill, and some challenges regarding language maintenance. Section 4 investigated the parents' possible connections to Japan including the non-native Japanese parent's Japanese learning experiences, affiliation with a local heritage community, frequency of visits to Japan, and interest in news about Japan. As a whole, the survey consisted of 13 questions using Likert scales, multiple choices, including Yes/No questions and open-ended questions. Open-ended questions were included in the questionnaire as an opportunity for participants to expand upon their answers to the Likert scale questions.

After the English version of survey was completed, it was translated in Japanese by the native Japanese author. The two versions were made available for the participants, allowing them to select their preferred version and potentially reducing the language pressure of non-native language fluency. As anticipated, the majority of the participants (aside from one father) selected their first language versions. The particular father, who was a native speaker of English,

responded to the Japanese version of the questionnaire in Japanese. The parents who nominated two children were asked to fill out the survey twice, one for each child.

Online Assessment Sessions

The assessment sessions for child participants were administered online to minimize the potential exposure of COVID-19 risk. This remote method also allowed the participants easier access to the session. The session consisted of two parts: an oral interview and a picture naming task.

Oral Interview. Eleven questions were orally asked to the child participants in Japanese (see Table 5 for English translation, see Appendix C for the original version). These questions were similar to their parents' questionnaire. Considering the child participants' age and different levels of Japanese language proficiency, the oral interview in Japanese began with simple items, such as asking their name, age, and Yes/No alternative questions, ending with one open-ended question for older or more advanced speakers. The open-ended question not only allowed the participants to freely express their thoughts on speaking Japanese as a heritage Japanese speaker, but also provided an opportunity to observe the child's lexical diversity and sophistication.

Overall, the child's interview had two main purposes. First, it was to give the child an opportunity to warm-up by conversing in Japanese with the author-researcher. The second purpose was to provide an approximation of how much the child could understand and respond in Japanese. It was efficient to explore the child's personality and Japanese fluency in advance through conversation, so that I could estimate how many supplemental aids would be needed in the scripted instructions for the next HALA task. In this study, responses from the items 4, 5, and 6 in Table 5 were coded using a 7-point Likert scale (1=*Always Japanese*, 7=*Always English*), which was consistent with the items in the parental survey on the language use at home.

Table 5*Questions orally asked for children in Japanese*

Question Items

1. What is your name?
 2. How old are you?
 3. Do you have any siblings?
 4. Which language do you speak to your mother, Japanese or English?
 5. Which language do you speak to your father, Japanese or English?
 6. Which language do you speak to your sibling(s), Japanese or English?
 7. Do you have a chance to speak in Japanese with someone besides your family?
 8. Is it difficult to speak in Japanese?
 9. Do you study Japanese?
 10. Do you want to continue to speak Japanese?
 11. Why do you want to speak Japanese?
-

Picture Naming Task. The second half of the meeting focused on the child's language development, or more precisely, their vocabulary proficiency. The present study adapted the HALA task, which was a picture naming task of human's body parts and was originally developed by O'Grady et al. (2009) for the purpose of analyzing English-Korean bilingual college students' language loss and language dominance. The HALA task was later modified in Kim and Kim (2022) to investigate L1 attrition of the heritage Chinese or Russian children who immigrated to Korea by assessing their reaction time in word retrieval. The authors recognized that the body parts naming task was appropriate for a bilingual experiment, as they were universally recognized items without concerns regarding cultural differences or abstract interpretations. The present study used the same picture files as Kim and Kim (2022) to explore the lexical proficiency of Japanese heritage children in Japanese and English. It should be noted that the present study focused solely on the child's vocabulary knowledge and did not consider their word retrieval time, as observed in O'Grady et al. (2009) and Kim and Kim (2022).

Two ShockWave Format (SWF) files comprising 31 colored pictures of body parts were used for this study. These two files contained identical pictures of practice and experiment trials, with the exception of the experiment pictures in the first file which were programmed to appear in a different order in the second file. The sample pictures for practice trials were not body parts, but rather, items that could be commonly found at home. During the practice trials, the child participants were instructed that a red circle would appear on each picture as a target pointer for

several seconds until the picture would automatically switch to the next one. Both files were run on the Elmedia Video player on the researcher's laptop, and the display was shared with the child participant via the Zoom share screen function. At the beginning of each practice trial and experiment trial, a green solid triangle appeared as a starting point. Each of the 31 pictures appeared sequentially on screen, and the child participant was prompted to say the name of the marked body part aloud. Each picture was displayed for eight seconds (the red circle disappeared on the seventh second) and was automatically switched to the next picture until the end where a red-squared stop sign appeared.

Data Collection Procedure

Data was collected during July and August 2022. Email was the primary correspondence tool with the parent participants. Each email was written in both Japanese and English text for the participants' convenience. Each child and a supervising parent attended the online assessment session together. Although no specifications for parental attendance were previously provided, all of the participants who accompanied their children were mothers. At the meeting, the mother was asked to sit wherever the child would feel most comfortable to assist them for their needs. Some mothers sat right next to the child, appearing on screen together. Others stayed in the same or the adjacent room by keeping a certain distance from the child. After a brief greeting was exchanged in Japanese, the assent form was displayed on the shared screen and verbally explained thoroughly to the child by the experimenter. The assent content was explained in either Japanese or English depending on the child's preference. The instructions of the meeting activities and oral interview were performed in Japanese with supplemental English for the children who displayed a lack of comprehension. At the end of the assent content walkthrough, the child was officially asked whether they would join the online session. All the child participants agreed to proceed with the online tasks.

As forementioned, most of the interviews were conducted in Japanese; however, a few children showed difficulty in understanding questions in Japanese. In this case, English questions were added after the Japanese questions, and the responses were noted on the As for the procedure of the HALA tasks, the Japanese naming task was always performed first followed by English one. The ordering of this task had been considered significantly. Since all of the child participants currently attend local schools[A14] [A15] in the U.S., it was theorized that English

was more dominant than Japanese. Therefore, the children who performed poorly in the Japanese naming task were also able to finish the task session confidently by ending with the English naming task, which resulted in the overall satisfaction of the participants by the end of the meeting.

Data Analysis

After the raw data were appropriately organized, the data analyses were performed with Microsoft Excel and IBM SPSS statistical tools in order to address the three research questions. RQ1 seeks to address to what extent family members' claims about language use were aligned with each other. As shown in Table 6, the parent's survey included the following questions regarding the language use at home using a 7-point Likert scale. The scale 1 indicates *Always Japanese*, scale 7 means *Always English*, and the midpoint 4 is *Japanese 50% & English 50%*.

Table 6

Survey question item No. 19 regarding the language use

19 (a).	Which language do you speak to your partner, and if mixed, how much of each respective language do you speak?	Self's language use with partner
19 (b).	Which language do you speak to the child, and if mixed, how much of each respective language do you?	Self's language use with child
19 (c).	Which language does your partner speak to the child, and if mixed, how much of each respective language does your partner speak?	Partner's language use with child
19 (d).	Which language does the child speak to you, and if mixed, how much of each respective language does the child speak?	Child's language use with self
19 (e).	If the child has any siblings, which language do you hear your children speak to each other, and if mixed, how much of each respective language do you hear?	Language use between siblings

As for the language use from child's perspective, their responses in the oral interview were coded using a 7-point Likert scale (1=*Always Japanese*, 2.5=*More Japanese*, 4=*Japanese 50% & English 50%*, 5.5=*More English*, 7=*Always English*) for the following three patterns of language use: the child's language use with their mother, the child's language use with their father, and the child's language use with their siblings. Due to the small sample size (in which normal distribution cannot be assumed), the Spearman rank correlation coefficient (ρ) (= rho) was used

for the analysis of RQ1 correlations between the participants (including children's reports vs. mothers' reports, children's reports vs. fathers' reports, mothers' reports vs. fathers' reports) were individually calculated with the measure using the IBM SPSS. Two-tailed tests were used to determine significance at the .05 level. Then, the scatterplots for each pair were generated.

In addition, the survey asked parents about their FLP decision-making, policy agreements, and language ideologies (see Table 7). The responses may reflect where parental decisions about language use at home had originated from. The FLP relevant items offered a *Yes* or *No* dichotomous answer. The items for the parental language ideology were asked in 7-point Likert scales and used in the RQ3 analysis.

Table 7

Survey question items about the FLP and language ideology

21	Have you ever discussed the decision of family language use with your partner?	FLP
22		FLP
(a)	Are you raising the child bilingually?	Language
23	What level of oral Japanese fluency do you expect of the child?	ideology
24		Language
(a)	Are you satisfied with the child's bilingual development?	ideology
25	Do you and your partner have a different opinion about the family language use?	FLP

With regard to RQ2, correlations between the family member's respective language use reports and child's HALA scores were computed using Spearman's rank correlation. The HALA scores measured children's lexical proficiency in both Japanese and English. The HALA scores were coded using the dichotomous scoring method. One point was added if the name of the focal body part was expressed correctly while the picture was on screen. If the child gave an incorrect answer, or could not express the answer within the time limit, or did not respond, 0 points were given. Plural or singular errors in the English nominal words were ignored. Both Japanese and English tasks were calculated with a total score of 31 points. Each score was marked using a

prepared score sheet (see Appendix D). The scores were reviewed in the recordings later to confirm the accuracy. In order to control for the child participants' age effect, dominance (or the comparable measure of language ability in both languages) was calculated by subtracting the HALA-Japanese score from the HALA-English score.

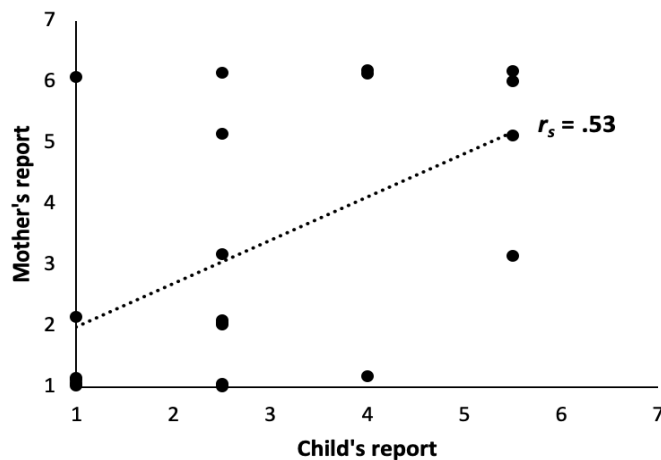
RQ3 was purposed to examine whether the two different regions presented any differences in family language use, child and parent language proficiency, and language ideology. As a measuring tool, first, independent t tests were performed to compare the collected data on language use, FLP, and language ideology between families in Hawai'i ($N = 9$) and Washington ($N = 8$). I recognized that the independent t test was not the best measurement tool when the sample sizes were small. Therefore, the Mann-Whitney U test was used to compare differences between two GH and GS. One concern was that there were duplicated responses in parental survey from five families, as their siblings participated in the online sessions. The present study originally intended to include the question on whether different patterns of parents' language use to siblings might occur. I hope to explore this in my future research.

FINDINGS/RESULTS

This study investigated language use reported by mothers, fathers, and children to determine whether perceptions of language use at home were congruent to one another under the mutual agreement of FLP. Additionally, it examined the potential association of language use by different family members in regard to children's oral vocabulary fluency in their home language.

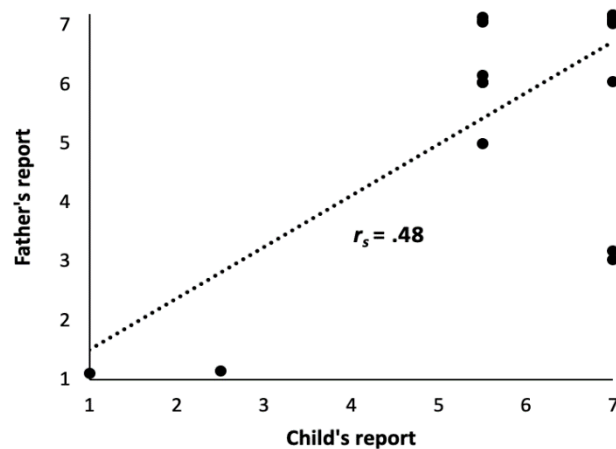
Family Language Use and FLP (RQ1)

Focusing on RQ1, language use reports from mothers, fathers, and children were compared respectively. Spearman's rank correlation was computed to assess the relationship between the children's reports and the mothers' reports about the child's language use to mother, as illustrated in Figure 1. There was a positive correlation between the two variables, $r_s = .53$, $p = .013$. This result suggests that there was some agreement between the child and mother regarding what languages the child uses with their mother.

Figure 1*Child's report vs. mother's report about child's language use with mother*

Note. The x-axis and y-axis labels indicate 7-point Likert scales of language use. 1 is always Japanese. As the number increases, the frequency of English use increases. 7 is always English.

Likewise, the relationship between children's and fathers' reports was computed and a positive correlation of $r_s = .48$, $p = .027$ was found, as shown in Figure 2. It suggests that both children and fathers also agreed on which languages the children use when they spoke to their fathers. In summary, there is evidence that the children's and parents' reports about the child's language use with parents were moderately correlated ($.4 < r_s < .6$). This suggests some evidence that all the family members had the same perception of what languages the children use with their parents.

Figure 2*Child's report vs. father's report about child's language use with father*

Furthermore, the mothers' and fathers' reports about mother's language use with the child had a strong correlation of $r_s = .72$, $p < .001$ as illustrated in Figure 3. Likewise, Figure 4 shows a strong correlation the mothers' and fathers' reports about father's language use with the child had a strong correlation of $r_s = .84$, $p < .001$. These results showed that both parents shared common perceptions about the languages they use with their children.

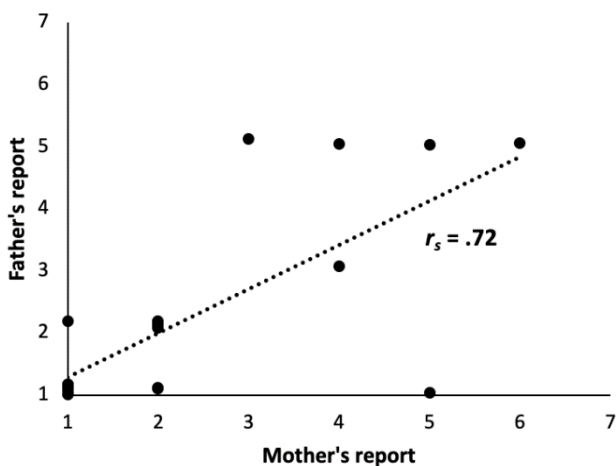
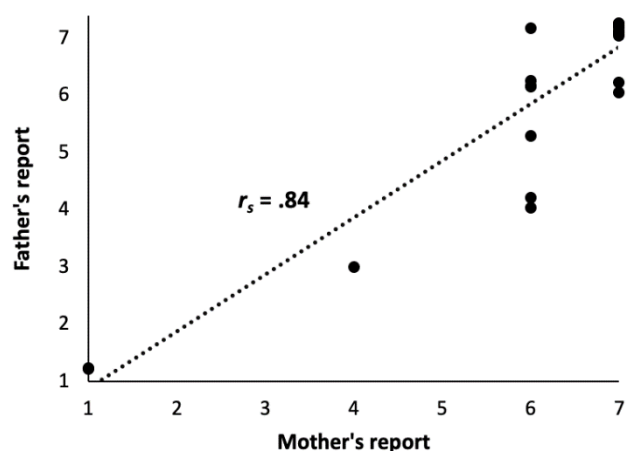
Figure 3*Mother's report vs. father's report about mother's language use with child*

Figure 4*Mother's report vs. father's report about father's language use with child***Table 8***Parents' responses about FLP decision making*

	Parents' Responses N=34	
	Yes / Somewhat	No
Have you ever discussed FLP with spouse?	26	8
Do you have a different opinion from your partner about family language use ?	2	32

These results were consistent with the parents' survey responses regarding establishing FLP among themselves (see Table 8). Seventy-six percent (26/34) of parents responded that they had discussed the FLP with their spouses, and 94% (32/34) of them reached an agreement regarding their decision making. In Table 8, there were a father and a mother, from different families, who had differing opinions than their spouses about their family's language use. The father reasoned that his spouse was more dedicated to their child being bilingual. The other mother disagreed with her spouse's idea of not forcing the child when they started to dislike learning Japanese. However, the majority of agreements were attested to by the results of the language uses responded by the mothers, fathers and children. Consequently, there is evidence to suggest that the FLP was carried out in accordance with the family's language use patterns claimed by the mothers, fathers, and their children.

Family Language Use and Children's Vocabulary Knowledge (RQ2)

RQ2 investigated to what extent family language use affected children's lexical proficiency in both languages. Additionally, the correlation was examined between the family language use and language dominance to rule out any influence from the children's age differences. The language dominance was computed by subtracting the HALA Japanese score from HALA English score. Since the RQ1 results confirmed that the reports from mothers and fathers were consistent, the data was consolidated by adding Likert scale ratings from mothers' and fathers' reports in RQ2 to increase the accuracy, which produced 2 to 14 points from the original 1 to 7 Likert Scale. Figures 5 and 6 present parents' reports about the native Japanese-speaking mothers' language use with their children in relation to their scores on the Japanese and the English version of the HALA task, respectively. The x-axis shows the combined 7-point Likert scale from the father's and mother's reports about language use to their child as the parents' reported. The lowest scale of 2 point indicates that Japanese was always used. As the numbers increase, the frequency of English use increases. The highest scale of 14 point indicates English was used all the time. As seen in Figure 5, the 2-tailed test showed a significant correlation of $r_s = .77$, $p < .001$ between the mother's Japanese use and the child's HALA-Japanese score, indicating that the more the mother used Japanese with the child, the higher the child's Japanese score became.

Figure 5

Mothers' language use to their children (from parents' reports) and HALA-Japanese scores

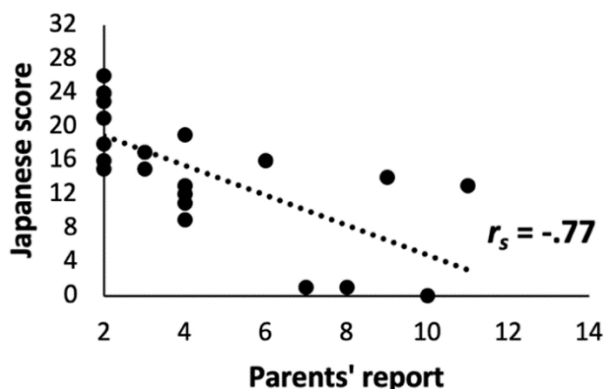


Figure 6

Mothers' language use to children (from parents' reports) and the HALA-English scores

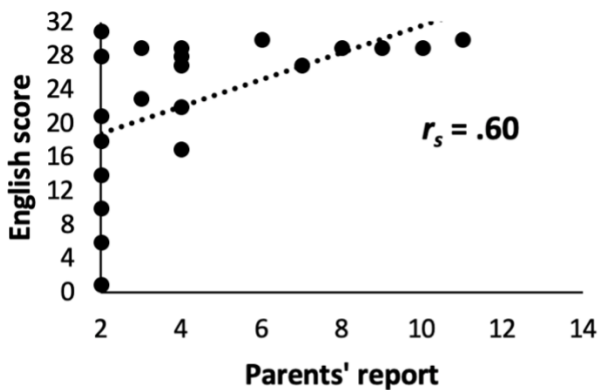
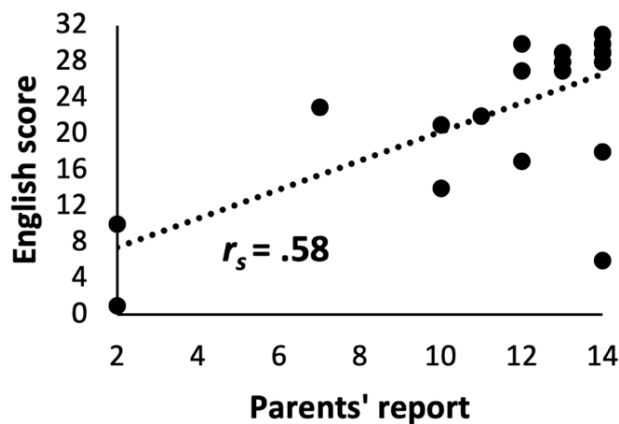


Figure 6 shows a significant correlation of $r_s = .60$, $p = .004$ between mother's language use and child's HALA-English score, indicating that the more mother used English, the higher the child's English score became.

In contrast, the native English-speaking father's language use correlated significantly only with HALA-English but not HALA-Japanese scores. Figure 7 displays a positive correlation between father's language use and child's HALA-English score ($r_s = .58$, $p = .006$), which was interpreted as the more the father used English, the higher the child's English score became.

Figure 7

Fathers' language use to children (from parents' reports) and the HALA-English scores

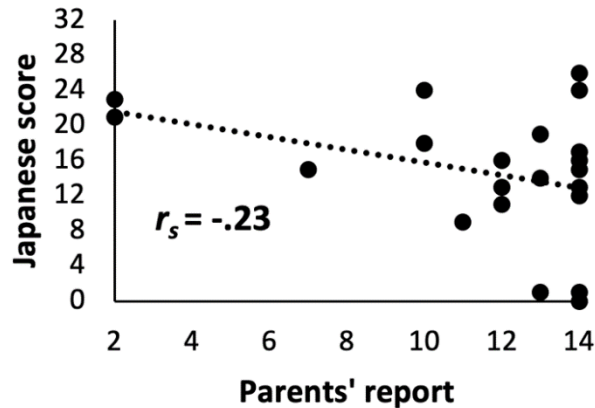


Note. The x-axis and y-axis show parental Likert scale (2-14) and HALA-English score (0-31) respectively.

In the Figure 8, a small but non-significant correlation is seen between father's Japanese use and the child's HALA-Japanese score, $r_s = -.23$, $p = .32$. This result suggests that father's language use did not contribute significantly to the child's Japanese vocabulary proficiency.

Figure 8

Fathers' language use to children (from parents' reports) and the HALA-Japanese scores



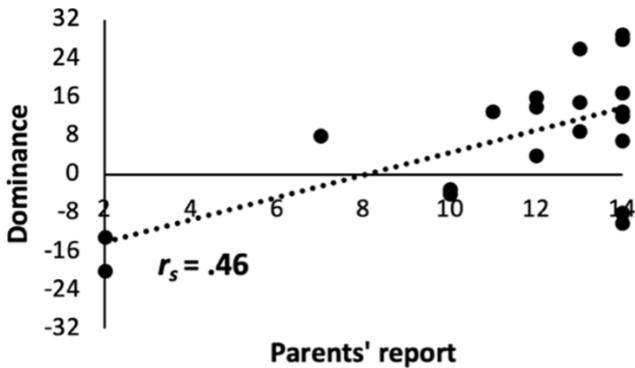
Note. The x-axis and y-axis show parental Likert scale (2-14) and HALA-Japanese score (0-32) respectively.

These results refer to only the quantity of Japanese used by the mother, not by the father, and suggest that fathers' Japanese input to children did not contribute to their Japanese score. However, one limitation of just looking at Japanese or English score, is that the children's age was not taken into consideration. Participants' age in this study ranged from 6 to 12. There is a strong possibility that older children have more opportunities in gaining vocabulary in both languages due to their social lives, which could reflect in the HALA scores. By looking at their dominance, which was calculated by subtracting HALA-Japanese score from HALA-English score, the age factor can be eliminated because their dominance indicates relative vocabulary skills between the two languages for each individual child. Although there was no correlation for the father's language use to their children with HALA-Japanese scores, it had a moderate correlation with the dominance, $r_s = .46$, $p = .03$ (see Figure 9). Likewise, the mother's language use with their children had a significant correlation with the dominance ($r_s = .85$, $p < .001$, see Figure 10), which indicated that both the quantity of Japanese used by both mothers and fathers contributed to the strength of children's dominance. More specifically, families in which both

mothers and fathers regularly used Japanese with the children were more likely to have children who had higher relative vocabulary knowledge in Japanese vs. English, yet this relation was more prominent with mothers than fathers.

Figure 9

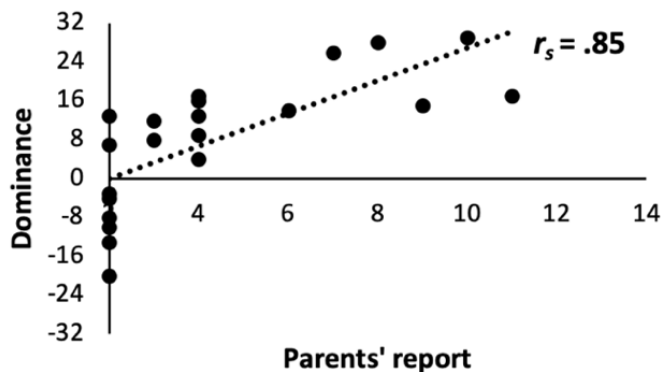
Fathers' language use to children (from parents' reports) and dominance



Note. The x-axis and y-axis show parental Likert scale (2-14) and the language dominance respectively. The dominance was computed as HALA-English score minus HALA-Japanese score.

Figure 10

Mothers' language use to children (from parents' reports) and dominance



Additionally, the children's output to their parents, as reported by the children, was examined. Figure 11 presents a moderate negative correlation between the child's language output to their mothers and the HALA-Japanese score $r_s = .45$, $p = .04$. This indicates that

children who used more English when speaking to their mothers were less lexically proficient in Japanese. In other words, the children using more Japanese to their mothers had higher Japanese lexical proficiency.

Figure 11

Children's language use to their mothers (from children's reports) and Japanese scores

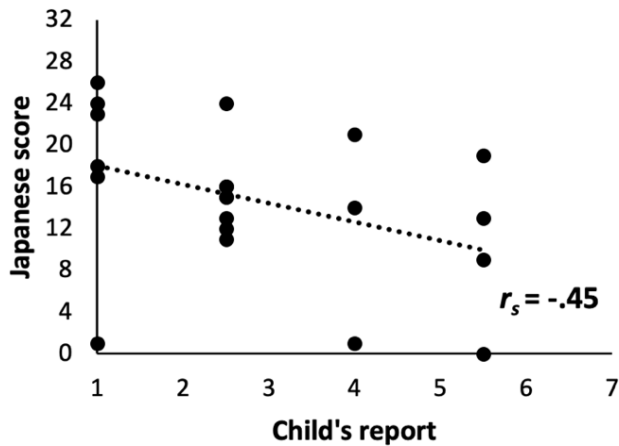
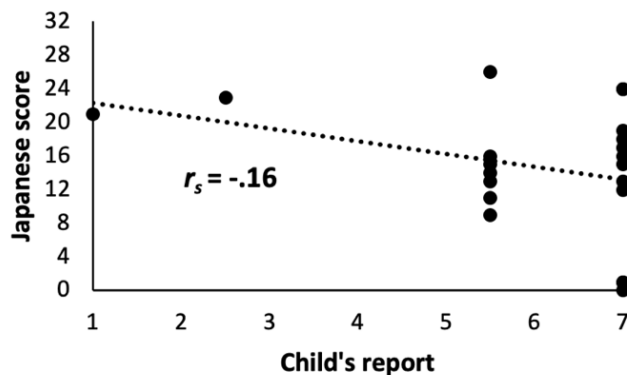


Figure 12

Children's language use to their fathers (from children's reports) and Japanese scores



On the contrary, Figure 12 shows no association between the children's language output to their fathers and the HALA-Japanese score, $r_s = .16$, $p = .48$. This means that the children's Japanese language use to father did not provide any influence on their Japanese lexical proficiency.

Regional Differences (RQ3)

The child participants (see Table 9) had a mean age of 9.7 years ($SD = 2.14$, min-max = 6-12) in GH, and 8.3 ($SD = 1.98$, min-max = 6-12) in GS.

Table 9*Children's Descriptive Statistics – GH vs. GS*

	Greater Honolulu ($N=11$)	Greater Seattle ($N=10$)
Children's age, mean	9.7 ($SD = 2.14$)	8.3 ($SD = 1.98$)
No. of children born in Japan	1	1
No. of first-born children	4	5
No. of boys (vs. girls)	8 (3)	6 (4)
No. of children with siblings	10	10

Table 10 and Table 11 report the demographic information of the parent participants in GS and GH. The averages ages for the mothers and fathers were 46.9 ($SD = 4.4$) and 51.6 ($SD = 6.8$) in GH, 41.0 ($SD = 2.9$) and 41.1 ($SD = 3.5$) in GS respectively. Most of them obtained higher education: 94% in GH and 88 % in GS, in which an inference can be made that both groups fall within the same socioeconomic category.

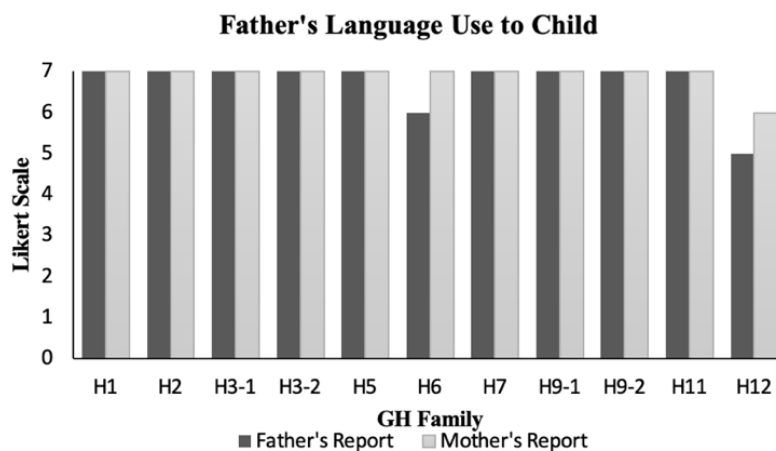
Table 10*Mothers' Descriptive Statistics, GH vs. GS*

	No. of GH Participants (<i>N</i> =9)	No. of GS Participants (<i>N</i> =8)
Birth country:		
Japan	9	8
Highest Education:		
High school	0	1
Community college	3	2
Undergraduate	4	5
Graduate	2	0
	GH Participants, <i>M</i> (<i>SD</i>)	GS Participants, <i>M</i> (<i>SD</i>)
Age	46.9 (4.4)	41.0 (2.9)
Years living in Japan	27.9 (5.6)	22.3 (5.0)
Years living in the US	17.4 (5.5)	17.7 (5.2)
Japanese Proficiency 1=Not at all, 7=Perfectly	6.9 (.31)	7.0 (.00)
English Proficiency 1=Not at all, 7=Perfectly	5.2 (.92)	5.4 (.99)

Table 11*Fathers' Descriptive Statistics, GH vs. GS*

	No. of GH Participants (N=9)	No. of GS Participants (N=8)
Birth country:		
The US	7	7
Other	2	1
Highest Education:		
High school	1	1
Community college	1	0
Undergraduate	3	5
Graduate	4	2
	GH Participants, <i>M (SD)</i>	GS Participants, <i>M (SD)</i>
Age	51.6 (6.8)	41.1 (3.5)
Years living in Japan	2.1 (3.9)	1.4 (1.9)
Years living in the US	49.2 (8.6)	39.2 (3.3)
Japanese Proficiency 1=Not at all, 7=Perfectly	1.6 (.83)	3.1 (1.90)
English Proficiency 1=Not at all, 7=Perfectly	6.8 (.42)	6.9 (.33)

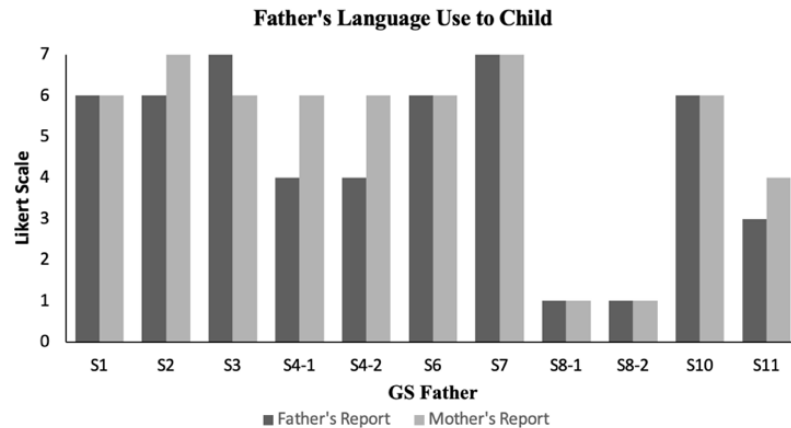
Figures 13 and 14 show the father's language use to the child in GH and GS families respectively.

Figure 13*GH Family's Report on Father's Language Use to Child*

Note. The x-axis indicates individual GH families. The y-axis indicates 7-point Likert Scale with 1=Always Japanese, 7=Always English.

Figure 14

GH Family's Report on Father's Language Use to Child



Note. The x-axis indicates individual GS families. The y-axis indicates 7-point Likert Scale with 1=Always Japanese, 7=Always English.

Independent sample *t* test was conducted to find any differences in family's language use, the children's and parents' language proficiency, and language ideology between GH and GS groups. From the fathers' reports shown in Table 12, the fathers' language use to both the mother and child, as well as the child's language use to their father showed significant differences.

Table 12

Fathers' Report on Language Use

Language Use	GH		GS		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Father to Child	6.727	0.647	4.400	2.171	3.262	0.008
Child to Father	6.727	0.467	4.400	2.497	2.528	0.031

Although the *t* test showed a significant difference, the standard deviations of the GS group are high in both reports. This was caused by a particular father (Father's ID S8s) in GS as illustrated in Figure 14. Therefore, as a different approach, I removed the outlier (Father's ID S8s) from the GS group and ran Mann-Whitney *U* tests at the .05 significance level to find out if

they still showed significant differences between the fathers' reports about the language use between the groups. Regarding the father's language use to the child, the test showed a significant difference, $U = 19$, the critical value = 23, $z = 2.279$, $p = .0226$. However, the result of the child's language use to father did not show a significant difference, $U = 29.5$, the critical value = 19, $z = 1.156$, $p = .246$. In summary, the GS fathers used more Japanese when speaking to their children.

Table 13 presents the independent t test results of the mothers' reports. The test results showed statistical differences in both language uses from the mother to the father, and from the father to the child.

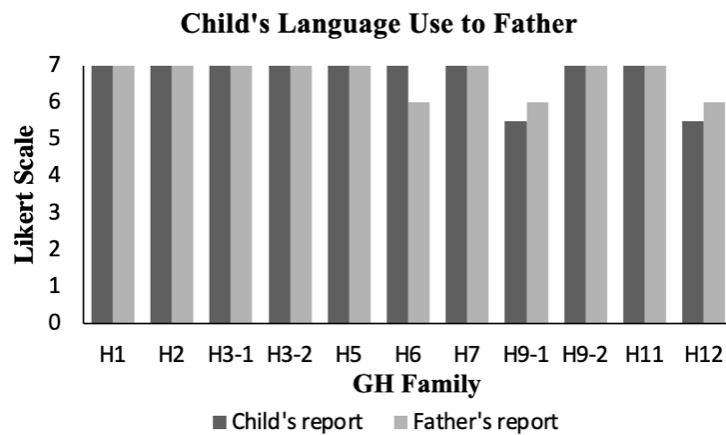
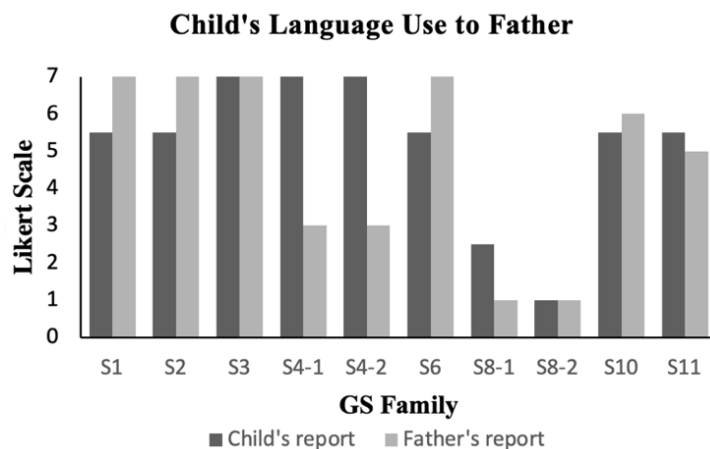
Table 13

Mothers' Report on Language Use

Language Use	GH		GS		t	p
	M	SD	M	SD		
Mother to Father	6.454	0.934	4.4	2.171	2.769	0.017
Father to Child	6.909	0.302	4.900	2.183	2.885	0.017

Once again, these test results may not be reliable because of the outlier father in GS. Thus, I ran Mann-Whitney U tests after removing the father's data. The results found no difference among the two groups about the mother's language use to the father ($U = 26$, the critical value = 23, $z = 1.747$, $p = .0801$), whereas the father's language use to the child had a significant difference, $U = 15$, the critical value = 23, $z = 2.583$, $p = .0099$. The mothers' reports also indicated that the GS fathers spoke more Japanese to their children than the GH fathers.

Next, the children's language use to the fathers between the two regions were compared in the same procedures. Figures 15 and 16 present the individual data about the child's language use to the father from child's and father's reports. The x-axis indicates individual families, while the y-axis indicates 7-point Likert Scale with 1=Always Japanese, 7=Always English.

Figure 15*GH Child's Language Use to Father from Child's and Father's Reports***Figure 16***GS Child's Language Use to Father from Child's and Father's Reports*

The *t* test result from the children's reports in Table 14 showed a statistic difference in the child's language use to the father between the groups. However, the result from the Mann-Whitney *U* test was not significant, $U = 24.5$, the critical value = 19, $z = 1.569$, $p = .116$.

Table 14*Child's Reports on the Language Use to Father*

Language Use	GH		GS		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Child to Father	6.727	0.607	5.200	1.975	2.347	0.04

Regarding the children's proficiency, averages of their Japanese and dominance scores were compared between the two regional groups. Figures 17 and 18 show the Japanese and language dominance of each child in GH and GS. The y-axis shows scores for the HALA-Japanese and the dominance (the HALA-English minus the HALA-Japanese).

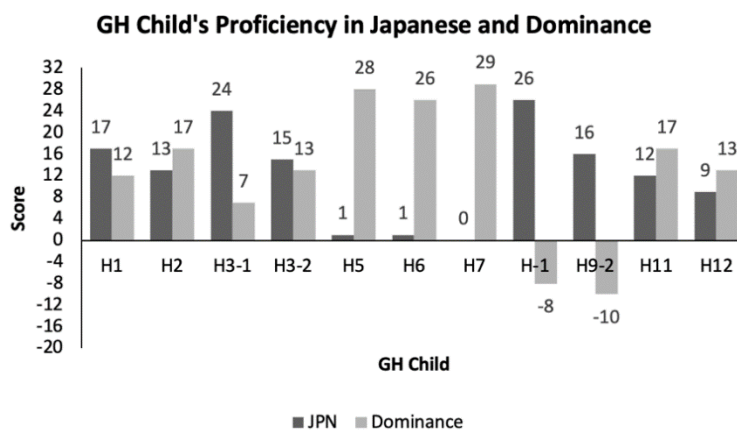
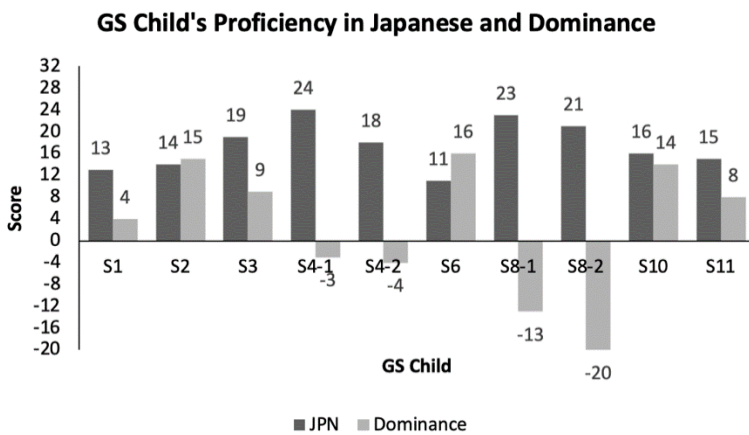
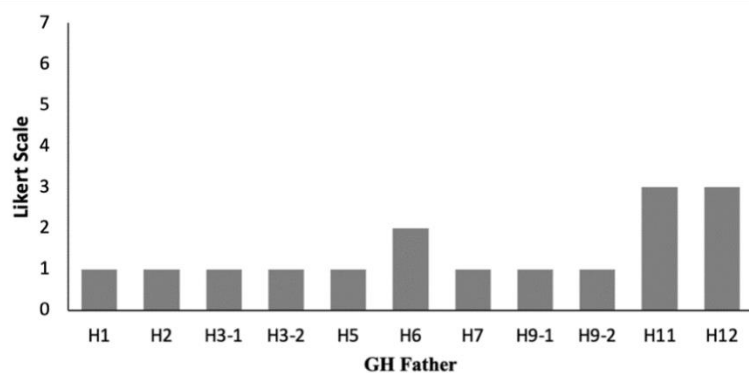
Figure 17*GH Child's Proficiency in Japanese and Dominance*

Figure 18*GS Child's Proficiency in Japanese and Dominance*

Note. The y-axis shows scores for the HALA-Japanese and the dominance (the HALA-English minus the HALA-Japanese) of the GS children.

The results from the Mann-Whitney U tests showed significant differences in neither the Japanese scores ($U = 31$, the critical value = 19, $z = 1.032$, $p = .303$) nor the dominance between the groups, $U = 30$, the critical value = 19, $z = 1.115$, $p = .267$. This means that children in both groups had similar Japanese proficiency and the language dominance.

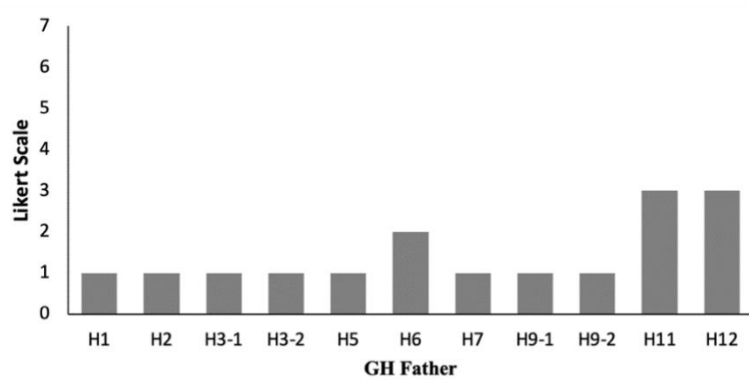
Next, the father's self-reported Japanese proficiency were compared between the two groups. Figures 19 and 20 present the individual father's self-reported Japanese proficiency between the two groups.

Figure 19*GH Father's Japanese Proficiency*

Note. The average of GH father's self-reported Japanese proficiency was 1.56 (1 = least proficient, 7 = most proficient).

Figure 20

GS Father's Japanese Proficiency



Note. The average of GS father's self-reported Japanese proficiency was 2.75 (1 = least proficient, 7 = most proficient).

As illustrated in Table 15, the *t* test result showed a statistical difference; however, this data included the outlier father in GS, which caused a large standard deviation ($SD = 2.058$).

Table 15

Fathers' Language Proficiency

Language Proficiency	GH		GS		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Japanese	1.455	0.82	3.700	2.058	-3.226	0.008

After taking out the outlier father's self-reported data, a Mann-Whitney U test was run. It also showed a significant difference, $U = 19.5$, the critical value = 23. $z = -2.241$, $p = .0251$. These test results attested that the GS father group had higher Japanese proficiency than the fathers of GH.

Lastly, the study examined parental language ideology by comparing responses from the 7-point Likert scales about parental language expectations toward their children's bilingualism and

satisfaction with their children's HL proficiency between the two groups. Figures 21 and 22 depict the individual reports from the two groups about the parental language ideology.

Figure 21

GH Parental Language Ideology on HL and Bilingualism from Mother's and Father's Reports

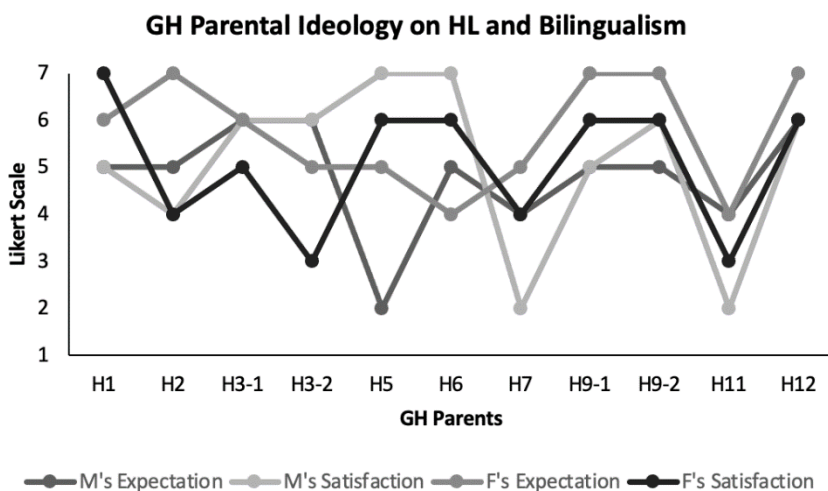
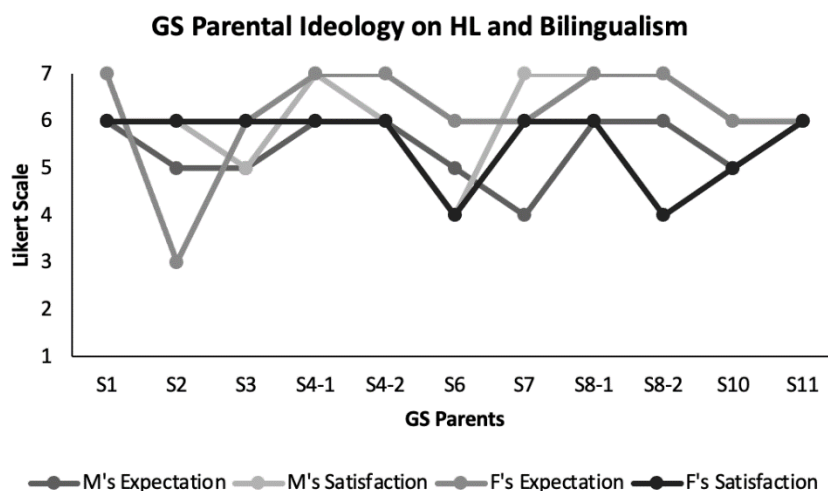


Figure 22

GS Parental Language Ideology on HL and Bilingualism from Mother's and Father's Reports



Furthermore, Table 16 presents the average of GH and GS parental reports about their HL ideologies toward the children. The reports were responses to the survey questions: what level of

oral Japanese fluency they expected of the child, and to what degree they were satisfied with the child's bilingual development.

Table 16

Parental Reports on the HL Ideologies

	Mother's Expectation	Mother's Satisfaction	Father's Expectation	Father's Satisfaction
GH Mean	4.82	5.09	5.73	5.09
GS Mean	5.33	5.89	6.00	5.67

Note. The GS outlier parents' reports were excluded from the average calculation.

As seen in the table above, little difference was found across the average responses in both groups. It was also confirmed by the results of the Mann-Whitney *U* tests that none of the statistic results demonstrated clear differences (see Table 17).

Table 17

Critical value of U

	<i>U</i>	Critical value of <i>U</i>	<i>z</i>	<i>p</i>
Mother's Expectation	37	23	-0.912	0.363
Mother's Satisfaction	37.5	23	-0.874	0.384
Father's Expectation	42	23	-0.532	0.596
Father's Satisfaction	39	23	-0.760	0.447

Note. The result is not significant at $p < .05$.

To summarize the test results that compared the GH and GS groups, it was found that one family disproportionately impacted the results. However, the statistic results which excluded the outlier family's data still proved that the GS fathers were more proficient in Japanese and spoke more Japanese to their children. Regional differences were present in only these two items. There were no clear evidence to suggest differences found in the children's Japanese proficiency, the language dominance, and the parental ideology among these two groups.

DISCUSSION

The purpose of the present study was to explore the family language use in the Japanese-English-speaking bilingual families, particularly focusing on whether it was perceptually consistent between mothers, fathers and children, to investigate whether the language use had any association with the children's lexical proficiency in both languages, and to examine whether there were any regional differences in language use, as well as other factors which could affect the children's language.

The finding for RQ1 was that language use from mothers', fathers' and children's reports were confirmed to be consistent with each other. As Said (2021) claimed, the importance of parents' and children's reciprocal language use practices, the language use consistency across the family attested that their FLP were mutually agreed upon, and successfully accomplished.

The results of RQ2 had shown that there were significant and positive correlations between parental language use and children's lexical proficiency (Sun et al., 2010; Dixon, 2011; Dixon et al., 2012; Gharibi & Boers, 2019; Verhagen et al., 2022). To be precise, the present study found a correlation between children's language dominance and the language use from not only native Japanese mothers but non-native Japanese fathers. This indicated that children were more likely to have higher relative Japanese vocabulary if both their parents regularly spoke Japanese with the children. In this respect, the results partially support Scheele et al.'s (2010) conclusion that an increase of HL language input could positively affect the children's HL vocabulary development but may adversely affect their societal language development. However, the finding in the present study provided evidence that both parents' language choice at home is important for the HL development of bilingual children. In particular, the non-native Japanese parents' heritage Japanese input quantity to their children played an important role, as they contributed to increase the relative Japanese vocabulary. This result was consistent with the results reported in Noro (2009), albeit with different approaches. The study claimed that non-native parents' relationship to Japan and their experiences in Japan, as well as their active Japanese language use at home, contributed to the school-age children's Japanese narrative fluency. Active participation by non-native heritage parents would allow the bilingual children to learn, practice and develop their HL at home. This is especially important for school-age children who are typically exposed to a tremendous amount of social language.

Regarding RQ3 and the impact of regional differences, my hypothesis was that in a region where HL are commonly available, there would be greater awareness about the HL use at home and more robust parental language ideology toward the children, resulting in stronger development of the children's HL oral vocabulary. The statistic test results between the GH and GS groups after removing the GS outlier family's data presented significant differences in fathers' HL use as well as their Japanese proficiency. However, contrary to my expectation that the greater societal acceptance of Japanese languages in GH would elicit more HL use and an advantage in the children's HL development, the results showed that it was GS fathers with higher Japanese proficiency used more Japanese at home, not GH fathers. A possible explanation for this could be addressed through the response to the survey question on whether the family belong to any Japanese community was compared between the groups. Only 22 % of the GH families responded that they were closely connected with Japanese communities through their families or schools, while 63 % of the GS groups reported yes to the question. These results attested that the significance of HL community regardless of social acceptance of HL.

Consequently, the present study demonstrated the crucial value in the family language use, especially both native and non-native parents' active HL use as a proximal input factor. In addition, the results imply that HL community support also provided a positive impact on the bilingual family's HL use and the children's language development.

LIMITATIONS AND FUTURE RESEARCH

Whereas previous research examined the parents' language input contribution to the heritage children's language development, the findings in the present study provided evidence that parents' language choice from both mothers and fathers played an important role in child's lexical development in their HL. Further quantitative analysis with a larger sample size would be necessary to increase the reliability in exploring potential contributors. With a larger sample size, the existence of multiple FLPs among first born child and younger siblings could also be explored. Additionally, looking at other family structures including Japanese fathers and non-Japanese mothers, or other non-traditional family structures, such as multi-generational families living with grandparents from Japan or LGBTQ families, would be interesting to examine. Moreover, introducing a qualitative approach in a mixed-methods design could be effective as it

would provide contextualized insights into particular bilingual families and enhance comprehensive understanding of language use and FLP decision makings.

CONCLUSION

In summary, the findings of the present study demonstrated that the language use from native and non-native HL parents to the bilingual children had played a significant role in elementary school children's lexical development in both HL and societal language. In particular, active Japanese language use from non-native Japanese parents to children could not only increase the entire HL input within the family, but also improve the bilingual children's relative Japanese vocabulary. Additionally, there was slight evidence suggesting that the heritage Japanese community, which motivated non-native Japanese parents to use the HL at home, indirectly had a positive impact on the children's heritage language maintenance. Therefore, the proximal factor supplemented with the HL community support seemed to be crucial to children's HL development.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to Dr. Grüter for all the guidance, support, and encouragement that she provided me throughout my SP. I would like to thank Dr. O'Grady who generously allowed me to use the HALA task and become one of my reviewers. I appreciate Dr. Kim, K and Dr. Kim, H. for sharing their actual material for my SP. I also would like to thank Dan Holden and Joan Pan, whose prompt and precise feedback brought me to the completion of this paper in time. In addition, I am thankful to the following dear colleagues and friends who supported me emotionally and intellectually by giving me advice, cheers, and cooperation for searching participants; Akari, Akiko, Emi, Haruka, Hoan, Megumi, Naoko, Natsuko, Teruko. Lastly, I am truly thankful to my family. I could not have made it without the tremendous support and patience from my husband Joe and children Yuki, Naoki, and Fiore. Arigato!

REFERENCES

- Curd-Christiansen, X. L., & Iwaniec, J. (2023). ‘妈妈, I miss you’: Emotional multilingual practices in transnational families. *International Journal of Bilingualism*, 27(2), 159-180.
- Dixon, L. Q. (2011). The role of home and school factors in predicting English vocabulary among bilingual kindergarten children in Singapore. *Applied Psycholinguistics*, 32(1), 141–168. <https://doi.org/10.1017/S0142716410000329>
- Dixon, L. Q., Zhao, J., Quiroz, B. G., & Shin, J.-Y. (2012). Home and community factors influencing bilingual children’s ethnic language vocabulary development. *The International Journal of Bilingualism: Cross-Disciplinary, Cross-Linguistic Studies of Language Behavior*, 16(4), 541–565. <https://doi.org/10.1177/1367006911429527>
- Farr, J., Blenkiron, L., Harris, R., & Smith, J. (2018). “It’s my language, my culture, and it’s personal!” migrant mothers’ experience of language use and identity change in their relationship with their children: an interpretative phenomenological analysis. *Journal of Family Issues*, 39(11), 3029–3054. <https://doi.org/10.1177/0192513X18764542>
- Gharibi, & Boers, F. (2017). Influential factors in incomplete acquisition and attrition of young heritage speakers’ vocabulary knowledge. *Language Acquisition*, 24(1), 52–69. <https://doi.org/10.1080/10489223.2016.1187613>
- Gharibi, & Boers, F. (2019). Influential factors in lexical richness of young heritage speakers’ family language: Iranians in New Zealand. *The International Journal of Bilingualism : Cross-Disciplinary, Cross-Linguistic Studies of Language Behavior*, 23(2), 381–399. <https://doi.org/10.1177/1367006917728395>
- Hornberger, N. H., & Wang, S. C. (2008). Who Are Our Heritage Language Learners?: Identity and Biliteracy in Heritage Language Education in the United States. In *Heritage Language Education* (1st ed., pp. 3–36). CRC Press. <https://doi.org/10.4324/9781315092997-2>
- Kim, K., & Kim, H. (2022). Sequential bilingual heritage children’s L1 attrition in lexical retrieval: Age of acquisition versus language experience. *Bilingualism: Language and Cognition*, 25(4), 537–547. <https://doi.org/10.1017/S1366728921001139>
- King, K. A., & Fogle, L. W. (2013). Family language policy and bilingual parenting. *Language Teaching*, 46(2), 172–194. <https://doi.org/10.1017/S0261444812000493>

- Lauwereyns, S. (2011). Japanese-English bilingual development in New Zealand: Parental attitudes and children's literacy and communication skills. *New Zealand Studies in Applied Linguistics*, 17(1), 49–69.
- Library of Congress. (n.d.). *Hawaii: Life in a plantation society*.
<https://www.loc.gov/classroom-materials/immigration/japanese/hawaii-life-in-a-plantation-society/>
- Montrul, S., & Polinsky, M. (2021). Introduction: Heritage languages, heritage speakers, heritage Linguistics. In S. Montrul & M. Polinsky (Eds.), *The Cambridge Handbook of Heritage Languages and Linguistics* (Cambridge Handbooks in Language and Linguistics, pp. 1-10). Cambridge: Cambridge University Press.
<https://doi.org/10.1017/9781108766340.001>
- Noro, H. (2009). The role of Japanese as a heritage language in constructing ethnic identity among Hapa Japanese Canadian children. *Journal of Multilingual and Multicultural Development*, 30(1), 1–18. <https://doi.org/10.1080/01434630802307874>
- O'Grady, W., Schafer, A. J., Perla, J., Lee, O-S., & Wieting, J. (2009) A psycholinguistic tool for the assessment of language loss: The HALA project. *Language Documentation and Conservation* 3(1), 100–112.
- Said (2021). Arabic-English bilingual children's early home literacy environments and parental language policies. *European Early Childhood Education Research Journal*, 29(3), 424–440. <https://doi.org/10.1080/1350293X.2021.1928724>
- Scheele, A. F., Leseman, P. P. M., & Mayo, A. Y. (2010). The home language environment of monolingual and bilingual children and their language proficiency. *Applied Psycholinguistics*, 31(1), 117–140. <https://doi.org/10.1017/S0142716409990191>
- Schermerhorn, A. C., & Mark Cummings, E. (2008). Transactional Family Dynamics: A New Framework for Conceptualizing Family Influence Processes. In *Advances in Child Development and Behavior* (Vol. 36, pp. 187–250). Elsevier Science & Technology.
[https://doi.org/10.1016/S0065-2407\(08\)00005-0](https://doi.org/10.1016/S0065-2407(08)00005-0)
- Sun, H., Ng, S. C., O'Brien, B. A., & Fritzsche, T. (2020). Child, family, and school factors in bilingual preschoolers' vocabulary development in heritage languages. *Journal of Child Language*, 47(4), 817–843. <https://doi.org/10.1017/S0305000919000904>

United States Census Bureau. (2021). American community survey. *DP05 ACS demographic and housing estimates*.

https://data.census.gov/table?q=United+States&g=0100000US_0400000US15,53&tid=ACSDP5Y2021.DP05

Unsworth, S., Brouwer, S., de Bree, E., & Verhagen, J. (2019). Predicting bilingual preschoolers' patterns of language development: Degree of non-native input matters. *Applied Psycholinguistics*, 40(5), 1189–1219.

<https://doi.org/10.1017/S0142716419000225>

Verhagen, J., Kuiken, F., & Andringa, S. (2022). Family language patterns in bilingual families and relationships with children's language outcomes. *Applied Psycholinguistics*, 43(5), 1109–1139. <https://doi.org/10.1017/S0142716422000297>

APPENDIX A

Parent's Questionnaire Items in English

1. Child's first name	19 (e). If the child has any siblings, which language do you hear your children speak to each other, and if mixed, how much of each respective language do you hear?
2. Child's gender	20 (a). Who was the most influential in deciding which language you should speak to the child?
3. What is your child's birth year and month?	20 (b). If you chose "Other" above, please describe who they are.
4. Child's place of Birth	21. Have you ever discussed the decision of family language use with your partner?
5 (a). Does the child have any siblings?	22 (a). Are you raising the child bilingually?
5 (b). If you chose "Yes" above, please list their first name(s) and year(s) of birth.	22 (b). Please describe the reason for your choice above.
6. About the child's English proficiency: How well does the child understand it?	23. What level of oral Japanese fluency do you expect of the child?
7. About the child's Japanese proficiency: How well does the child understand it?	24 (a). Are you satisfied with the child's bilingual development?
8. Does the child go to a Japanese school?	24 (b). Please describe the reason for your choice above.
9. Your first name	25 (a). Do you and your partner have a different opinion about the family language use?
10. Your gender	25 (b). Please describe the reason for your choice above.

11. Your year of Birth	26 (a). Do you think it is challenging to promote or maintain child's Japanese language development in the current setting (living in the U.S.)?
12. Your place of Birth (City, State, Country)	26 (b). Please describe the reason for your choice above.
13. How many years in total did you live in Japan?	27 (a). Only for non-native Japanese speakers: Have you ever studied about Japan or Japanese language?
14. How many years in total have you lived in the U.S. and/or English-speaking country? (e.g., 5 yrs 2 mos)	27 (b). If you chose "Yes" above, please describe your experiences (e.g., where and how long)
15. Education: What is your highest level of education?	28 (a). Do you belong to any social community where you can communicate with Japanese people? (e.g., church, play circle)
16. About your English proficiency: How well do you understand it?	28 (b). If you chose "Yes" above, please describe the social community.
17. About your Japanese proficiency: How well do you understand it?	29. How important is it for you to spend time and speak with other Japanese people?
18. If you speak other languages besides English and Japanese, please list them.	30. How important is it for you to have your child spend time and speak with other Japanese people?
19 (a). Which language do you speak to your partner, and if mixed, how much of each respective language do you speak?	31. How often do you go back to Japan (before the COVID-19)?
19 (b). Which language do you speak to the child, and if mixed, how much of each respective language do you speak?	32 (a). Do you keep up with Japanese news and current events?
19 (c). Which language does your partner speak to the child, and if mixed, how much of each respective language does your partner speak?	32 (b) If you chose "Yes" above, where is your source of information?
19 (d). Which language does the child speak to you, and if mixed, how much of each respective language does the child speak?	33. If there is any additional information you wish to share with us about your and your child's language history and use, please write it here.

APPENDIX B

Parent's Questionnaire Items in Japanese

1. 子供の下の名前	19 (e). 対象の子供に兄弟・姉妹がいる場合、子供たち同士でどちらの言語をどれくらいの頻度で使いますか？
2. 子供の性別	20 (a). あなたが子供に話しかける言語を決定する際に、誰に最も影響を受けましたか？
3. 子供が誕生した年と月	20 (b). 「Other (その他)」を選択した場合、最も影響を受けた人物を記述してください。

4. 子供の生誕地	21. 家庭での使用言語について配偶者と話し合ったことがありますか？
5 (a). 兄弟・姉妹はいますか？	22 (a). 子供をバイリンガルに育てていますか？
5 (b). 上記で「はい」を選択した場合、兄弟・姉妹の下の名前と誕生した年を教えてください。	22 (b). その回答の理由を説明してください。
6. 子供の英語の習熟度について: 英語をどれくらい理解していますか？	23. 子供にどの程度の日本語レベルを期待しますか？
7. 子供の日本語の習熟度について: 日本語をどれくらい理解していますか？	24 (a). 子供のバイリンガル能力に満足していますか？
8. 日本語の学校に通っていますか？	24 (b). その回答の理由を説明してください。
9. 下の名前	25 (a). 家庭での言語使用について配偶者と意見に相違がありますか？
10. 性別	25 (b). その回答の理由を説明してください。
11. 誕生した年	26 (a). 現在の状況（米国在住）で子供の日本語の発達を促進または維持することは難しいと思いますか？
12. 生誕地 (国、州 / 県、市)	26 (b). その回答の理由を説明してください。
13. 合計でどれくらい日本に住んでいましたか？	27 (a). 日本語が母語でない人のみ回答してください：日本や日本語について勉強したことがありますか？
14. 合計でどれくらい米国（または英語圏内）に住んでいますか？（例：5年2か月）	27 (b). 上で「はい」を回答した場合、日本での経験や日本語学習について説明してください。
15. 最終学歴を教えてください。	28 (a). 日本人とコミュニケーションがとれる社会的コミュニティに所属していますか？（例：教会、プレイサークルなど）
16. 英語の習熟度について: 英語をどれくらい理解していますか？	28 (b). 上で「はい」を回答した場合、そのコミュニティについて説明してください。
17. 日本語の習熟度について: 日本語をどれくらい理解していますか？	29. あなたにとって日本人と話す機会を持つことはどれくらい重要ですか？
18. 日本語と英語以外の言語が話せる場合は、その言語を記入してください。	30. 子供が日本人と話す機会を持つことは、あなたにとってどれくらい重要ですか？
19 (a). 配偶者に対してどちらの言語をどれくらいの頻度で使いますか？	31. どの頻度で日本に帰省しますか？（コロナ禍以外の状況で回答してください。）
19 (b). 対象の子供に対してどちらの言語をどれくらいの頻度で使いますか？	32 (a). 日本のニュースや時事問題に目を通していますか？
19 (c). 配偶者は対象の子供に対してどちらの言語をどれくらいの頻度で使いますか？	32 (b). 上で「はい」を回答した場合、その情報源について説明してください。

19 (d). 対象の子供はあなたに対してどちらの言語をどれくらいの頻度で使いますか？

33. その他に、ご自身や子供の言語使用や言語にまつわる体験について共有していただける情報がある場合は、ここに記述してください。

APPENDIX C

Child's Interview Items

Oral questions in Japanese	Translation
1. まずはお名前を教えてください。	1. Please tell me your name.
2. XXさんは何歳ですか。	2. How old are you, NAME?
3. 兄弟がいますか。	3. Do you have any siblings?
おうちで話している言葉について質問しますね。	I am going to ask you about languages you speak at home.
お母さんとは日本語と英語のどちらで喋りますか。	Which language do you speak with your mother,
4. ちで喋りますか。	4. Japanese or English?
お父さんとは日本語と英語のどちらで喋りますか。	Which language do you speak with your father,
5. ちで喋りますか。	5. Japanese or English?
兄弟とは日本語と英語のどちらで喋りますか。	Which language do you speak with your
6. ちで喋りますか。	6. sibling(s), Japanese or English?
おうち以外の人と日本語で話すことがありますか。	Do you ever speak Japanese with people outside
7. 日本語を話すのは難しいですか。	7. your home?
日本語をこれからも勉強しますか。	8. Is it challenging to speak Japanese?
9. 日本語をこれからも話したいですか。	9. Do you continue to learn Japanese?
10. どうして日本語を話したいですか。	10. Do you want to keep speaking Japanese?
11. 日本語を話したいですか。	11. Why do you want to speak Japanese?

APPENDIX D

Online Session Sheet: HALA List

Date		Time	
Name		ID	
	Picture naming task (JPN)		Picture naming task (ENG)
1	足	1	tongue
2	鼻	2	back
3	耳	3	ear
4	顔	4	legs
5	お腹・おへそ・へそ	5	eyes
6	背中	6	feet
7	頭	7	lips
8	手	8	hand
9	肩	9	shoulder
10	歯	10	teeth
11	舌・べろ	11	face
12	くちびる	12	mouth
13	口	13	head
14	目	14	belly button, belly, tummy, stomach
15	指	15	fingers
16	膝	16	knees
17	足	17	nose
18	うで	18	heels
19	手首	19	forehead
20	つま先・足の指	20	toes
21	足首	21	ankles
22	かかと	22	arm
23	ひじ	23	palm
24	くび	24	neck
25	ほっぺ・ほほ・ほう	25	chin
26	まゆげ	26	eyebrows
27	おでこ	27	wrist
28	あご	28	cheeks
29	親指	29	thumb
30	つま	30	nails
31	手のひら	31	elbow

AUDIENCE MEMBERS AS LANGUAGE BROKERS IN LIVE STREAMED GAMING SESSION

NAOKI ITAKURA

University of Hawai‘i at Mānoa

ABSTRACT

In this paper, I use multimodal Conversation Analysis and the concept of language brokering to investigate how online audience participation resolves the lack of comprehension exhibited by a focal live streamer and helps him participate in ongoing interactions. The analysis illustrates how the live chat messages from the audience enable a focal live streamer to manage oral interactions with his co-players. More specifically, the focal live streamer either solicits repair or directs their gaze to the chat box where the audience enacts as language brokers online. The audience gives the focal live streamer two types of comments: (i) words they address and (ii) topics they yield. Various modes (e.g., spoken and written) and multilingual practices (e.g., code-switching, English translations) are employed within the interaction among participants in live streaming. With a greater understanding of the participation framework between a focal live streamer and his audience on live streaming, this paper highlights multimodal analyses of digital interactions where oral and written communications coexist.

Keywords: multimodal Conversation Analysis, live-streamed gaming session, digital interaction, audience participation, language broker, multilingualism

INTRODUCTION

As digital interaction becomes widely spread, more and more people engage in oral and written communication regardless of their location. Most digital interactions are either synchronous or asynchronous, following either written or spoken mode. However, one example of digital interaction that combines synchronous and asynchronous communication with different

modes (e.g., written and oral) is a live-streamed gaming session. Nowadays, people can live stream their gaming activities on streaming media, such as Twitch and YouTube, where the audience can send live chat messages on a chat box, which is a form of audience participation. Such modes of digital interaction that combine asynchronous and synchronous interactions (e.g., Choe, 2019; Licoppe & Morel, 2018) have not been studied as much compared to other forms.

As aforementioned, digital interaction unfolds opportunities for people to communicate both synchronously and asynchronously, using various modes (written vs oral). Asynchronous communication, Social Messaging Services (SMS) and Instant Messages (IM) for instance, provide users with online text-based communication (Rendle-Short, 2015). They exhibit intersubjectivity and self-repair among participants (Kulkarni, 2016). Written posts, such as Facebook posts (Ditchfield & Meredith, 2018) and group postings (Graham, 2016), are worth examining how people manage interaction and interplay between group and individual identities.

Synchronous communication, such as video-mediated interactions (business meetings, Skype etc.), has also been largely investigated. Video-mediated interactions exhibit specific turn allocations (e.g., Licoppe, 2017; Kim, 2018). Video-mediated consultations and meetings also provide substantial outcomes, such as noticing in a remote situation (Oittinen, 2020) and how embodied actions, such as gazing, involve interactions (Femø Nielsen, 2019).

Within digital interaction, mass audience participation is a frequently focused form in many studies. Mass audience participation occasionally happens in co-local settings, where people gather physically and discuss (Furukawa, 2016; Llewellyn, 2005). Social media provides a new way of mass participation, especially in text-based interactions. Giles (2021) analyzed text messages among various users including those toward celebrities on Twitter. Mass participation integrates text messages with a novel participation framework. Choe (2019) said that their audience sent text messages to a chat box in a Korean live stream called *mukbang*. This system guided live streamers to recruit audience participation, which established a novel participation framework. The participation framework is related to language brokering. Specifically, an addressee and a recipient interact but cause miscommunication. Then, they request a third person to participate in the interaction mainly through their gaze shift and reconstruct the participation framework (Traverso, 2019). That person may either reformulate or translate what the addressees say.

Such modes of digital interaction that combine various modes and asynchronous and synchronous interaction have not been studied as much compared to other forms (e.g., Licoppe & Morel, 2018; Choe, 2019). Thus, this paper draws on an internationally well-known streaming media, Twitch, focusing on a gaming session of an online multi-party shooting game, APEX LEGENDS. I will explore how not only the live streamers themselves but also the audience of the live streaming contribute to language brokering, where the third person gets involved in providing linguistic and sometimes cultural expertise (Bolden, 2012). In what follows, I first review some of the work on digital interaction, audience participation, and language brokering. Next, I present some examples of online audience participation to show how their live chat messages assist a focal live streamer to comprehend and participate in ongoing oral interactions. I then turn to the other action, which is yielding potential topics, and show how the audience's comments contribute to a focal live streamer orally addressing these live chat messages.

BACKGROUND

Digital Interaction

According to Meredith et al. (2021), digital interaction includes, “any communication which takes place within a digital environment which is designed to facilitate a digital communication” (p. 6). In digital interaction, the boundaries between offline and online are porous (Blommaert, 2017). Graham (2019) elaborated that the blurring of online and offline patterns merges physically and geographically based boundaries and bridges the local with the global (p. 380). Nowadays, digital interaction has provided different types of “synchronicity” (e.g., synchronous or asynchronous) and “modality” (e.g., written or oral) (Jenks, 2014, p. 33). In terms of asynchronous and written modes, studies have looked at text chats. Online chat rooms are worth investigating text-based interactions on various platforms. Jenks (2009) investigated how participants managed after the talk overlapped on a Skype chat room, discovering that pauses were to reset floors and open the floor for re-bidding. Jenks and Brandt (2013) explored multinational and multiparty chat rooms. Checking names through a summon-answer sequence, greeting each other, and asking questions related to topics maintain mutual orientation in these chat rooms, which allows participants to establish participant framework and systematic adjacency pairs. Nguyen et al. (2022), in contrast, showed possibilities of oral and written

communication in video-recorded Skype sessions, where a participant makes use of voice and text channels to correct vocabulary and teach spelling. The Skype platform keeps chat box and web browsers available during the meeting, which allows students to maintain a mutual orientation toward collaborative assignments (Dooly & Tudini, 2022).

A type of digital interaction platform that combines both synchronicity and modality is online gaming. Studies have looked at online games where players use chat boxes, which are forms of text-based interactions. There is a type of online game that enables players to chat with teammates orally and via text in virtual game worlds, which is a Massively Multiplayer Online Role-Playing Game (MMORPG) (Moore et al., 2007). The first three letters, MMO (Massively Multiplayer Online), offer opportunities for users to communicate online, which allows for investigating how players collaboratively interact both orally and via text (Sjöblom, 2011). The availability of spoken and written communications encourages players to discuss in their second languages in a gaming context (Throne et al., 2009). Text chat clarifies addresses and recipients accomplishing turn-takings in MMO. Bennerstedt and Ivarsson (2010) uncovered the practice that participants in MMO used text chat to arrange group formation. Moore et al. (2006) showed that participants used their avatars and exchanged text messages to offer help and give pleasure. MMORPGs also allow players to collaborate via text messages. Greenfield and Subrahmanyam (2003) discussed that text chat could implement strategies to maintain coherence, such as repetition and selecting the next speaker via text (pp. 728-729). Nilsen and Mäkitalo (2010) argued that other strategies like reformulation were to maintain intersubjectivity and continue discussions (p. 101).

Likewise, digital interaction has exhibited a wide variety of research in terms of different types of synchronicity and modality, especially how participants interactively transmit messages. Yet, recent digital interaction that could encompass both written and oral communication simultaneously remains largely unexplored.

Audience Participation

Another important aspect of digital interaction is the various ways of audience participation, such as asking questions and producing vocal reactions. Audience participation has been studied more in co-local settings, such as music performances and other performative settings. One example of audience participation in co-local settings is a TV show. It provides the audience as

guest speakers with opportunities to discuss with celebrities (Furukawa, 2016). Another form of audience participation in co-local settings is verbal audience responses. Clayman (1993) analyzed audience responses preceded by booing illustrated affiliation and disaffiliation in various public discussions. Llewellyn (2005) examined buzzing moments in a public meeting and concludes it as justifying position-making (p. 703). In a musician's live performance, audience members produce vocal reactions to the musician's embodied actions and motions (Pehkonen, 2017). Functions of pre/post-speaker-completion heckles vary in giving new information and interrupting a speaker and involve a sequential placement (McIlvenny, 1996).

Several studies on classroom interaction include audience participation. Tũma (2018) examined audience comments, particularly presenters self-selecting audience members to elaborate in Q&A sessions in the undergraduate seminar presentation. Teachers employ techniques to invite student participation during whole classwork, such as using interrogative and co-constructive sequences between L2 teacher and L2 learner (Rusk et al., 2017). Students can play roles as audience members. They utter reactions such as *hmm* and keep eye contact to indicate elaboration (Tũma, 2018). Online audience participation is investigated to some extent (e.g., Licoppe & Morel, 2018; Choe, 2019). Despite massive analyses of audience participation in public discussions, performative settings, and classroom interactions, there have been fewer multimodal CA studies of audience participation on online platforms.

Language Brokering

Language brokering defined as an “endogenous method for solving understanding problems and thereby promoting intersubjectivity” (Bolden, 2012, p. 115) can occur in co-local settings (Traverso, 2019; Jansson & Wadensjö, 2016 etc.). Traverso (2019) investigated the sequence that transforming the participation framework enabled the third person to give translations for the purpose of filling in an epistemic gap. Murillo and Kam (2021) explored how language brokers played roles in supportive communication. Of more direct relevance to this paper, Bolden (2012) showed that participants enacted language brokers after soliciting repair, in which an addressee cast him/herself as potentially lacking linguistic expertise and turns to the participant acting as an intermediary between two languages. Jansson and Wadensjö (2016) investigated a caregiver enacting as a language broker for less mature children and observed the caregiver giving

translation, misaligning to invite competent language brokers (p. 284), requesting competent speakers for translation.

The sequence of language brokering initiates after embodied actions and utterances index assistance. Greer (2015) presented in his study that gaze shift indicated asking brokers to engage. Participants appeal to a broker when linguistic assistance is necessary. Repeating in a lower volume could be counted as appealing to a broker (Greer, 2015). Direct announcements from brokering seekers, such as, “I don’t speak French.”, signal linguistic assistance (Traverso, 2012). Multimodal and sequential analyses highlight plenty of ways participants enact and induce language brokering. Yet, there is less work on its analysis on online platforms.

Thus combining the various concepts of digital interaction, audience participation, and language brokering previously discussed, this study investigates how language brokering (Bolden, 2012) occurs in a live-streamed gaming session that combines different modalities in synchronous interaction.

DATA AND METHODS

Data

I will examine the live-streamed multiparty gaming session where audience comments are visible for gamers. The data for the presented paper consists of an approximately three-hour and twenty-minute gaming session live-streamed on November 8, 2021. To explore language brokering in the new mode of communication, I selected a multilingual team. The focal participants are three live streamers: Euriece (EUR) from Canada, Junichi Kato (KATO) from Japan, and Killin9Hit (KH) from South Korea. KATO is an L1 Japanese speaker while EUR and KH are L2 Japanese speakers. They are located remotely and meet up in a virtual space to play an online multiplayer shooting game called APEX LEGENDS (hereafter APEX) as a team. They audibly communicated with each other mostly in Japanese, which they all possessed minimal proficiencies, to achieve goals on APEX. The audience is also present and watches the gaming session online. EUR, KATO, and KH live-streamed the gaming session separately; therefore, each live streamer could only interact with their own audience.

The data was live-streamed on the streaming media called Twitch. The designs of streaming media enable the audience to type chat messages with emojis, emoticons, and words (Graham, 2019, pp. 384-385). The audience's comments pop up on a screen either vertically (Figure 1) or horizontally (Figure 2). In the data, the audience's comments run horizontally flowing from right to left on the screen.

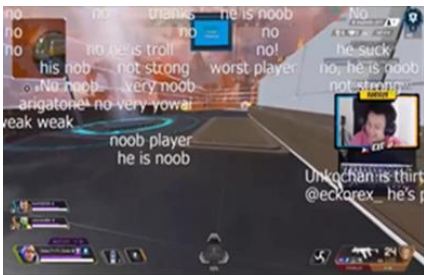
Figure 1

Comments Running Vertically

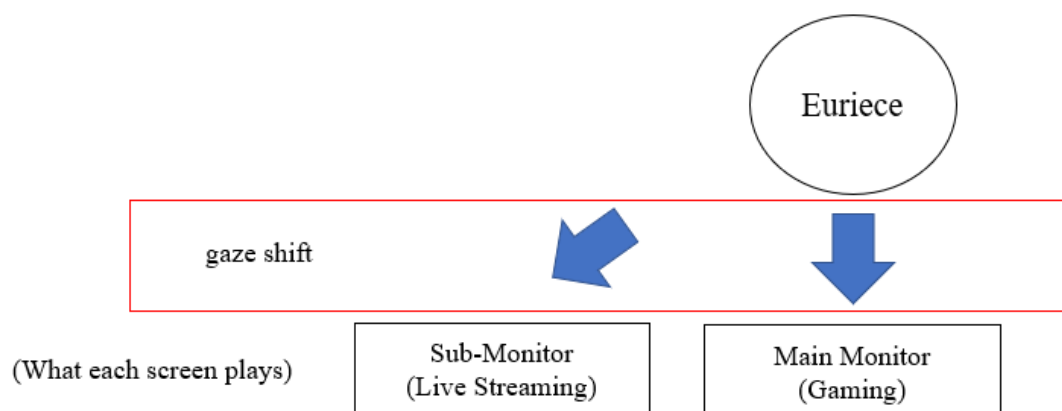


Figure 2

Comments Running Horizontally



The data comes from EUR's perspective as his audience shares chat messages on his chat box more actively than that of KATO and KH. These chat messages are only visible to EUR and allow him to recruit his audience members as either addresses or respondents. EUR used two computer displays—one for showing the game screen (APEX) and the other for showing his live-streaming screen (Twitch). His webcam shows his face playing the game. EUR usually gazed at the main game; yet, when he began interacting with his audience, his gaze shifted to the chat box (gaze shift is highlighted with a red rectangular in Figure 3). I examined the embodied actions based on his posture exhibited through his webcam.

Figure 3*Diagram of EUR's Gaze Directions and the Location of Computer Displays*

Although the main purpose of the live-streamed gaming session was that EUR, KATO, and KH played APEX on the team, I selected cases where these live streamers carried out conversations whose topics were not gaming. These cases allow for investigations of where linguistic trouble emerges and how EUR manages it with the audience's assistance.

Method

The transcripts adopt a three-tier format (Hepburn & Bolden, 2017). The first-tier structures a Romanized version of the Japanese, and the second tier represents a word-by-word translation and symbols used in morpheme-by-morpheme glosses of the first tier (Hoshi, 2021; Tsujimura, 1996). Moreover, a space below the third tier provides frame grabs of audience comments and the embodied actions participants employ. +sign is transcribed at the onsets of frame grabs above the first tier (Mondada, 2018). EUR's gaze shift is indicated by the blue arrow (↙) on the frame grabs. Finally, idiomatic English translations are provided at the end of each turn in the transcripts. The audience's comments on frame grab relevant to ongoing conversations are also translated into English.

The following questions will be addressed through my analysis of the focal segments: 1) How does the audience interact with Euriece (live streamer)? 2) How does Euriece make use of language-related assistance brokered by the audience?

FINDINGS

In my data exploration, I found ten cases of language brokering where the audience provided language-related assistance to EUR. I will present analyses of three of these cases that significantly capture audience participation in reformulating and expanding topics of ongoing oral interactions and helping EUR engage with the other co-players. With the selected excerpts, I intend to show how EUR makes use of the audience comments that appear on the chat box and engages in a conversation with his co-players while simultaneously playing the game. In all these excerpts, EUR, KATO, and KH do not meet face-to-face and communicate via audio materials. The audience's comments displayed in the frame grabs are not visible to KATO and KH.

In the first two excerpts, EUR made an explicit request to his audience to translate what KATO and KH are talking about. The audience reformulated and summarized KATO and KH's utterances, as well as the background knowledge that was shared but not told in the conversation, via text message. This helped EUR to follow the ongoing oral interaction between KATO and KH (Excerpt 1) and to share his situation associated with the story KH presented (Excerpt 2). The audience members also provided potential topics on a chat box, which ended up with EUR addressing their comments orally (Excerpt 3).

Language Brokering to Comprehend a Storyline

This excerpt shows the first half of the interaction in which KH launches a story about his romantic relationship. I will examine how EUR requests the audience's assistance and makes use of it to comprehend a storyline. Before the excerpt, EUR told KATO and KH that he maintained a long-distance romantic relationship. The first excerpt begins after KATO confirmed whether KH dated a Korean lady or not. The audience members post comments while they are listening to a live-streamed conversation between KATO and KH.

Excerpt 1

- 1 KH jibun no risunaa san nanka sasotte kekkon
my GEN listener Ms. something invite.GER marry
+fig 1.1
- 2 +shimashita
do.did
"I invited, like, my listener and married."



Figure 1.1

- 3 AHA[HAHA]
- 4 [ichaicha] shite
flirt do.GEN
"Flirting (with her)"
- 5 KATO haha[haha]
- 6 KH [↑hahahaha:haha:]
+fig 1.2
- 7 KATO +AHAHAHAHA=



Figure 1.2

+fig 1.3

8 EUR +e?
INT
“Huh?”



Figure 1.3

9 KH =yacchai |mashita yo moo |katoo san jibun
do.end up did IP yet Kato Mr. me
“Mr. Kato, I did somehow.”

10 KATO [HAHAHAhaha]

+fig 1.4

11 KH [nakanaka] yatteru n janai desu ka +jibun.
rather did.GER GEN did.NEG COP Q me

“I did something active, didn’t I?”



Figure 1.4

- 12 KATO wahahahaha soo nan [da]=
so NOM P
“I see.”
- 13 KH [risunaa] san ni: [ano:]
listener Ms. DAT well
“The listener, well, “
- 14 KATO [AHahaha]
- 15 KH >jibun no ie ni< shootaishite
my GEN house DAT invite.did.GER
- 16 [moratte,]
receive.GER
“I invited (a listener) to my house.”
- +fig 1.5
- 17 EUR [haha TRANSLATE] +TRANSLATE [TRANSLATE]



Figure 1.5

What the hell is the way to get married lol

18 KATO

[HAHAHA] un
yes

“Yes.”

19 KH

issho [ni nanka]
together GEN something
“Together, like.”

+fig 1.6

20 EUR

[translate] (.) +huh?



Figure 1.6

21 KATO HAHHAH

- 22 (1.6)
- 23 KH jibun ano: furaido chikin de shoobu
I well fried chicken CP match
- 24 kakemashita ne
bet.did IP
"Well, I put a lot of energy to win her with fried chicken."
- 25 KATO hahaha soo nan da: ii ne.
so NOM P good IP
"I see. Sounds good."
- eur +fig. 1.7 +fig. 1.8
- 26 KH +uchi no ie de nanka furaido +chikin tabenai
my LK house CP something fried chicken eat.NEG



Figure 1.7



Figure 1.8

27 kai tte=
 Q like
 “Don’t you eat fried chicken or something in my house? Like,”
 +fig 1.9
 28 KATO =+HAHAHA



Figure 1.9

- 29 KH 0messeeji okutte0 nanode sokkara
message send.GER because since then
"I texted her. Because since then,"
- 30 KATO fsoo nan daf=
so NOM P
"Oh, I see."
+fig 1.10
- 31 EUR =+hee: hahaha
INT
"I see."



Figure 1.10

- +fig 1.11
- 32 KATO okusan +bijin da mon na.
wife beautiful P thing IP
"Your wife is beautiful, isn't she?"



Figure 1.11

- 33 KH tada maa
 but well
 “But well,”
- 34 KATO yappa ne: soo yannai to ne:
 expected IP so do.must CON IP
 “As expected, I know you have to actively do that. Otherwise,”
- 35 KH soo ssu yone
 so COP IP.IP
 “Right.”
- 36 (2.4)
- +fig 1.12
- 37 EUR +hahaha



Figure 1.12

In the first segment, KATO and KH laugh at KH's answers, "**jibun no risunaa san sasotte kekkon shimashita**" and "**ichaicha shite**" with a loud voice, a rising tone, and elongation. Their laughter lasts for 4.3 seconds, which may attract EUR with the ongoing oral interaction as he solicits repair by saying "e?". EUR's audience shares their knowledge of KH's story with him via live chat messages. Indeed, the audience shifts their topic after KH initiates his turn in line 2. EUR's audience finishes talking about past conversations like, "アメリカの飯はまずい (American meals taste bad.);" and "勃起もするわ (I do erect.);" before a small blank appears (Figure 1.1). When laughter moves the onset of oral interaction along (Glenn, 2013) from line 5 to line 10, EUR's audience comments on laughter via live chat message. They send semiosis to demonstrate laughter ('www' meaning laughing out loud in Japanese) (Figure 1.1). Moreover, the audience notices something from KH's story by saying, "あ (Oh.);" which stands in the first position as a change-of-state token and informs KH's story coincides with when a mental event occurs in the audience members (Heritage, 2018, p. 161). The change-of-state token, thus, presents the audience members have sufficient knowledge of KH's story. Based on the evidence that EUR shifts his gaze to a chat box in line 8 (Figure 1.3), he orients toward the live chat messages sent from his audience. The audience starts to share information, such as "イギリスの飯はまずい (British meals taste bad.);" and "ジェンおるやん (You have Jenn.);" which may index their membership knowledge (Figures 1.3 and 1.4).

The second segment shows that EUR requests his audience for translation by using verbal and nonverbal cues while KATO and KH engage in oral interaction from line 9 to line 16. EUR's orientation toward the live chat messages sent from his audience makes a novel participation framework observable. Although separate participation frameworks frequently appear in gaming interaction (Piirainen-Marsh, 2012), live streaming features a participation framework where live streamers can interact with their audience. The audience enacts as language brokers for EUR after he vividly signals assistance. While KH continues telling the story of dating his wife in lines 15 and 16, EUR exclaims the request, “**TRANSLATE TRANSLATE**” gazing at the chat box (Figure 1.5) in line 17. His request for translation overlaps with the continuing intonation of sharing the story in line 16, which seems that KH has not completed his TCU. This fact becomes strong evidence that the request directs EUR's audience. Furthermore, EUR's gaze shift index initiation of language brokering (Greer, 2015); however, most of his audience still co-construct the stance toward KH's story, sending *www* and, “*なんだその結婚の仕方はw* (What the hell is the way to get married lol)” (Figure 1.5). EUR requests, “**translate**” again and solicits repair, “*huh*” in line 19. Gaze shift (Figure 1.6) rather directs to his audience sending messages on a chat box. Moreover, EUR pats his headset (Figure 1.6), demonstrating that he treats the ongoing oral interaction as a trouble source.

EUR's oral request and gaze shift in the earlier segment guide his audience to attribute them to a lack of comprehension. Live chat messages coming after his request are possible to build another turn-taking system. In other words, schisming, in which two turn-taking systems are constructed in different parties (Egbert, 1997), occurs. The oral request and gaze shift become a “schisming-inducing turn” (Egbert, 1997, p. 3). The audience summarizes and translates the oral interaction in which KATO and KH engage by saying for instance, “*KHの嫁はリスナーだったんだって* (Quote, “KH's wife was a listener.”)” and, “*ファンと結婚したらしい* (He seems to marry his fan.)” (Figures 1.7 and 1.8). They also say, “*listener hunter KH*” (Figure 1.8) or “*KH married his viewers*” (Figure 1.9), although both of them do not necessarily translate the episode KH employs fried chicken to represent a funny invitation for a date. EUR shifts his gaze to a chat box and displays his understanding by saying “**hee**” in line 31. *Hee* is a news-receipt token that can be free-standing and becomes an expression of assessment of the news (Mori, 2004, p. 1181). Based on the audience's comments and the timing of his utterance, it is likely that EUR qualifies these comments as language brokering.

In the last segment, EUR's audience keeps enacting as language brokers. They reassure him “マジだよ (For sure.)” that their summary is accurate and offer him an English translation, “KH married to his listener” (Figure 1.11). The audience sends not only a summary but also a reaction like, “下衆な笑い方草 (Creepy ways to laugh lol)” (Figure 1.12), which may relate to him producing laughter in line 37. Based on his gaze shift to a live chat and orientation toward his audience, his laughter is likely to show he comprehends a storyline.

In the first excerpt, the audience participation indirectly assists EUR to resolve the lack of comprehension and follow the ongoing oral interaction. The audience members enact as language brokers after EUR requests help in the second segment of the excerpt. Instead of KATO and KH, the audience summarizes and translates KH's story via live chat messages. Consequently, the audience's comments contribute to EUR's understanding of a large picture of the story.

Participating in Oral Interaction after Language Brokering

The following excerpt shows the second half of the story KH presents. I will examine how EUR elicits his situation by using his audience's assistance. The second excerpt begins after KATO and KH discussed the story that KH dated his wife in his house. Same as the first excerpt, EUR continues requesting his audience for assistance.

Excerpt 2

- 38 KH >jitsuwa< sono: sono hi nanka sakkaa shiai
actually that that day something soccer game
- 39 ga atte
NOM exist.GER
“Actually, there was, something like, a soccer game on that day.”
- 40 KATO ua: ou ou ou
wow yeah yeah yeah
“Wow. Yeah.”
- 41 KH chuugoku to kankokuno
China with South Korea.GEN
“South Korea against China.”
- +fig 2.1
- 42 KATO +UN
yes
“Yes.”



Figure 2.1

- +fig 2.2
- 43 EUR +hahaha



Figure 2.2

44 KH kunino daihyoo sen ga atte
country.GEN representative match NOM exist.GER

+fig 2.3

45 sakkaa shiai minagara +nanka
soccer game watch.GER something

"The representatives had a game. Watching the soccer game, like,"



Figure 2.3

46 (4.4)

+fig 2.4

47 EUR [+haha]



Figure 2.4

- 48 KATO [shine] ua: oshi:=
die so close
“Fxxk off. Oh, close.”
- 49 KH =uwa oshii majide
INT close for.real
“Oh, really close.”
- 50 KATO ato ippatsu.
left one shot
“One more shot.”
- 51 EUR fma:jidef [hahaha]
for.real
“Really?”
- 52 KH [tada sonna ni]
but that DAT
“But that’s.”
- 53 KH nani [yuurisu]=
what Euriece
- 54 KATO [haha]
- 55 KH =rikai deki mashita?=
understand can did
“What? Did you understand, Euriece?”

56 EUR =e ʔore mo jen chan ga: (2.0) um (1.6)
INT I too I too Jenn cutie GEM

57 shichoosha
listener
"Wait, me, too. Me, too. Jenn is a listener."

58 KH e? shichoosha [san?]
INT listener Ms.
"Wait, a listener?"

59 EUR [un] shichoosha
yes listener
"Yes. Listener."

EUR's audience provides EUR with summaries and English translations on his chat box. Nonetheless, there is a gap in topics among KATO, KH, and EUR's audience. KH launches the episode about the soccer game between Team China and Team Korea by saying, “**jitsuwa sono hi nanka sakkaa shiai ga atte**” from line 38 to line 39. When KATO and KH talk about the soccer game, EUR's audience offers him information about KH like, “リスナー手を出した (Reached out to listener),” and, “視聴者と結婚した (married with his shichoosha),” and their reaction to the episode KH is sharing like, “ひっでえwww (That suck lol).” Some of the comments include an English translation, “KH's wife was a listener,” although they do not say anything about the soccer game (Figure 2.1). EUR orients toward the audience's comments and produces laughter in line 41 (Figure 2.2). Based on the orientation toward a live chat, it is possible that he laughs at the comments KH married his listener instead of the story he orally presents.

Euriece is likely to rely on these live chat messages to comprehend what KH says considering his orientation toward his audience's comments. Despite Euriece orienting toward his audience's comments, they seldom translate the episode Kato and KH are talking about. This segment also shows that Euriece gets ready to share his comments after he shifts his gaze back and forth. When KH shares what he did with his wife while they were watching the soccer game by saying, "sakkaa shiai minagara nanka," in line 45, the audience's comments become massive. EUR's audience sends their reaction to that story via text, such as, "リスナー食い (Eat listeners.)," and, "ファン食い (Eat fans.)." Some of them type their view of Euriece's laughter

like, “クソ笑うやん (You laugh a lot.)”. Others still enact as language brokering by sending an English translation, “KH made his listener his wife.” and their knowledge of KH’s wife, SOM chan like, “SOMちゃんリスナーは知ってた (I knew SOM chan was a listener.)” (Figure 2.3). EUR moves to a vacant room and returns his gaze to a gaming screen (Figure 2.4), and then produces laughter in line 47. Considering his continuous gaze shift, he is likely to laugh at the live chat messages sent by his audience. His gaming action, likewise, indexes that he stops playing for a moment and prepares his speech with the audience’s comments. Yet, KATO and KH contribute to the gaming interaction so intensively from line 48 to line 50 as to let the laughter pass.

In the end, EUR’s participation may be enabled by various sources in this segment. His audience not only has given him English translations but has summarized KH’s story and information about his wife so far. This text-based language brokering may result in Euriece uttering the interjection “maji de” to produce newsworthiness with a laughing voice followed by laughter in line 51. KH allocates turns to invite EUR to the oral interaction. While KATO and KH have allocated turns to each other until line 51, KH nominates EUR in the next turn in line 52 to let him join the interaction. Turn allocation highlights that EUR seldom interacts with KATO and KH unless he is called for. Gaps in Japanese competencies may trigger EUR to engage less actively in oral interaction.

Audience participation is likely to fill in that gap. After KH solicits a repair for Euriece by saying nani in line 53, Euriece remarkably shares his personal experience associated with KH’s story from line 56 to line 57. In this utterance, Euriece is searching for the word shichoosha (‘listener’), which is extracted from the earliest audience’s comments. KH utters the interjection “e” ending with a rising tone to index newsworthiness in line 56, which conveys that KH’s mental state is changing. Although he keeps calling the loanword, “risunaa,” in the first excerpt, he reformulates it after Euriece utters shichoosha. Euriece’s word choice urged by his audience’s comments perhaps influences oral interaction.

In the second excerpt, audience assistance offers opportunities for EUR to engage with his teammates. Text-based language brokering plays a crucial role in helping EUR orally address his situation. EUR frequently shifts his gaze from the chat box to the gaming screen, which indicates that he relies on his audience as language brokers and prepares his speech. KH’s story inspires

EUR's audience, considering that the flow of their comments fluctuates in each figure. Audience participation pushes Euriece to join the ongoing interaction in the end.

Language Brokering to Produce Relevant Topics

In the third excerpt, I will examine how the audience members enacting as language brokers produce relevant topics and help EUR address their comments. In this excerpt, EUR, KATO, and KH talk about food culture since they were living in different countries (Canada, Japan, South Korea). Before the excerpt, KATO asked KH whether people eat sashimi (a slice of raw fish) in South Korea. As soon as KH gave an affirmative response and further described the customs in South Korea, KATO asked EUR whether people eat sashimi in Canada. The excerpt begins with EUR answering KATO's question. Same as in the previous two excerpts, EUR's audience frequently types comments while they are listening to the live-streamed interaction.

Excerpt 3

- 60 KATO *kanada wa_i*
 Canada TOP
"How about Canada?"
- 61 (1.5)
- +fig 3.1
- 62 EUR +so[no:]
 that
"Um."



Figure 3.1

- 63 KATO [*sushi*] *sushi sushi*
- 64 KH *haha* [*nama*].
 raw
"Raw."
- 65 EUR [*u:n*] *sashimi wa* (2.0) <*tabe(.)te*>
 well *sashimi* TOP eat.GER
- +fig 3.2
- 66 +*tabete muzui* (.) *ore=*
 eat.GER difficult me
"Well, it is difficult for me to eat sashimi."



Figure 3.2

- 67 KATO =ftabete [muzuif.]
eat.GER difficult
"It is difficult to eat."
- 68 KH [a anmari] tabe nikui rashii desu ne
rarely eat hard seem COP IP
- 69 nanka.=
something
"It seems it is hard for him to eat, like,"
- 70 KATO =A:::
ah
"Oh."
- 71 EUR ye[ah yeah]
- 72 KH =[namazakana wa]
raw fish TOP
"Raw fish."
- 73 (1.7)
+fig 3.3
- 74 EUR +sashimi.
sashimi
"Yeah, yeah. Sashimi."



Figure 3.3

- 75 KATO >un un un<.
yes yes yes
“Yes yes yes.”
- 76 KH yakizakana wa doo daroo na
grilled fish TOP wonder will Q
- 77 °yuurisu° fa FIRE FIRE [fish]=
Euriece
- 78 KATO [°fire fish°]
- 79 KH =suki?
like
“How about grilled fish? Euriece, fire fish. Do you like it?”
- 80 EUR >fire fish wakannai<.
know.NEG
“I don’t understand fire fish.”
- 81 KH tabenai?
eat.NEG
“Don’t you eat it?”
- 82 (3.2)
- 83 EUR tabenai.=
eat.NEG
“I don’t eat it.”

- +fig 3.4
- 84 KATO =+nani kuu no? NIKU?
 what eat Q meat
 “What does he eat? Meat?”



Figure 3.4

- 85 (3.7)
- 86 KATO oniku_z
 HON.meat
- +fig 3.5
- 87 KH +niku [janai] desu kane yappa
 meat TAG.NEG COP Q.IP as expected



Figure 3.5

- 88 KH [niku tabe]ru n janai kana?
 meat eat NOM TAG.NEG IP.Q

- "I guess he eats meat. I guess so."*
- 89 KATO [hu:n]
INT
"I see."
- 90 (1.9)
- 91 KH did you like meat?
- 92 (1.8)
- 93 EUR meat?=
94 KH =no [fish]?
95 EUR [UN]
yes
- 96 (2.6)
- 97 EUR hahaha
+fig 3.6
98 +(2.3)



Figure 3.6

- 99 EUR HAHAAHA
- 100 EUR makku makudonarudo debu.
Mc McDonald fatie
"Yes. McDonald's. Fatie."

101 KATO hahaha

EUR's audience members, KATO, and KH all begin to help EUR answer the question. In line 60, KATO nominates EUR as the next-turn speaker by asking him about Canada, where he has epistemic primacy. Since EUR hesitates to respond in line 62, Kato and KH provide utterances to assist Euriece by self-repairing "**sushi sushi sushi**" in line 63 and addressing a candidate word "**nama**" in line 64. Euriece shows a struggle but answers difficulty to eat sashimi from line 65 to line 66. Euriece's audience anticipates that Euriece would not prefer sashimi using their membership knowledge. They first greet EUR, "おい (Hey.)," and say, "ユーリスが嫌いなやつ (That's what Euriece doesn't like)." After EUR says, "**tabete muzui ↓ore**," his audience gives reactions to sushi and the English translation of sashimi via live chat messages (Figure 3.2); yet, EUR does not direct his gaze to a chat box and account for these audience comments.

The second segment shows that KATO and KH keep assisting EUR, which could see that the live streamers prioritize the progressivity of the talk rather than look at the audience's comments. KH attempts to assist EUR more actively than KATO. He self-selects his turn and produces reformulation from line 66 to line 67. The reformulation also directs not only KATO but to EUR, who displays affirmation with KH's reformulation in line 68. EUR's audience, in contrast, shares sympathy with not eating sashimi like, "生は無理かもね (I guess you can't eat raw fish.)," and disaffiliating stances toward sashimi like, "刺し身アンチ (Anti sashimi.)," as well as "Euriece 刺し身4 (*sashimi fxxk*; 4 comes from a Japanese word, *shi*, meaning death)" (Figure 3.3). While the substantial gap in line 72 allows EUR to direct his gaze to a chat box, he does not warrant his audience's reactions as language brokers.

Code-switching plays a role in allocating turns in the third segment. Moreover, candidate understanding may continue oral interactions. KH shifts the topic from sashimi to grilled fish in line 74 and allocates the next turn to EUR by saying, "**yuurisu fa FIRE FIRE fish**," in line 77 and, "**suki?**," in line 79. KH code-switches from Japanese to English in line 77 to ask EUR his

question. However, EUR receives translation as a trouble source and solicits repair by saying, “**fire fish wakannai**,” in line 80. KH gives a candidate response, “**tabenai?**,” instead of repairing in line 81. A substantial gap allows EUR to draw KH’s repair as a candidate understanding in line 82. Audience participation follows the candidate understanding made by KH and EUR in line 82. EUR directs his gaze at a chat box where the audience members send various reactions like sympathizing with difficulties and recommending eating grilled fish. Some of them attempt to give English translations, such as boiled fish (Figure 3.4). However, these translations do not accurately translate grilled fish. Less accurate language brokering causes unsuccessful language assistance (Greer, 2015, p. 11), which is likely that the audience’s comments are not helpful for EUR. In the massive number of live chat messages commenting on different views, EUR seems expected to select ones useful for him instantly in live streaming.

In the last segment, EUR’s audience and KH guide EUR to produce a relevant topic. In addition to audience participation, silences enable KH to code-switch and EUR to shift his gaze to live chat messages. KATO joins the oral interaction by shifting the topic, “**nani kuu no? NIKU?**,” in line 83. He also uses a substantial gap for self-repairing like, “**oniku,**,” in line 84. KH draws KATO’s self-repair as his curiosity about the food culture in Canada in line 85. EUR’s audience send English translations and questions about grilled fish as usual (Figure 3.5). Moreover, some of them yield topics related to meat, such as *makku* (abbreviated McDonald’s in Japanese) and *poteto* (‘French fries’) (Figure 3.5). Topics yielded by EUR’s audience direct to him at the end of the excerpt. The substantial gap in line 91 allows KH to formulate a question in English to EUR. EUR does not recognize that he is asked a question considering the 1.8-second silence but receives the English reformulation by repeating meat in line 93. He then overlaps with the closing of another question from KH and exclaims a positive minimal response in line 95. The 2.3-second silence in line 98 enables EUR to direct his gaze to a chat box (Figure 3.6) and produce exclaimed laughter. His gaze shift warrants audience participation. His audience produces topics (*makku*, *poteto*, and *niku to poteto* in Figure 3.5) via live chat messages. Then, EUR addresses some of them, such as *makku*, *makudonarudo* (‘McDonald’s’), and *debu* (‘fattie’), in line 100. Unlike the first two excerpts, the upshot of relevant topics indirectly assists EUR to speak up in the interaction.

In the third excerpt, potential topics yielded by the audience impact the oral interaction among live streamers. Rather than English translations, EUR's audience sends their reactions to his utterances. Nevertheless, his audience plays roles as language brokers when EUR shifts his gaze to request help. The audience members provide him with relevant topics so that he can associate them with meat. Warranting these topics seems to display a new trait of online audience participation.

DISCUSSION

The present study investigated how Euriece recruits his audience members as language brokers in a live-streaming context. Language brokering is by no means a practice limited to co-present settings. In fact, live chat messages exhibit real-time brokering on the internet, which displays that language brokering is particularly relevant for novice Japanese speakers like Euriece. Euriece's audience summarizes a portion of ongoing conversations and offers English translations to help him engage in oral interactions (Excerpts 1 and 2).

It is worth noting that the involvement of the audience demonstrates two turn-taking systems: (i) orally between live streamers and (ii) both orally and written between a live streamer and audience through a live chat box, which Euriece undertakes by shifting his gaze to the chat box when he receives language brokering. Gaze shift initiates interaction with the audience in a live-streaming context, which is a mark of schisming (Egbert, 1997). Schisming could occur in interaction within this framework: (i) live streamer-live streamer and (ii) live streamer-audience. In other words, two participation frameworks, which are commonly seen in gaming interaction (Piirainen-Marsh, 2012), are observed. Another turn-taking system starts when Euriece reacts to his audience's comments orally; simultaneously, Kato and KH engage in their own interactions. Euriece can switch his stance from overhearers to addressees/recipients. In this context, this situation empowers him to engage with his audience by orally requesting translation and relying on his audience's comments running on the chat box as his response to KH. Findings of schisming feature the template of live-streamed interactions, making the audience's roles more conspicuous. Live streamers utter and react showing their eligibility to participate in oral interactions. These findings expand previous studies of social media and gaming interactions.

However, challenges remain in how the messages in a live chat from the audience are taken up by Euriece since the audience's comments run randomly; thus, Euriece is expected to select useful and suitable comments as support for his oral interactions with other live streamers. Although the oral request for translation and gaze shift can build, "schisiming-inducing turns" (Egbert, 1997, p. 3) in the excerpts, the observation has a limitation to determine whether Euriece and his audience establish turn-taking systems altogether. While additional research is needed, it is likely that as linguistic resources are visible to a novice language user (Euriece), a speaker relies on these resources, providing further evidence that audience participation can engage in language brokering on an online platform.

In addition, the presence of two languages (English and Japanese) used in interactions between Euriece and his audience mainly occurring through live chat, gaze, and oral interaction can be seen as a form of 'multilingualism' ("groups and individuals to engage on a regular basis in space and time in everyday life") (Franceschini, 2009. pp. 33-34). In all the excerpts, the audience sends linguistic resources including reactions, reformulations, and translations in both English and Japanese. Although I do not see how these live chat messages relate to Euriece, it is plausible to assume that Euriece's gaze shift and utterances coming after that could verify these live chat messages as assistance to engage with Kato and KH. It is apparent that KH distinguishes between English and Japanese depending on to whom his utterance directs. KH speaks to Kato in Japanese; yet, he often code-switches from Japanese to English to speak to Euriece. While additional research is needed, the gap in linguistic competencies makes distinguishing linguistic repertoire visible. KH may contribute to determining to whom he talks in a situation where participants cannot recognize each other.

I would suggest that my study also offers evidence of online audience participation—not so much in terms of summoning questions (Llewellyn, 2005) and producing vocal reactions (Pehkonen, 2017) but in terms of how audience participation generates topic suggestions which are demonstrated when the audience starts providing topics (e.g., *makudonarudo*; *niku to poteto*) which makes Euriece engage with Kato and KH more actively (Excerpt 3). Thus, online audience participation has the potential to generate topic suggestions. In line with the multimodal CA approach, this form of audience participation focuses observations firmly on the interaction rather than the speaker.

Overall, this study has proposed that the live-streaming context enables the merging of different modalities (written and oral) in digital interaction between audience members via live chat and online game live streamers with one function of online audience participation as ‘language brokering’. Digital interaction allows for opportunities to establish novel participation frameworks and augment in situ interactions between various participants. These findings suggest the further expansion of researching language use in social media, which is a worthwhile topic for future research.

REFERENCES

- Bennerstedt, U., & Ivarsson, J. (2010). Knowing the way. Managing epistemic topologies in virtual game worlds. *Computer Supported Cooperative Work*, 19, 201-220. DOI: 10.1007/s10606-010-9109-8.
- Blommaert, J. (2017). *Society through the lens of language: A new look at social groups and integration*. (Tilburg Papers in Culture Studies; No. 178).
- Bolden, G. B. (2012). Across languages and cultures: Brokering problems in understanding repair. *Language in Society*, 41, 97-121. DOI: 10.1017/S0047404511000923.
- Choe, H. (2019). Eating together multimodally. Collaborative eating in mukbang, a Korean livestreaming. *Language in Society*, 48, 171-208.
<https://doi.org/10.1017/S0047404518001355>.
- Clayman, S. E. (1993). Booing: The anatomy of a disaffiliative response. *American Sociological Review*, 58, 110-130.
- Ditchfield, H., & Meredith, J. (2018). Collecting qualitative data from Facebook: Approaches and methods. In U. Flick (Ed.), *The SAGE handbook of qualitative data collection* (pp. 496-510). Sage.
- Dooly, M. & Tudini, V. (2022). ‘We should google that’: The dynamics of knowledge-in-interaction in an online student meeting. *Classroom Discourse*, 13(2), 188-211.
<https://doi.org/10.1080/19463014.2021.2023596>.
- Egbert, M. (1997). Schisming: The collaborative transformation from a single conversation to multiple conversations. *Research on Language and Social Interaction*, 30(1), 1-51.

- Femø Nielsen, M. (2019). Adjusting or verbalizing visuals in ICT-mediated professional encounters. In D. Day & J. Wagner (Eds.), *Objects, Bodies and Work Practice* (pp. 191-215). Multilingual Matters.
- Furukawa, G. K. (2016). ‘It hurts to hear that’ Reflecting the feelings of foreigners on Japanese television. In M. T. Prior, & G. Kasper (Eds.), *Emotion in Multilingual Interaction* (pp. 238-265). Benjamin.
- Franceschini, R. (2009). Genesis and development of research in multilingualism: Perspectives for future research. In L. Aronin & B. Hufeisen (eds.), *The Exploration of Multilingualism; Development of Research on L3, Multilingualism and Multiple Language Acquisition*, 27-61. John Benjamins.
- Giles, D. (2021). Context, history, and Twitter data: Some methodological Reflections. In J. Meredith, D. Giles, & W. Stommel (Eds.), *Analysing Digital Interaction* (pp. 41-63). Springer International Publishing AG.
- Glenn, P. (2013). Interviewees volunteered laughter in employment interviews: A case of “nervous” laughter. In P. Glenn, & E. Halt (Eds.), *Studies of Laughter in Interaction* (pp. 255-275). Bloomsbury Academic, An imprint of Bloomsbury Publishing Plc.
- Graham, S. L. (2016). Relationality, friendship, and identity in digital communication. In A. Georgakopoulou, & T. Spiliotti (Eds.), *The Routledge Handbook of Language and Digital Communication* (pp. 319-334). Routledge.
- Graham, S. L. (2019). A wink and a nod: The role of emojis in forming digital communities. *Multilingua*, 38(4), 377-400. <https://doi.org/10.1515/multi-2018-0037>.
- Greenfield, P. M., & Subrahmanyam, K. (2003). Online discourse in a teen chatroom: New codes and new modes of coherence in a visual medium. *Applied Developmental Psychology*, 24, 713-738.
- Greer, T. (2015). Appealing to a broker: Initiating third-person repair in mundane second language interaction. *Novitas-ROYAL (Research on Youth and Language)*, 9(1), 1-14.
- Heritage, J. (2018). Turn-initial particles in English: The cases of oh and well. In J. Heritage, & M-L. Sorjonen, *Between Turn and Sequence: Turn-Initial Particles Across Languages* (pp. 155-189). John Benjamins Publishing Company.

- Hoshi, S. (2021). Effects of classroom instruction on the development of L2 interactional resource for joint stance taking: Use of Japanese interactional particle Yo in spontaneous peer conversation. *Applied Linguistics*, 43(4), 698-724.
- Jansoon, G., & Wadensjö, C. (2016). Language brokering in multilingual caregiving settings. *Communication & Medicine*, 13(3), 277-290.
- Jenks, C. J. (2009). When is it appropriate to talk? Managing overlapping talk in multi-participant voice-based chat rooms. *Computer Assisted Language Learning*, 22(1), 19-30. <https://doi.org/10.1080/09588220802613781>.
- Jenks, C. J. (2014). *Social Interaction in Second Language Chat Rooms*, Edinburgh University Press.
- Jenks, C. J., & Brandt, A. (2013). Managing mutual orientation in the absence of physical copresence: Multiparty voice-based chat room interaction. *Discourse Processes*, 50(4), 227-248. <https://doi.org/10.1080/0163853X.2013.777561>.
- Kim, S. (2018). “It was kind of a given that we were all multilingual”: Transnational youth identity work in digital translanguaging. *Linguistics and Education*, 43, 39-52. <https://doi.org/10.1016/j.linged.2017.10.008>.
- Kulkarni, D. (2016). Inter-subjectivity in Instant Messaging Interactions. *Journal of Creative Communications*, 11(3), 227-243. DOI: 10.1177/0973258616667182.
- Licoppe, C. (2017). Skype appearances, multiple greetings and ‘coucou’: The sequential organization of video-mediated conversation openings. *Pragmatics: quarterly publication of the International Pragmatics Association*, 27(3). 351-386. DOI: 10.1075/prag.27.3.03lic.
- Licoppe, C. & Morel, J. (2018). Visuality, text and talk, and the systematic organization of interaction in Periscope live video streams. *Discourse Studies*, 20(9), 637-665. DOI: 10.1177/1461445618760606.
- Llewellyn, N. (2005). Audience participation in political discourse: A study of public meetings. *Sociology*, 39(4), 697-716. DOI: 10.1177/0038038505056028.
- McIlveny, P. (1996). Heckling in Hyde Park: Verbal audience participation in popular public discourse. *Language in Society*, 25(1), 27-60.

- Meredith, M., Giles, D., & Stommel, W. J. P. (2021). Introduction: The microanalysis of digital interaction. In Meredith et al. (Eds.), *Analysing digital interaction* (pp. 1-21). Palgrave Macmillan.
- Mondada, L. (2018). Multiple temporalities of language and body in interaction: Challenges for transcribing multimodality. *Research on Language and Social Interaction*, 51(1), 85-106. <https://doi.org/10.1080/08351813.2018.1413878>.
- Moore, R. J., Ducheneaut, N., & Nickel, E. (2007). Doing virtually nothing: Awareness and accountability in Massively Multiplayer Online Games. *Computer Supported Cooperative Work*, 16, 265-305. DOI: 10.1007/s10606-006-9021-4.
- Mori, J. (2006). The workings of the Japanese token hee in informing sequences: An analysis of sequential context, turn shape, and prosody. *Journal of Pragmatics*, 38(8), 1175-1205.
- Murillo, R. M., & Kam, J. A. (2021). Spanish-speaking family members and non-Spanish speakers' supportive and unsupportive communication for Latina/o/x language brokers. *Journal of Social and Personal Relationships*, 38(11), 3387-3413. DOI: 10.1177/02654075211031294.
- Nguyen, H. t., Choe, A. T., & Vicentini, C. (2022). Opportunities for second language learning in online search sequences during a computer-mediated tutoring session. *Classroom Discourse*, 13(2), 145-163. <https://doi.org/10.1080/19463014.2021.2023597>.
- Nilsen, M., & Mäkitalo, Å. (2010). Towards a conversational culture? How participants establish strategies for coordinating chat postings in the context of in-service learning. *Discourse Studies*, 12(1), 90-105. DOI: 10.1177/1461445609346774.
- Oittinen, T. (2020). Noticing-prefaced recoveries of the interactional space in a video-mediated business meeting. *Social Interaction Video-Based Studies of Human Sociality*, 3(3). DOI: 10.7146/si.v3i3.122781.
- Pehkonen, S. (2017). Choreographing the performer-audience interaction. *Journal of Contemporary Ethnography*, 46(6), 699-722. DOI: 10.1177/0891241616636663.
- Piirainen-Marsh, A. (2012). Organising participation in video-gaming activities. In R. Ayaß, & C. Gerhardt. (Eds.), *The Appropriation of Media in Everyday Life* (pp. 197-230). John Benjamins Publishing Company.
- Rendle-Short, J. (2015). Dispreferred responses when texting: Delaying that 'no' response. *Discourse & Communication*, 2(19), 1-20. DOI: 10.1177/1750481315600309.

- Rusk, F., Sahlström, F., & Pörn, M. (2017). Initiating and carrying out L2 instruction by asking known-answer questions: Incongruent interrogative practices in bi- and multilingual peer interaction. *Linguistics & Education*, 37. <http://dx.doi.org/10.1016/j.linged.2017.02.004>.
- Schott, G., & Kambouri, M. (2006). Social play and learning. In D. Carr, D. Buckingham, A. Burn, & G. Schott (Eds.), *Computer games: Text, narrative, and play* (pp. 119-148). Cambridge, UK: Polity Press.
- Selting, M. (2017). The display and management of affectivity in climaxes of amusing stories. *Journal of Pragmatics*, 111, 1-32. <http://dx.doi.org/10.1016/j.pragma.2017.01.008>.
- Sjöblom, B. (2011). *Gaming interaction: Conversations and competences in internet cafe's*. Linköping Studies in Arts and Science, 545. Linköping, Sweden: University of Linköping.
- Thorne, S. L., Black, R. W., & Sykes, J. M. (2009). Second language use, socialization, and learning in Internet Interest Community and online gaming. *The Modern Language Journal*, 93, 802-821.
- Traverso, V. (2012). Ad hoc-interpreting in multilingual work meetings: Who translates for whom? In C. Baraldi, & L. Gavioli (Eds.), *Coordinating Participation in Dialogue Interpreting* (pp. 149-176). John Benjamins.
- Traverso, V. (2019). Form of participation in a medical care consultation with a nonpresent interpreter. *Research on Language and Social Interaction*, 52(2), 124-143. <https://doi.org/10.1080/08351813.2019.1608095>.
- Tsujimura, N. (1996). *An Introduction to Japanese Linguistics*. Blackwell Publishers.
- Tüma, F. (2017). Enabling audience participation and stimulating discussion after student presentation in English as a foreign language seminars. *Linguistics and Education*, 47, 59-67. <https://doi.org/10.1016/j.linged.2018.08.004>.

APPENDIX A

Transcript Convention (Hepburn & Bolden, 2017; Mondada, 2018)

. falling intonation

? rising intonation

↗ rising contour

↑ rising tone

↓ falling tone

: elongation

£ laughing voice

ahaha laughter

haha laughter

wahaha laughter

= latching

[**word**] overlapping

>**word**< speedy talk

<**word**> slow talk

word emphasis

WORD exclamation

○**word**○ small voice

+ onsets of frame grabs

Japanese Grammar Glossing (Tsujimura, 1996; Hoshi, 2021)

COP copula

CON conjunction

DAT dative

GEN genitive

GER gerund

HON honorific

INT interjection

LK linking particle

NOM nomination

PLU plural

PST past tense

TAG tag question

Q question

P particle

CP case particle

IP interactional particle

TOP topical particle

Participants

EUR Euriece

KATO Junichi Kato

KH Killi9Hit

TEST REVIEW: OCCUPATIONAL ENGLISH TEST

MAGGIE McGEHEE

University of Hawai‘i at Mānoa

INTRODUCTION

The Occupational English Test (OET) is an English for Specific Purposes (ESP) test designed to assess the language proficiency of healthcare professionals seeking to work or study in an English-speaking setting. Developed at the University of Melbourne and originally used in Australia, it is now recognized by health boards and decision-makers in fifteen countries. This review describes the test purpose, design, and scoring methods, and explores aspects of the OET that both provide support for and question the validity of using OET scores in the life-or-death decision of who is permitted to practice medicine.

TEST PURPOSE

The OET offers twelve occupation-specific tests, targeted to dentists, dietitians, doctors, nurses, occupational therapists, optometrists, pharmacists, physical therapists, podiatrists, radiologists, speech pathologists, and veterinarians. The publisher, Cambridge Boxhill Language Assessment (CBLA), does not disclose the annual number of OET test takers, but releases percentages by demographics, occupation, and first language (CBLA, 2023). Medical licensure boards, hospitals, universities, and training programs use OET for admissions and employment decisions for applicants whose first language is not English. OET results are also used to make immigration decisions for skilled worker or student visas. In the United States (US), OET is one of two options for graduates of non-US medical schools to meet a communication skills requirement before practicing or studying advanced medicine in the US (Educational Commission for Foreign Medical Graduates (ECFMG), n.d.).

The OET advertises that selecting an ESP test focused on healthcare benefits both medical decision-makers and the test takers themselves, who can focus test preparation on using English in their intended occupational context. In addition to claiming “proof of ability to communicate

effectively” in English, the OET further purports that “successful OET learners have the English language and clinical communication skills to provide high quality and safe patient care” (CBLA, n.d.). OET emphasizes that it does not test medical knowledge, only language ability, but purposefully uses only healthcare-based scenarios and materials in order to assess English proficiency in this specific domain. In addition to evaluating linguistic competence, the OET intends to evaluate test takers’ extra-linguistic skills for compassionate care, empathetic listening, and navigating power differentials between practitioner and patient.

TEST METHOD

Test takers have three options for completing the OET: on paper in person at a testing center, or on a computer either at a testing center or at home. The entire test takes just under three hours to complete. Four timed subtests focus on Listening (45 min), Reading (60 min), Writing (45 min), and Speaking (20 min). The Listening and Reading passages discuss general health-related topics and are the same for all professions for these receptive language tasks. These general passages are chosen to minimize privileging or testing any candidates’ specific medical knowledge, and instead focus on language ability. They use medical vocabulary and discuss themes of concern to health practitioners, but avoid requiring specialist knowledge. By contrast, the Writing and Speaking tasks are profession-specific, presenting test takers with patient cases and clinical settings unique to their specialty for these productive tasks (CBLA, n.d.). Table 1 summarizes OET’s four subtests and their length, description, and items.

Table 1*OET Subtests: Length, Task Description, and Items*

Subtest	Length	Task Description	#/type of items
<i>Same content for all professions</i>			
Listening	~15 min	Part A. Listen to 2 patient consultations and complete case notes	24 gap-filling
	~12 min	Part B. Listen to 6 workplace conversations, briefings, or consultations, and identify the gist, details, and opinions	6 multiple choice (3-option)
	~13 min	Part C. Listen to 2 interviews or presentations/lectures, and identify the gist, details, opinions	12 multiple choice (3-option)
Reading	15 min	Part A. Scan 4 texts on the same topic, and read to find needed details	20 matching, short answer, sentence completion
	~10 min	Part B. Read 6 extracts of workplace communications (i.e., memos, policy documents, manuals), find main ideas, gist, or details	6 multiple choice (3-option)
	~35 min	Part C. Read 2 long passages on different healthcare topics, answer meaning, attitude, opinion, vocabulary questions	16 multiple choice (4-option)
<i>Profession-specific content</i>			
Writing	45 min	Write a letter based on case notes to refer, transfer, or discharge a patient. (Some professions advise or inform a patient.)	1 prompt, write a 180-200 word letter
Speaking	20 min	2 role plays. An interlocutor plays a patient, client, relative, or caretaker in a simulated clinical visit	2 role plays

The **Listening** subtest has three parts with 42 items in total. In each part, candidates hear recorded materials and answer questions when prompted. Each recording plays only once. In Part A, test takers complete case notes via 24 gap-filling items while listening to two different clinician consultations with patients. Responses on Part A are scored by human assessors against standardized keys (see “Scores,” below). Part B and C are multiple choice sections scored by computer. Part B is comprised of six workplace conversations. One multiple choice question for

each asks test takers to identify the gist, details, or opinions in the conversations (six total items). Part C includes two longer recordings of healthcare-related presentations or podcast-style interviews, with six multiple choice questions during each recording (12 total items). Notably, “a range of accents are used to reflect the global nature of the healthcare workforce” (CBLA, n.d.), not to mention that of patients. Test takers read the written questions and instructions describing the context of each excerpt before playback begins (The Official Guide to OET, 2018).

The **Reading** subtest also includes three parts. Part A (expeditious reading task, 15 min) presents four short texts on a single topic, followed by 20 matching, sentence completion, and short answer questions. Test takers are instructed to skim the four texts to locate the needed information, then look for the detailed answers. As with Listening, Part A is scored by assessors, while Parts B and C (careful reading tasks, 45 min) are computer-scored. Part B presents six short texts that might be found in a healthcare workplace (such as a policy document, workplace guidelines, manuals, or internal memos). One multiple choice question for each text asks test takers to select a detail, the gist, or the main point. Part C asks candidates to find the meaning and the author’s attitude or opinion in two longer, general healthcare texts by responding to eight, four-option multiple choice questions on each. Test takers must self-pace over the 45 minutes allotted for Parts B & C combined. (CBLA, n.d.)

The **Writing** subtest is an integrated task, combining reading and writing. Test takers are given a set of case notes or other documentation about a patient, and are directed to write a 180-200 word letter. Usually, this letter refers the patient to another practitioner for further treatment, but may also be a letter transferring the patient to another hospital or discharging them from care. Some professions may instead be directed to address the letter to a patient or relative and give advice or information. Candidates have an initial 5 minutes to read the documentation and instructions, followed by 40 minutes for writing. (CBLA, n.d.)

The **Speaking** subtest comprises two roleplays. In each, a trained interlocutor plays a patient, relative, or caregiver. The two roleplays cover two different clinical visit scenarios. Test takers have three minutes to read each roleplay card giving them initial background information on the case. Some details are omitted that they must elicit during the roleplay. In addition to assessing the patient’s condition and providing medical guidance, test takers must establish rapport, show empathy, and fulfill specific tasks given on the roleplay card. For computer-administered tests, the Speaking roleplay is conducted via Zoom. Whether taking the test in person or on the

computer, the timed five-minute interactions are audio-recorded with no video images, and the audio-only recordings are scored. (CBLA, n.d.)

SCORES

The OET is primarily a criterion-referenced test, in which test takers are evaluated against set rubrics (or keys for the multiple choice questions) that aim to define what each person can do in English. Test takers receive four separate scores, one for each subtest. Subtest scores range from 0-500 and are also paired with a letter grade (A, B, C+, C, D, or E). No overall or combined score is assigned, as the OET emphasizes that candidates may display different levels of ability in different linguistic areas. Scores are also not calculated or reported in relationship to other test takers' scores.

CBLA publishes an equivalency table relating OET scores to International English Testing System (IELTS) Academic and Common European Framework of Reference for Languages (CEFR) bands (CBLA, 2020; Lim, 2016). As shown in Table 2, OET provides only one set of overall band descriptors; even though test takers do not receive an overall score, OET does not provide skill-specific band descriptors for each subtest. Further, OET does not define any specific cut scores, leaving that determination up to decision-makers who use the results. CBLA does note that many health boards set a minimum score of 350/B on each subtest, and often require candidates to achieve all four scores in a single sitting (CBLA, n.d.). For example, graduates of foreign medical schools seeking to practice or study in the US must earn a minimum score of 350/B on all four sections in a single test administration (ECFMG, n.d.).

Table 2*OET Numeric Scores, Letter Grades, Band Descriptors, and IELTS and CEFR Bands*

OET numeric score	OET letter grade	OET band descriptor	IELTS band	CEFR band
450-500	A	Can communicate very fluently and effectively with patients and health professionals using appropriate register, tone and lexis. Shows complete understanding of any kind of written or spoken language.	8.0-9.0	C2
400-440	B	Can communicate effectively with patients and health professionals using appropriate register, tone and lexis, with only occasional inaccuracies and hesitations. Shows understanding in a range of clinical contexts.	7.5	C1
350-390			7.0	
300-340	C+	Can maintain the interaction in a relevant healthcare environment despite occasional errors and lapses, and follows standard spoken language normally encountered in his/her field of specialization.	6.5	B2
250-290	C		6.0	
200-240			5.5	
100-190	D	Can maintain some interaction and understand straightforward factual information in his/her field of specialization, but may ask for clarification. Frequent errors, inaccuracies and mis- or overuse of technical language can cause strain in communication.	<5.5	--
0-90	E	Can manage simple interaction on familiar topics and understand the main point in short, simple messages, provided he/she can ask for clarification. High density of errors and mis- or overuse of technical language can cause significant strain & communication breakdowns.		--

As mentioned above, the multiple choice questions in Parts B and C of the Listening and Reading subtests are computer-scored. The Writing and Speaking subtests and Part A of the Listening and Reading subtests are scored by trained assessors. At least two different, randomly-assigned assessors score each candidate's response on these subtests. OET adjusts scores based on raters' patterns of severity or leniency (McNamara et al., 2019). If the two assessors' scores

do not match, or if an assessor has questions about how to rate a response, the task is referred to at least one additional senior assessor as well.

For Listening and Reading, scoring guides detail what and how much correct information must be included in a response to receive a given score. Writing and Speaking subtests are scored against “Assessment Criteria and Level Descriptors” updated in 2019 and 2018, respectively (CBLA, n.d.). Five Writing subtest criteria are scored from 0 to 7: Content, Conciseness & clarity, Genre & style, Organization & layout, and Language. A sixth criterion (Purpose) is scored from 0 to 3. Scores on the Speaking subtest are based on four linguistic criteria rated from 0 to 6 (Intelligibility, Fluency, Appropriateness, and Grammar & expression), and on six clinical communication criteria rated from 0 to 3 (Relationship building, Understanding & incorporating the patient’s perspective, Providing structure, Information gathering, and Information giving). These criteria scores are then converted to the test taker’s final reported subtest score.

Importantly, OET does not disclose the specific calculations used to relate criteria scores to the reported numeric subtest scores or letter grades. OET does state that in order to receive a 350/B on Writing or Speaking (commonly set as the cut score by decision-making bodies), the test taker must achieve “a high level of performance on all...criteria” and that “Test-takers securing grade B will have achieved predominantly scores of 5 out of 6 on each linguistic criteria and 2 out of 3 for the clinical communication criteria” (CBLA, n.d.).

COST AND PUBLISHER

The OET registration fee is quite high, at US \$455 / AU \$587 as of May 2023. CBLA does not publish decision factors behind setting this high fee. All four subtests include at least one part scored by two or more human assessors, and trained interlocutors are necessary for the Speaking roleplays. These would contribute to cost; still, other English proficiency tests incorporate these same features without such high fees. OET takers may also elect to take individual subtests, at a fee of AUD \$200.50 for one, AUD \$399.00 for two, or AUD \$477.50 for three (CBLA, n.d.). Again, OET does not dictate whether candidates should only be evaluated based on scores received on all four subtests in a single sitting, or may substitute individual section scores by

retaking a section or sections. As with setting a cut score, these determinations are left to the decision-making bodies accepting OET (CBLA, n.d.).

Cambridge Boxhill Language Assessment (CBLA) publishes the OET. The OET Centre is based in Australia, with collaboration from Cambridge Assessment English, the Australian Research Council, and the University of Melbourne. The Cambridge English Language Assessment Research and Validation team develops the listening and reading portions, while speaking and writing materials are developed by OET test writers. Contact information:

The OET Centre	AUS +61 3 8658 3963
PO Box 16136	UK +44 1202 037333
Collins St West VIC 8007	USA +1 855 585 0125
Australia	www.occupationalenglishtest.org

Validity

In part, validity asks whether a test measures what it purports to measure, in its specific context and for its intended use (Brown, 2005; Chapelle, 2012). OET states that “successful OET learners have the English language and clinical communication skills to provide high quality and safe patient care” (CBLA, n.d.), and scores are used to make decisions about who may study and work in healthcare in English-speaking settings. To support the validity of using OET scores in this way, evidence should suggest that those scores indeed reflect test takers’ linguistic abilities within the target healthcare context; that OET reliably provides consistent results; and that decisions based on the scores successfully identify professionals who can deliver care in English.

The strongest factors in support of an OET validity argument are its publisher’s ongoing efforts to create items that reflect language use in the target healthcare context, and to produce scores that suggest how successfully test takers will communicate in English in the healthcare workplace. Questions remain about statistical evidence for reliability and benchmarking with other established measures. Additional data are needed to evaluate the effects of OET’s 2018 and 2019 Speaking and Writing rubric revisions.

Support

OET is definitively a test of English for a specific purpose, and OET designers appropriately strive to approximate real-world language use within a health domain. From its initial development, OET applied linguists collaborated with supervisors of international healthcare providers to craft criteria and scoring based on their evaluation of language levels necessary to provide safe care (McNamara, 1996). Accordingly, Speaking roleplays simulate clinical visits. Listening and Writing sections, wherein test takers review audio or written texts and compose case notes and letters, reflect real daily work responsibilities. UK NARIC notes that the OET Listening items “reflect authentic features through use of pace, emphasis, digressions and accents and, as such, are well selected to reflect real life communication within a healthcare setting” (Coleman, 2019). OET Reading tasks draw on a range of typical medical-domain texts, ranging from technical reports and journal articles to hospital memos and emails. These materials are well suited to OET’s specialized purpose, supporting content validity because test items are similar to real-world tasks. Test takers can expect to be familiar with the situations and documents from work experience, and decision-makers can expect that scores reflect candidates’ use of English in healthcare scenarios, albeit simulated.

Equally important for validity, OET emphasizes that it does not test medical competency outside of language. OET designers take care to avoid questions that rely on understanding a certain disease or treatment plan, or that would privilege test takers who happen to have that expertise. This supports OET’s claim to assess language proficiency and not something else. For example, Listening and Reading sections are not specialty-specific, but use general medical and health-related topics and materials “to test language knowledge and ability over and above the candidate’s knowledge of that field” (CBLA, n.d.). The Writing and Speaking sections purposefully present targeted materials based on the test taker’s profession, because different professionals “engage with...patients about different issues in different contexts.” Even in these profession-specific subtests, scores do not consider the quality of the test taker’s medical assessments or diagnostics, but only their use of English to convey their messages. This is appropriate to an ESP test’s use for evaluating language ability only, within a target domain.

Validity also considers whether a test positively impacts those who take it (Chapelle, 2012). Prospective OET test takers are positively spurred to acquire domain-specific vocabulary, linguistic tools for structuring clinical visits, and letter- and memo-writing conventions in

English. OET linguistic criteria require successful test takers to command English grammar, pronunciation, and register, and its newer clinical communication criteria evaluate extra-linguistic skills such as demonstrating empathy and explaining medical terminology in lay terms for patients. These tasks are specific to successfully using English while providing care. Further supporting positive impact on test takers for this ESP test, Carr found that prospective medical practitioners “overwhelmingly prefer the OET” to IELTS, “rating it more achievable, more relevant, and more motivational than the IELTS” (Carr, 2021).

The OET uses a variety of item types to assess candidates’ language proficiency. This variety balances the ease and practicality of scoring selected response items, with the greater authenticity of extended production tasks, supporting validity. Item types including selected response (multiple choice, matching), limited production (gap-filling, short answer, sentence completion), and extended production tasks (letter writing, role plays) (Qian & Pan, 2013). Test takers also must demonstrate their ability in a variety of linguistic arenas even within a subtest (i.e., test takers must read in the Writing section, write in the Listening section, and Listen in the Speaking section). OET validity is supported by inclusion of these tasks that require candidates to interact with another speaker in real time, and write a document reflective of one they would write when working in healthcare.

OET’s rigorous scoring approach and attention to inter-rater reliability also lends support for validity. Other than the multiple-choice sections, each item is scored by two assessors who are randomly selected. If their scores do not match, the item is referred for re-scoring to a third rater. Further, OET assessors are “monitored for accuracy and consistency, and the scores they award are adjusted to take into account any leniency or severity” (CBLA, n.d.). Although OET does not release details on how these adjustments are calculated, these practices support inter-rater reliability, so that individual test takers will receive comparable scores regardless of which assessors are assigned to score them.

Beyond the test, for predictive validity, it is important to ask how well scores actually predict test takers’ successful use of English to perform real-life language tasks. OET’s ongoing approach to test development and revising rubrics based on what is important to actual health practitioners also supports its validity as an ESP test. Over time, OET received feedback that test takers who scored high on the Speaking subtest often struggled with communication in the workplace (Vidaković & Khalifa, 2013). OET launched a research project in the early 2000s to

evaluate and refine its own evaluation criteria, demonstrating active response to criticism and a commitment to improvement.

OET's research program explored the test's validity by comparing evaluations from applied linguists and OET assessors with those of and healthcare practitioners with domain knowledge (Manias & McNamara, 2016; T. McNamara et al., 2018; Pill, 2016; Pill & McNamara, 2016; Séguis & McElwee, 2019). As part of that project, Elder et al. (2012) asked practicing doctors, nurses, and physical therapists to comment on what they found relevant about language use in clinical roleplays. The researchers identified themes such as logical question structuring, asking open-ended questions, explaining medical terminology in lay terms, and showing sensitivity to patients (Elder et al., 2012). These concepts were absent from the then-current OET Speaking criteria, which were at that time limited to linguistic skills only. Using only linguistic scoring criteria might be more appropriate for an overall language proficiency test, but left an evaluation gap in this ESP test.

Based in part on these studies, OET added new Clinical Competence criteria to the Speaking subtest in 2018 with the goal of reflecting what health professionals and supervisors perceive as important to effective workplace communication. In order to evaluate whether language experts and health professionals perceived these criteria comparably, OET asked senior assessors and eight healthcare domain experts to use them to evaluate the same OET Speaking test recordings from test takers who had received a range of proficiency scores (Séguis & McElwee, 2019). Participants gave individual criteria scores, an overall score, and chose a threshold recording of the “worst” performance that they deemed “minimally acceptable.” The senior OET assessors and the healthcare professionals agreed strongly on all of these, lending initial support to Speaking scoring validity under the revised criteria (Séguis & McElwee, 2019).

Separately, Davidson recruited 18 medical professionals for standard-setting workshops and think aloud protocols to elicit what they find important in evaluating OET Writing samples (2022). Overall, their responses aligned with the OET Writing subtest criteria at the time of the research in early 2019. OET has since revised those five Writing criteria into a new set of six, based on CBLA's separate research program. OET's 2019 revision seeks to improve these Writing criteria that Davidson found already showed strong evidence of reflecting professionals' priorities when evaluating medical writing.

Questions

OET’s efforts to continually review, revise, and improve belong in the “Support” section, above. However, because few studies are yet available assessing the 2018 and 2019 revisions to the Speaking and Writing criteria, the success of these revisions remains a question. Overall, having access to additional scoring and results details that OET keeps confidential would provide a further basis for discussing OET validity.

As described under “Scores,” OET does not publish calculations for how it translates a test taker’s individual criteria ratings into a final subtest score. This makes it difficult to evaluate these procedures. Nor does OET define a cut score for any of its sections, leaving this up to decision-makers who use the test. In 2023, OET published a table of reliability calculations for 2021 scores. Replicated in Table 3 below, the OET website report notes, “The reliability of the Listening and Reading sub-tests is reported using Cronbach Alpha, and the reliability of the Writing and speaking sub-tests is reported using Spearman Reliability” (CBLA, 2023). No further details are presented of how these reliability coefficients were developed, including methodology, sampling, or calculations.

Table 3

OET-reported subtest reliability for 2021 test results

Subtest	Overall Reliability
Listening	0.81
Reading	0.83
Writing	0.77
Speaking	0.79

In general, target reliability coefficients are 0.8 or higher for high stakes tests, and 0.9 for professionally-developed high stakes standardized tests such as OET. These OET-reported reliability coefficients for 2021 are on the low side of acceptability for a high stakes test, with Writing and Speaking scores falling below the minimum 0.8 threshold. Given that reliability is a prerequisite for validity, this raises important questions about OET as a professionally-developed standardized test.

In the Speaking subtest, there is also a question of score comparability because “Different role-plays are used for different candidates at the same test administration” (CBLA, n.d.). Though this is likely due to test security, no explanation is provided of why this choice has been

made or how scenarios are distributed. This differential application of prompts would be especially concerning if the test were more strictly norm-referenced, if candidates were scored in comparison to how others performed on the same day. Still, different candidates may receive Speaking prompts of varying difficulties, which would affect score comparability.

Regarding linguistic-specific skills only, CBLA publishes benchmarks of OET against CEFR and IELTS Academic bands as a reflection of general English language proficiency (see Table 1) (CBLA, n.d.). However, whether these are entirely comparable is unclear. In 2019, UK NARIC evaluated OET assessments and test taker samples against CEFR bands and benchmarked A/B/C OET ratings with CEFR levels C2/C1/B2, respectively (Coleman, 2019). CEFR may provide a more useful comparison than IELTS. Lim compared the scores of test takers who took both the OET and IELTS Academic in 2013, to benchmark the scores and calculate correlation. Correlations were only around 0.50 for most subtests, and even lower for Writing at 0.36 ($p < 0.01$). Lim wrote in partial explanation, “As this data shows, the two are not entirely comparable, for entirely expected reasons” (2016), namely, that IELTS Academic and OET are targeted to different target language use contexts (general academia vs. working in a medical setting). Still, Lim’s findings in part led OET to revise its scoring system to better align Reading and Writing B scores with IELTS, and to include another score option (inserting C+) to improve granularity of information about test takers in the B-C range (Lim, 2016). An updated correlation study would be instructive, especially after the 2018 and 2019 OET revisions.

While OET Writing and Speaking criteria were revised, there remains a risk of negative washback during test preparation for the Writing and Speaking sections especially. Test takers may achieve high scores by memorizing key phrases and structures that fit the criteria, which they may use during the test without complete understanding or command of the target ability (Séguis & McElwee, 2019). OET weighted the new Speaking criteria in part to minimize this, but analysis is needed to understand the effects and success of the weighting.

Further, there may remain opportunities to improve prompts and interlocutor training for Speaking. In 2016, Woodward-Kron & Elder compared OET Speaking roleplay recordings with the same test takers’ performances on a different Australian test designed to evaluate medical competence only (the Objective Structured Clinical Examination, or OSCE). These researchers discussed threats to OET authenticity and reliability, such as an overly short time limit (five minutes), too little use of lay terms and over-use of formal language not reflective of real patient

speech, and the “unnaturally cooperative behavior” of the trained interlocutors (Woodward-Kron & Elder, 2016). They suggested revising the roleplay prompts and interlocutor training to bring the OET Speaking test more in line with observed OSCE performances. This study was part of OET’s revision research program described under “*Support*,” but it is unclear whether OET revised prompts or interlocutor training, and the Speaking roleplays still comprise five minutes.

Finally, one question raised by the Listening subtest is that materials are read in a range of accents, and test takers may encounter any of them, including British, American, Australian, or any other global English. It could also be argued (and OET does) that this supports validity, as it is intended to “reflect the global nature of the healthcare workforce” (CBLA, n.d.). Indeed, it is a healthcare reality that practitioners will encounter patients who speak any number of Englishes (or no English). Still, for the purposes of OET applicability, it might be relevant for test takers to hear selected accents depending on where they intend to practice, so decision-makers understand on which accent(s) a given candidate’s Listening scores are based. Further, OET currently only includes accents representing these “inner circle” Englishes, which does not truly represent the full breadth of language that health care providers will encounter in practice. An open question is how to appropriately design a language test for caregivers who will need skills to communicate and negotiate meaning with patients from a range of English backgrounds and proficiency levels.

CONCLUSION

It is critically important that healthcare professionals are able to use language to safely perform their work. OET’s emphasis on developing authentic materials and scoring methods in close collaboration with practicing healthcare professionals support its use as an ESP test in this high-stakes decision. OET’s variety of item types, each based on real daily tasks of a working healthcare professional, mean test takers and decision-makers alike can expect to be familiar with the situations, texts, and scenarios being tested. From the perspective of decision-makers, an ESP test such as OET is assumed to be a better predictor of domain-specific English usage than a general English proficiency test because “neither command nor fluency of a standard language guarantees success in specific contexts such as medicine” (Hull, 2016).

While many of the published studies on OET were conducted by researchers at the University of Melbourne, the birthplace and ongoing primary contributor to the OET, their outright goal for conducting these research programs is to improve the test (rather than “simply” validating or supporting it). In general, OET’s constant efforts to evaluate the test suggest its designers sincerely strive for continuous improvement. Evidence in support of OET validity include this continuous review to ensure the materials and tasks reflect the target language use domain. OET’s research-based revisions focused on how test takers eventually perform and are perceived by others working in the real-world healthcare context. Still, in the absence of publicly available data, questions remain about reliability of OET scores across test takers and administrations. Specifically, new data and updated analyses are needed in order to evaluate whether and how well 2018 and 2019 revisions support the validity of using OET scores to predict test takers’ communicative ability in English in real clinical workplaces.

REFERENCES

- Brown, J. D. (2005). *Testing in language programs: A comprehensive guide to English language assessment* (1st ed.). McGraw-Hill.
- Carr, A. (2021). OET vs IELTS: Finding the Most Appropriate Way to Test Language Skills for Medicine. *ESP Today*, 9(1), 89–106. <https://doi.org/10.18485/esptoday.2021.9.1.5>
- CBLA. (n.d.). *OET - The English Language Test for Healthcare Professionals*. OET - Occupational English Test. Retrieved February 5, 2022, from <https://www.occupationalenglishtest.org/>
- CBLA. (2020). *Factsheet: Information for OET candidates (V4.0)*. Retrieved July 12, 2023 from https://prod-wp-content.occupationalenglishtest.org/resources/uploads/2020/01/24145449/FAC_INF_060819.pdf
- CBLA. (2023). *Test statistics: Test performance 2021*. Retrieved July 11, 2023 from <https://www.oet.com/discover/about-oet/test-statistics>
- Chapelle, C. A. (2012). Conceptions of validity. In G. Fulcher & F. Davidson (Eds.), *The Routledge handbook of language testing* (pp. 21–33). Routledge.

- Coleman, M. (2019, July 17). *New report compares OET to international standard of language ability*. OET - Occupational English Test. <https://www.occupationalenglishtest.org/oet-benchmarked-to-cefr/>
- Davidson, S. (2022). The domain expert perspective: A qualitative study into the views expressed in a standard-setting exercise on a language for specific purposes (LSP) test for health professionals. *Language Testing*, 39(1), 117–141. <https://doi.org/10.1177/02655322211010737>
- Educational Commission for Foreign Medical Graduates. (n.d.). *ECFMG Requirements For Certification*. Retrieved February 13, 2022, from <https://www.ecfmg.org/certification/requirements-for-certification.html>
- Elder, C., Pill, J., Woodward-Kron, R., McNamara, T., Manias, E., Webb, G., & McColl, G. (2012). Health Professionals' Views of Communication: Implications for Assessing Performance on a Health-Specific English Language Test. *TESOL Quarterly*, 46(2), 409–419. <https://doi.org/10.1002/tesq.26>
- Hull, M. (2016). Medical language proficiency: A discussion of interprofessional language competencies and potential for patient risk. *International Journal of Nursing Studies*, 54, 158–172. <https://doi.org/10.1016/j.ijnurstu.2015.02.015>
- Lim, G. S. (2016). *The Occupational English Test and IELTS: A Benchmarking Report* (p. 9). Cambridge Assessment English. occupationalenglishtest.org/research
- Manias, E., & McNamara, T. (2016). Standard setting in specific-purpose language testing: What can a qualitative study add? *Language Testing*, 33(2), 235–249. <https://doi.org/10.1177/0265532215608411>
- McNamara, T. (1996). *Measuring second language performance*. Longman.
- McNamara, T., Elder, C., Flynn, E., Knoch, U., Manias, E., Woodward-Kron, R., & Yahalom, S. (2018). Cross-disciplinary collaboration in research on a specific-purpose language test in the healthcare setting. *Journal of Applied Linguistics and Professional Practice*, 13(1–3), 189–210. <https://doi.org/10.1558/japl.31857>
- McNamara, T., Knoch, U., & Fan, J. (2019). *Fairness, justice, and language assessment: The role of measurement*. Oxford University Press.

- Pill, J. (2016). Drawing on indigenous criteria for more authentic assessment in a specific-purpose language test: Health professionals interacting with patients. *Language Testing*, 33(2), 175–193. <https://doi.org/10.1177/0265532215607400>
- Pill, J., & McNamara, T. (2016). How much is enough? Involving occupational experts in setting standards on a specific-purpose language test for health professionals. *Language Testing*, 33(2), 217–234. <https://doi.org/10.1177/0265532215607402>
- Qian, D. D., & Pan, M. (2013). Response Formats. In A. J. Kunnan (Ed.), *The Companion to Language Assessment* (pp. 860–875). John Wiley & Sons, Inc.
<https://doi.org/10.1002/9781118411360.wbcla090>
- Séguis, B., & McElwee, S. (2019). Assessing Clinical Communication On The Occupational English Test. In S. Papageorgiou & K. M. Bailey (Eds.), *Global Perspectives on Language Assessment* (1st ed., pp. 63–79). Routledge.
<https://doi.org/10.4324/9780429437922-5>
- The Official Guide to OET* (1st ed.). (2018). Kaplan Publishing.
- Vidaković, I., & Khalifa, H. (2013). Stakeholders' perceptions of the Occupational English Test (OET): An exploratory study. *R E S E A R C H*, 54, 4.
- Woodward-Kron, R., & Elder, C. (2016). A comparative discourse study of simulated clinical roleplays in two assessment contexts: Validating a specific-purpose language test. *Language Testing*, 33(2), 251–270. <https://doi.org/10.1177/0265532215607399>

A SHORT PAPER ARGUING FOR WORKING PAPERS AS A PLATFORM FOR SCHOLARLY DEBATE

RICKEY LARKIN

University of Hawai‘i at Mānoa

MICHOL MILLER

University of Hawai‘i at Mānoa

ABSTRACT

Despite calls for shorter papers, many of our journals in applied linguistics still require lengthy minimum word requirements. In this short paper, we argue that departmental working papers may be the home needed for shorter scholarly opinion driven articles. We outline seven reasons for this and argue that we may benefit open science initiatives by utilizing working paper publications as such.

Keywords: working papers, applied linguistics, scholarly debate, opinion articles

Working papers ought to be used for scholarly debate. Some major publications in applied linguistics solicit opinion pieces and invite authors to submit shorter, opinion-based pieces on professional, pedagogical, and research-related issues. For example, *ELT Journal's Comment* invites authors to write personal and possibly controversial essay-style pieces on professional issues in the field up to 1,000 words long, while *TESOL Quarterly's Research and Teaching Issues* accepts submissions up to 3,400 words that discuss contemporary theoretical, technical, or pedagogical topics. Calls for shorter papers have been made in our field as a way to more effectively engage both writers and readers without draining precious intellectual energy, and in turn improve knowledge dissemination (Krashen, 2012). While some regional journals have heeded these calls (e.g., Adamson & Nunn, 2021), most major journals have yet to adopt guidelines for shorter papers.

At the same time, departmental working papers in applied linguistics are in a strange place. In this era of hyper-competitive scholarship, where publication count primarily contributes to job placement, one might be hesitant to publish in a working paper publication. This is due to the fact that most journals require the author to not have submitted their manuscript elsewhere in *any* form. Furthermore, as scholars are under pressure to produce polished research manuscripts for the highest-impact journals, less of their focus is available for producing informative written work that is accessible and relevant to the everyday realities of classroom teachers. This in turn has led to the ‘researcher-practitioner divide’, a situation exacerbated by an over-emphasis on lengthy, jargon-filled publications that may not even be physically accessible to teachers without institutional access to major research databases (McKinley, 2019). Writing a short, persuasive piece in an open-access working paper publication represents an opportunity for upcoming scholars to help bridge this gap. Thus, it is clear that working paper publications in our field are being under-utilized.

Here at SLS Working Papers, we have recently added opinion pieces to our call for submissions. There are a number of reasons why working paper publications make sense for these types of papers:

1. Working paper publications typically utilize internal reviewers. These reviewers can attest for the logical, well-written, and formatted standards that are needed for scholarly opinion pieces.
2. Working paper publications are normally in-house, which allows them to be more receptive to undergraduate and MA level work. This in turn allows for voices and arguments from a wider range of developing scholars to find a home.
3. As in-house publications, working papers can provide a unique space for departmental debates and calls for change. This gives students an opportunity to express their desires in a public and institutionally supported way, such as arguments regarding curriculum change or departmental policies.
4. An influx of articles into working paper publications can revitalize the space and encourage more lively and robust scholarly debate.

5. Working paper publications can create an environment for scholars in a department to form a ‘school’. That is, it provides an avenue for theoretical, political, or goal-oriented works that, together, are greater than the sum of their parts.
6. Working paper publications can serve as a safe space for early career scholars whose work may otherwise get picked up by predatory journals.
7. Academic publication is a capitalistic nightmare and grassroots resistance is necessary to overcome it. Working paper publications are typically open-access and are thus a viable means to support open science.

It is for these reasons that we encourage other working paper publications to send the call for short opinion pieces. We also strongly encourage both students and faculty in our own department to heed this call for shorter, thought-provoking argumentative papers that can spark the kind of lively scholarly debate that will drive our field forward.

REFERENCES

- Adamson, J., & Nunn, R. (2021). A Short Paper Proposing That We Need to Write Shorter Papers A response to Prof Stephen Krashen. *Middle East Journal of TEFL*, 1(1), 11-12.
- Krashen, S. (2012). A short paper proposing that we need to write shorter papers. *Language and Language Teaching*, 1(2), 38-39.
- McKinley, J. (2019). Evolving the TESOL teaching–research nexus. *TESOL Quarterly*, 53(3), 875-884.

**ANNOTATED SUMMARIES OF SECOND LANGUAGE STUDIES GRADUATE WORK AT THE UNIVERSITY OF
HAWAI‘I AT MĀNOA, 2022-2023**

MICHOL MILLER

University of Hawai‘i at Mānoa

The 2022-2023 academic year marked a return to normal after the disruption of the COVID-19 pandemic to our department’s research activities. This year a sizable group of hard-working graduate students completed their studies, and their scholarly papers and dissertations represent a significant contribution to a broad range of topics in second language acquisition, pedagogy, and use. To learn more about each project, all available scholarly papers and dissertations have been summarized below. PhD dissertations can be found on ScholarSpace at the University of Hawai‘i at Mānoa (<https://scholarspace.manoa.hawaii.edu>).

Graduation Term	Student Name	Degree	Title of Scholarly Paper (AGC, MA) or Dissertation (PhD)
Fall 2022	Zhong, ‘Crystal’ Jing	PhD	<i>What Gets Transferred in L3 Acquisition? Ditransitives and Passivization of the Double Object Construction in L3 Mandarin</i> This experimental study focuses on the nature of transfer in third language (L3) acquisition with the contribution of new data collected from less commonly-studied populations of L3 learners, including L1Cantonese–L2English–L3Mandarin (CEM) learners and L1Korean–L2English–L3Mandarin (KEM) learners of Mandarin Chinese. The work provides an up-to-date overview of contemporary models of L3 acquisition,

			including the <i>L1 Status Factor</i> , <i>L2 Status Factor</i> , <i>Typological Primacy</i> , <i>Scalpel</i> , and <i>Principal Language of Communication</i> models, and explores the influence of L2 proficiency on the source of transfer to the L3. Study participants completed acceptability judgement tasks in both their L2 and L3 Mandarin, and five linguistic phenomena were tested, including the Double Object Construction, the Prepositional Dative Construction, the Reverse Prepositional Dative Construction, the Passivization of Recipient, and the Passivization of the Theme. Results indicate that, for these learners, the L1 is the source of transfer, providing support to the <i>L1 Status Factor</i> and <i>Typological Primacy</i> models. Furthermore, no significant correlations were found between L2 proficiency and the source of L3 transfer.
Spring 2023	Diez Ortega, Maria	PhD	<i>Collaborative Gaming in L2 Spanish: The Impact of Playing a Task-Based Digital Game on Beginner Learners' Language Development</i>
Spring 2023	Ho, Kendi	PhD	<i>Health Communication in Home Care for Elders in Hawai'i</i>
			This dissertation focuses on the intercultural communicative practices of multilingual caregivers of elders and their families in institutional settings in Hawai'i. Mixed method research was used to explore the perceptions of stakeholders of the communication of multilingual care workers through sequential exploration of qualitative and quantitative data. Qualitative data triangulation of 40 semi-structured interviews, four home observations, and four stimulated recalls was carried out through thematic content and discourse analysis. Results showed that successful multilingual care workers employed

sociopragmatic strategies to manage rapport and and the local cultural order through the use of Pidgin, the local insider language and build solidarity for more effective outcomes. Based on the qualitative data analysis, items for an initial survey were designed to investigate six constructs: care, appropriate assessment, professional competency, rapport management, cross-cultural communication, and language choice/prosody, to identify salient communicative activities for a second survey. The study contributes to limited available research on therapeutic home care communication of multilingual care workers, and results indicate that care workers and elders orient to multiple levels of context in daily activities. Furthermore, the integration of qualitative and quantitative data analysis, as well as consultation with stakeholders during each phase of instrument development, increased the validity and relevance of survey items. Finally, implications of this study indicate the need for language curriculum designers and instructors to consult with domain experts when developing English for Medical Purposes language programs.

Spring 2023	Liu, Yang	PhD	<i>Let's Go! Learning Chinese with a Place-based Mobile Game</i>
-------------	-----------	-----	--

This study describes the creation and implementation of a place-based augmented reality (AR) mobile game for Chinese as a Second Language (CSL) learners at Peking University. Students' gameplay sessions were video-recorded during a seven-week course and Multimodal Conversation Analysis was used to analyze mobility, temporality, and engagement with objects in interaction. The analysis focused on three recurring activities, including collaborative reading of instructions and dialogue in the

			game, approaching passers-by to participate in the game, and experiencing places through social interactions. Findings demonstrate that study participants managed multiple devices together as a group to complete the tasks in the game, especially when moving from one place to another, and also engaged with linguistic resources in the game text as learning objects. Students also demonstrated increasingly developed linguistic and semiotic resources over the seven-week course when formatting actions, including self-introduction and activity explanation. The work contributes a model for designing, developing, and implementing a mobile AR game, and new insight on game-based L2 learning and interaction.
Spring 2023	Schwartz, Bethany Faye	PhD	<i>Language Use and Code-Shifting Among Pidgin (Hawai‘i Creole) Speaking Children</i> This work examines the use of Pidgin (Hawai‘i Creole) by bidialectal/bilingual children in Hawai‘i and consists of two related studies exploring the morphosyntactic features of Pidgin, as well as how children’s use of Pidgin varies across different interlocutors and tasks. In the first study, adult Pidgin speakers rated audio story retell recordings of K-3 children in Hawai‘i from a corpus of previously collected data to determine the best samples for morphosyntactic analysis. Analysis of those samples indicated that Pidgin-speaking children may not produce classical Pidgin features when speaking with unfamiliar adults, and that certain non-standard forms may be characteristic of children’s typical Pidgin usage, rather than developmental English usage. In the second small-scale study, language samples from 14 Hawaiian children were collected across two tasks, story retell and play-based conversation, in two contexts, an English context

			with White English speakers and a Pidgin context with Local Pidgin speakers. Analysis of the mean Pidgin feature use, or Pidgin Density Measure (PDM) demonstrated a positive trend between higher PDMs during story retell tasks in the Pidgin context, as well as a positive correlation between mean PDM and current Pidgin exposure as estimated by parents. Overall, the study contributes tentative evidence that child speakers of Pidgin adapt their language use to the situational context and provides a more detailed description of child Pidgin than was previously available.
Spring 2023	Bertulfo, Maribel	MA	<i>Critical Pedagogy for Filipino Heritage Learners in Hawaii</i>
Spring 2023	Chen, Pinzhen	MA	<i>Translanguaging Practices in a Chinese Language Classroom in Hawaii</i>
Spring 2023	Coney, Nicholas	MA	<i>Examining English Proficiency Tests and Cut Scores across R1 University Admission Policies</i>
Spring 2023	Guevarra, Krissa Mae	MA	<i>Roles of Two Assistant Language Teachers in their Teaching Journey: A Narrative Analysis</i>
Spring 2023	Nguyen, Hoan	MA	<i>Facilitative Use of Classifiers in Heritage Vietnamese</i>
Spring 2023	Park, Seulji	MA	<i>Challenges for Teacher Professional Development: Reality of Collaborative Professional Learning Community in South Korea</i>
Spring 2023	Skaggs, Keilyn	MA	<i>Needs Analysis: Potential English Language Program for Caregivers of K-8 Students</i>

Spring 2023	Eastman, Lydia	AGC	<i>Identity and Social Media Interactions between L1 and L2 Spanish Speakers: The case of Reddit Postings</i>
			This study investigates how Spanish-speaking social media users present their identities in the anonymous digital setting of Reddit. The investigation focused on users of the subreddit r/Spanish, dedicated to discussions on Spanish language learning, pragmatics, and metalinguistic explanations of Spanish among both L1 and L2 speakers. The study was informed by digital discourse and pragmatics and analyzed two Reddit postings and discussions between posters. Results demonstrated how users utilize personal user flair, discourse, cyber pragmatics, and digital resources to present their online identities, and contribute to academic works on the pragmatics and spontaneous digital discourse of language learners.
Summer 2023	Bacchus, Laura	MA	<i>Affordances of Twitch for Language Learning</i>
Summer 2023	Downes, Lori	MA	<i>How Have Language Learning Journals Responded to the Replication Crisis?</i>
Summer 2023	Doyama, Akiko	MA	<i>Implementing Global Englishes Activities into an EAP Classroom</i>
Summer 2023	Hannah, Nicole	MA	<i>A Singer's Privilege?: A Study on Learning Pronunciation through the Lenses of a Singer</i>
Summer 2023	Iida, Chisae	MA	<i>The Effectiveness of One-on-One Teaching English Pronunciation for an Adult Japanese English Learner</i>

			This experimental investigation focused on the effects of one-on-one pronunciation training on the productive accuracy of English phonemes, comprehensibility, and accentedness of an adult Japanese English learner. The intervention was designed to enhance comprehensibility and speech accentedness through explicit instruction addressing segmental and suprasegmental features and totaled 16 hours of intensive English pronunciation instruction. Results showed improvement in accentedness and comprehensibility, but phonemic production did not improve across all target sounds. The study contributes insights on the effectiveness of targeted one-on-one pronunciation tutoring, and indicate that explicit instruction and consistent practice can lead to gains in comprehensibility and accentedness.
Summer 2023	Itakura, Naoki	MA	<i>Audience Members as Language Brokers in Live-Streamed Gaming Session</i> Through Multimodal Conversation Analysis, this paper explores the concept of language brokering between a focal live streamer and audience participants who help the streamer participate in ongoing interactions. The analysis demonstrates how live chat messages enable the streamer to manage oral interactions with other players, by soliciting repair or directing his gaze to the chat where audience members act as language brokers. Multimodal and multilingual practices such as codeswitching and English translation are employed by participants in the live streaming event. This paper contributes to the body of work investigating digital interactions with both oral and written communication through multimodal analysis.
Summer 2023	Kanehira, Homare	MA	<i>Needs Analysis of Business English Users in Japan and Korea</i>

Summer 2023	Livingston, Cassidy	MA	<i>L2 Learners' Perception of Long Vowels and Germinates in Japanese Dialects</i> This experimental study investigates the relationship between learners' perceptual accuracy of Japanese phonological features, including germinates and long vowels, and the influence of different Japanese dialects, including Standard, Okinawa, and Kansai dialects. Participated completed two transcription tasks of nonwords in Hiragana; nonwords included a long vowel, germinate, or minimal pairs with vowels and singletons. Results were analyzed with R through mixed-effects logistic regressions, and indicated that learners' perceptual accuracy dropped when transcribing nonwords containing long vowels. Learners' perceptual performances were not affected by differences in dialect.
Summer 2023	Napoleon, Noelani	MA	<i>Reclaiming the "True" Hawai'i in a Podcast: A Discourse Analysis of Decolonial Practices</i> This study investigates the discursive practices of two diasporic Hawai'i locals through the analysis of a podcast, and seeks to answer the question, "How do Hawai'i locals discursively reclaim and decolonize Hawai'i history and practices from the continental United States?" Through the lens of discursive tools focusing on the tactics of intersubjectivity, results showed that the two podcasts hosts utilized their social identities to assert their authority and reject colonial narratives, through epistemic, dialogic, and affective stance-taking. The findings contribute to studies on the discourse of decolonial efforts in Hawai'i.

Summer 2023	Roos, Sachiko	MA	<i>Language Use of Japanese-English Bilingual Families and Association with Children's Oral Proficiency in Heritage Japanese</i> This experimental study focuses on the relationship between proximal and distal input factors influencing the development and maintenance of the oral and lexical proficiency of Japanese heritage language learners. Study participants included 21 children belonging to Japanese-English speaking bicultural families in Hawai'i and Washington. Participants completed an oral picture naming task and a semi-structured interview about their family language use. Mothers and fathers of the children completed online surveys about family language use and other factors influencing their children's language acquisition. Results demonstrated consistency in reciprocal language use between children and parents, such that the quantity of parental language output was positively correlated with children's oral lexical proficiency.
Summer 2023	Wu, Jieying	MA	<i>Expertise in Action: Explaining Technical Terms in Expert Witness Testimony under Direct Examination in a Courtroom</i>
