

Imaginal and Virtual Reality-based Public Speaking Practice for Communicating with Intercultural Audiences

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Abstract: For students within foreign studies departments at the tertiary level, presentations in both their first and second languages have become integral components of course work, and therefore public speaking anxiety may hinder the pursuit of second language acquisition and intercultural communication competence. More effective methods for combating this problem must be developed, and exposure training (using both virtual and imagined practice) has been shown as effective for anxiety reduction related to public speaking. However, whether increasing intercultural public speaking confidence may also aid in reducing foreign language learning anxiety remains an ongoing question. University students in Japan (n=20) underwent a training program which featured VR-based and imaginal public speaking practice in front of intercultural audiences. Results indicate that public speaking anxiety levels were reduced by significant levels; however, only VR-based practice helped reduce foreign language anxiety significantly. Interviews showed the program was considered effective overall by the majority of participants.

Keywords: Public speaking anxiety, intercultural communication, foreign language classroom anxiety, exposure therapy, virtual reality, presentation skills training, mindfulness

Many types of anxiety can influence students at the tertiary level who are pursuing efforts to acquire a second language, including intercultural communication apprehension, public speaking anxiety, foreign language anxiety, and more. The presence of these anxieties can have a profound impact on the classroom success of university students and on their ability to function during future employment (Broeckelman, Johnson, & Schwebach, 2016). Anxiety is the most commonly diagnosed psychological disorder in many parts of the globe, and great efforts have been made in recent decades to offer solutions to students as well as members of the general public (Wiederhold & Bouchard, 2014). Public speaking anxiety, one of the many types of specific social anxiety disorders, is pervasive in society (Dwyer & Davidson, 2012), and when combined with the foreign language classroom anxiety that often accompanies learning a second language (Horwitz, Horwitz, & Cope, 1986), university students can often face debilitating levels of communication-related apprehension.

Culture can play a large part in this apprehension (Thompson & Lee, 2014). Japanese students' communication apprehension related to second language use has been shown to be negatively correlated with second language communication confidence, which in turn has a strong influence on their willingness to communicate in that language (Yashima, 2002). Therefore, anxiety about using a foreign language directly affects Japanese people's desire to speak and communicate in that language. In addition, Japanese students are particularly reserved in front of strangers, following their cultural norms for self-presentation as evidenced by the adage, "The nail that sticks out gets hammered down" (Markus & Kitayama, 1991). Indeed, studies have revealed that the use of silence (as a result of communication apprehension or concerns about politeness during spoken foreign language usage) is a common face-saving technique used by Japanese students in university foreign language classrooms, and that this use of silence is often viewed negatively by non-Japanese instructors, ultimately interfering with the building of classroom rapport and students' ability to perform well in speaking

activities (Nakane, 2006). With an emphasis on general communication skills and foreign speaking proficiency in Japanese schools increasing, anxiety-reduction techniques are particularly important. Therefore, new and more effective methods of combatting this problem must be developed for the classroom and beyond.

Extensive research has been conducted related to how students' attitudes toward foreign cultures and intercultural communication situations affect willingness to communicate and feelings of uncertainty during conversations in a foreign language (Yashima, 2002; Neuliep, 2012). However, more must be done to investigate how training for public speech acts directed at intercultural audiences might aid in the process of reducing anxiety related to the pursuit of foreign language education and communicating with foreign nationals.

This paper describes a study in which methods aimed at reducing public speaking anxiety in students within university foreign language departments were implemented within a month-long intensive program, informed by earlier studies that used both technological and non-technological interventions (Safir, Wallach, & Bar-Zvi, 2012; Anderson, et al., 2013). This program adopted a similar, multi-pronged approach to anxiety reduction common in modern therapeutic settings (Hofmann, Gutner, & Asnaani, 2012), and included exposure-based public speaking practice, education related to presentation skills and the causes of anxiety (both public speaking and foreign language education-related), journaling practices similar to cognitive behavioral therapy (CBT) methods, and mindfulness techniques. In order to aid in training for intercultural communication settings, public speaking exposure practice took place in front of intercultural audiences in either virtual or imagined settings. One aim of the study was to fill the gap in the literature related to the connections between public speaking anxiety and foreign language classroom anxiety in tertiary-level students in Japan, and whether intercultural communication-based presentation practice would influence feelings related to the acquisition of a second language as well.

1. Literature Review and Theoretical Framework

1.1 Communication Apprehension and Public Speaking Anxiety

Anxiety is defined as “the subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system” (Horwitz, Horwitz, & Cope, 1986, p. 125). Students may enter the classroom already suffering from a variety of anxiety types, including communication-related disorders (McCroskey, 1977). In the United States, many employers have informed universities that public speaking and communication skills should be a primary goal of tertiary-level education (Broeckelman, Johnson, & Schwebach, 2016), leading many instructors to now incorporate oral assessments and speaking activities into courses to a greater extent than in the past. Interventions for those people experiencing debilitating levels of communication-based anxiety are therefore increasingly necessary. In contrast, Japanese schools have yet to incorporate public speaking classes within their curricula to a large extent, and debating has just recently been recognized as an effective education tool (Okada, Sawaumi, & Ito, 2018).

Extensive research has been conducted on communication apprehension (CA), the anxiety related to interpersonal communication, and classroom communication anxiety (CCA) in the context of university courses (McCroskey, 1977). CA can negatively affect students' GPA, as well as their chances for success during later employment (McCroskey, Booth-Butterfield & Payne, 1989). Fortunately, methods have been developed to help alleviate CA and CCA, including better teacher clarity regarding instructions for course activities, the use of example answers to questions, and the use of name cards for eliciting student responses in a group (Broeckelman, Johnson, & Schwebach, 2016; Bodie, 2010).

Public speaking anxiety among university students appears to be as pervasive as levels found in the general population, with little difference between genders (Elkiran, 2021). Advice for educators in regard to teaching public speaking skills and helping to reduce students' public speaking anxiety is also available. Key techniques include showing the similarities between private speech and effective public speaking (Aruffo, 2015), how to best structure a talk and create supporting materials (Anderson, 2016), and how to emotionally self-regulate when experiencing public speaking anxiety (Esposito, 2000). However, research into the effects of teacher immediacy behaviors (both verbal and non-verbal) on the public speaking anxiety of students is mixed (Foutz, et al., 2021), and therefore an aim of this program was to empower students to reduce this anxiety for themselves through exposure, public speaking skills education, and at-home practice.

1.2 Foreign Language Anxiety and Willingness to Communicate in Intercultural Situations

For many university students studying a foreign language, communication apprehension toward public speaking may be occurring in addition to existing levels of foreign language anxiety toward the target language. Foreign language anxiety is a type of specific social anxiety, but is distinct from anxiety related to oral language performance in general (MacIntyre & Gardner, 1994). Although almost every language learner experiences some anxiety toward the learning process (Thompson & Lee, 2014), debilitating levels of foreign language anxiety affect learning success and can negatively impact class performance (Hewitt & Stephenson, 2012; Horwitz, 1986). Facilitating anxiety can also exist, helping to motivate learners and enhance language learning, although this can shift to debilitating anxiety given internal or context-related factors (Scovel, 1978).

In the last few decades, a new emphasis on speaking proficiency and face-to-face interaction has been placed on foreign language classrooms by the Japanese Ministry of Education (Yashima, 2002). Oral performance activities are associated with higher levels of anxiety in learners, which can hamper success with these tasks and assessments (Phillips, 1992). Self-confidence in foreign language ability is linked to higher levels of willingness to communicate (WTC) among Japanese students, and increased chances for speaking practice often lead to better language learning outcomes (Rubin & Thompson, 1994). Instructors should become better informed of what factors can contribute to communication apprehension in an English classroom in Japan, including students' feelings of competitiveness, perfectionism, need for face-protecting measures, preference for staying quiet in particular circumstances, and more (Matsuoka, 2008).

Along with emphasizing more active communication in English, the Japanese government is promoting its students to study abroad, affording them the opportunity to become immersed in a totally foreign (English-speaking) environment. Traditionally, Japanese students as a whole have shown little desire to study at overseas institutions, with currently only a third expressing interest in the idea, and only 4% actually attending study abroad programs ("Few Young Japanese Want to Study or Work Abroad", 2021). To counteract this trend, projects by the Japanese government including *Tobidate Nihon* (a subsidized study abroad exchange program) have been put into place (Rappleye & Vickers, 2015). All participants in this research program expressed some degree of interest in studying abroad during university, and participation in overseas programs has been shown to help reduce intercultural communication apprehension and increase levels of intercultural self-efficacy (Jing & Zhang, 2019). Lower levels of intercultural communication apprehension also correlated with more positive expectations for study abroad experiences, although higher levels were found to predict lower levels of satisfaction in intercultural communication situations (e.g., conversations with foreign

nationals) (Kim & Goldstein, 2005). Therefore, one aim of this study was to encourage students to participate in overseas programs (and continue their pursuit of second language acquisition) by training them to speak in intercultural communication situations.

1.3 Exposure Training for Public Speaking Anxiety Reduction

Extinction learning (the gradual weakening of conditioned responses) through exposure therapy techniques has become an important tool for anxiety reduction. Exposure is a “component of a treatment package in which the patient is educated about the disorder, prepared and provided with a rationale of the therapeutic change, and exposed to avoided and feared external and internal stimuli” (Neudeck & Wittchen, 2012, p. 26). Exposure therapy is one of the most empirically supported treatments for anxiety, and when done in conjunction with treatments that help patients challenge dysfunctional cognitions that cause anxiety-producing associations (using CBT techniques), this therapy can be highly effective (McMillan & Lee, 2010).

“Recovery” (negative reassociation of a stimulus and outcome even after extinction) is a possibility, and extinction learning is strengthened by the use of exposure in multiple contexts (Gunther, Denniston, & Miller, 1998). To reduce chances for recovery of fear associations, exposure training was conducted in this study using several different environments (classroom settings, home settings, and virtual settings) using a variety of exposure types (in-vivo, imaginal, and in-virtuo). Education regarding the connections between negative thinking patterns and anxiety was provided to participants, as well as lessons related to breathing techniques, attention-focusing techniques, and emotional regulation training through mindfulness meditation. Treatment programs using a multifaceted approach to anxiety reduction have been shown to be effective for many people and for many types of anxiety disorders (Hofmann, Gutner, & Asnaani, 2012).

1.4 Virtual Reality: Developments for Use in Anxiety Reduction and Speech Training

Virtual reality (VR) has slowly become an important tool in the effort toward anxiety reduction. VR is “a set of computer technologies, which, when combined, provide an interface to an interactive, computer-generated world” (Wiederhold & Bouchard, 2014, p. 3). Education researchers have been exploring how VR can be used as a language-learning tool and a medium for classroom tasks, and the wide-scale adoption of smartphone technology among students means that smartphone-based VR headsets can be used in many classrooms relatively cheaply and conveniently (Hastings & Brunotte, 2017).

VR-based therapeutic techniques have been used for decades by psychotherapists to effectively treat many types of disorders (Wiederhold & Bouchard, 2014). Evidence suggests that VR graded exposure therapy (VRGET) can be successful at combating generalized social anxiety disorder, and the specific social anxiety disorder of public speaking phobia, among other anxiety types (Bouchard, Bosse, Loranger, & Klinger, 2014). Early studies using VR to treat public speaking phobia showed evidence for reduced levels of anxiety following exposure to virtual audiences when compared to traditional exposure therapies or no treatment (North, North, & Coble, 1998; Harris, Kemmerling, & North, 2002), as well as improved levels of willingness to communicate, self-perceived communication confidence, and reduced communication apprehension among patients (Heuett & Heuett, 2011). More recent studies have used a combination of CBT and mindfulness training approaches along with VR-based exposure therapies, with similarly successful results (Safir, Wallach, & Bar-Zvi, 2012; Anderson, et al., 2013). In the study by Anderson and colleagues, participants joined either

individual or group exposure sessions using VR to practice public speaking, with significant reductions to anxiety for both groups compared to a control. However, further studies are required to show how these techniques will work with a Japanese population, and how exposure to intercultural speaking situations specifically will affect communication apprehension.

2. Research Questions and Hypotheses

Based on the findings synthesized from the literature review, the following hypotheses were formulated:

H1: The intensive exposure training program will result in a reduction in public speaking anxiety within participant groups from before and after the treatment.

H2: Exposure to public speech acts in front of intercultural audiences will result in a reduction of foreign language classroom anxiety within participant groups from before and after the treatment.

Likewise, from the literature review, the following research questions were proposed:

RQ1: What are the sources of Japanese university students' public speaking anxiety, and what are the possible connections between foreign language anxiety and public speaking anxiety for these students?

RQ2: How effective will participants find a short-term, intensive program focused on exposure training to intercultural audiences, presentation skills development, and mindfulness meditation for reducing public speaking anxiety?

3. Materials and Methods

3.1 Participants

Before recruitment began, ethics review procedures were completed at the institution where data were collected. Recruitment was conducted through posters placed around the university campus. The study aims were made explicit on the recruitment poster, and therefore student participants self-selected as experiencing public speaking anxiety and hoping to reduce this anxiety. A sample size of 20 participants was chosen due to the contact time required with each participant (six hours over four sessions) and available funding limits. All participants were drawn from the Department of Foreign Studies and the institution where data were collected. Due to the need for open access to educational resources at the host institution, the first 20 participants who volunteered were placed within the program. Participation was strictly voluntary and all participants were compensated monetarily for their involvement.

All participants were in their first or second year of university study, with a mean age of 19.3 years old. Self-reported gender was 85% female and 10% male, with one participant declining to report. Before the first research session, signed consent forms were obtained from all participants and from legal guardians (in the case of students under 20 years old). Issues related to informed consent, the ability to withdraw from the program, and permission for future publication were explained both verbally and in writing. Participants were placed randomly into the imaginal exposure group (n=10) or the VR-based exposure group (n=10) where program participation would differ only by the type of home presentation practice assigned.

3.2 Presentation Skills and Psychology Education

For this study an intensive (four-session) program was created in which educational materials related to public speaking anxiety were presented, and best practices for presentations were

taught. Within the program, participants engaged in CBT-based writing exercises, mindfulness meditations, breathing training, focused attention training activities, and more. These sessions involved in-person meetings with groups of participants, as well as home exercises and exposure practice based on materials presented in the live meetings. All course materials were presented in English (a second language of the participants whose proficiency levels were high enough to engage in this material), but for core concepts of particular importance, Japanese translations were provided (allowing for first-language support). Presentation skills training materials were based on the work of TED's Chris Anderson (2016), as well as the researchers' previous experience teaching public speaking methods, with examples of professional speakers and presentation materials explored and analyzed as a group. To allow for training within intercultural communication situations, presentation practice was conducted in front of either virtual or imagined intercultural audiences (see the *Exposure Training* section below).

CBT-related materials were based on the work of Beck (2011). Methods for identifying cognitive distortions (dysfunctional thinking related to speaking in intercultural communication situations) were taught, and participants spent several home research sessions writing about their thoughts related to public speaking and labeling distortion types from examples. The goal of these activities was to help empower participants to correct negative thinking connected with public speaking, and is recommended by exposure therapy practitioners as a crucial step in reducing anxiety (McMillan & Lee, 2010).

Emotional regulation techniques, and methods for increasing tolerance to communication apprehension were taught based on the work of professional speech trainers like Esposito (2000) and the mindfulness practices developed by Mark Williams of the Oxford Mindfulness Center (Williams & Penman, 2011). Mindfulness has also become a key component of anxiety treatment, and guiding principles of mindfulness were explained in person through session materials, with participants being guided through several mindfulness meditations created by Williams and Penman (2011) as a group. Mindfulness meditation practice at home was done using guiding audio files recorded by the lead researcher and provided to participants. This mindfulness training was done before each presentation training session carried out by participants during home practice.

3.3 Exposure Techniques

Exposure therapy can be highly context dependent, and recovery of fear associations can be prevented through the use of a variety of settings in which the negative stimulus is presented (Gunther, Denniston, & Miller, 1998). Therefore, different environments were used for exposure training in this program. On the one hand, in-vivo (in person) exposure to public speaking scenarios was carried out in some sessions so that participants could practice and receive feedback in front of peers, with each participant ($n=20$) preparing and delivering a two-minute speech about a personal topic. On the other hand, the majority of exposure training was conducted at home by the participants, where one group ($n=10$) practiced imaginal (thought-based) exposure to public speaking scenarios and were instructed to prepare a short speech from a list of potential topics. They then delivered these speeches to an imaginary intercultural audience while standing and imitating the delivery methods of a real speech act. Participants were instructed to imagine a non-Japanese audience, perhaps populated with members of the host country of the foreign language they were studying (e.g., English speakers). Another group ($n=10$) underwent in-virtuo (VR-based) exposure training at home. Each participant in this group was given a VR headset and instructions on how to use a smartphone application for virtual public speaking practice, preparing speeches for these sessions using the same list of topics as the imagination group. The VirtualSpeech smartphone application was chosen because it is free to use, and therefore accessible to many other educators, students, workplace

trainers, and therapists as well. The audiences within this app are quite diverse, with individuals of European, African, and Asian descent present. VirtualSpeech also features several environments, including classroom and large audience settings, and therefore fits the goal of providing differing contexts in which extinction learning can take place (VirtualSpeech, 2020). The View Master model of VR headsets was chosen for participants' home practice because of its compatibility with many different smartphone models, and its hard plastic design which would prevent damage from participants' use.

Two different at-home exposure training methods were used (imaginal, in-virtuo) in order to test a variety of anxiety-reduction techniques on this population, and assess their effectiveness at targeting foreign language learning anxiety as well. In addition, participants were encouraged to use their foreign language of study, or English (in the case of English majors or if not enough proficiency had been acquired in the non-English foreign language) while doing home presentation practice. Each home exposure training activity by the participants was preceded by an individual review of the skills learned in the live sessions and a guided mindfulness meditation.

The training sessions consisted of in-person lectures/discussion sessions carried out once a week over a one-month period (four in-person sessions total). Each session lasted for 90 minutes. A classroom at the university where participants were recruited was used for this training, with participant groups organized by type of exposure practice (imaginal or in-virtuo). Details for each research and at-home session can be seen in Table 1.

Table 1. In-person and At-home Research Session Activities

| | | |
|---|-----------|---|
| Session 1: <i>person</i> | <i>In</i> | <ol style="list-style-type: none"> 1. Program explanation and discussion of informed consent/program withdrawal 2. Foreign Language Classroom Anxiety Scale (FLCAS) completed by participants 3. Individual interviews with participants 4. In-vivo exposure training (individual two-minute speeches in front of fellow participants) 5. Overview of the program and key components/aims |
| Session 1: <i>Individually at home</i> | <i>at</i> | <ol style="list-style-type: none"> 1. <i>Writing</i>: Expectations for the program 2. <i>Writing</i>: Examples of negative thoughts from the "inner critic" related to public speaking abilities (based on Esposito, 2000) |
| Session 2: <i>person</i> | <i>In</i> | <ol style="list-style-type: none"> 1. Sharing of Session 1 home writing responses between participants 2. Discussion of public speaking phobia and physical manifestations of panic/anxiety (based on Bodie, 2010; Moore & Agur, 2002) 3. Presentation skills training basics (based on Anderson, 2016) 4. Focused attention and emotional regulation training (based on Esposito, 2000) 5. Mindfulness meditation practices/guiding principles; Group practice of the "Three Minute Breathing Space" meditation by Williams & Penman (2011, pp. 129-132) and deep breathing exercises |
| Session 2: <i>Individually at home</i> | <i>at</i> | <ol style="list-style-type: none"> 1. <i>Writing</i>: Examples of positive imagery and positive self-talk (Esposito, 2000) 2. <i>Three Minute Breathing Space</i> meditation using guiding audio 3. Public speaking practice using imaginal (Group 1) or in-virtuo (Group 2) exposure training in front of intercultural audiences 4. <i>Writing</i>: Self reflections of home practice successes, difficulties, etc. |
| | | <ol style="list-style-type: none"> 1. Sharing of Session 2 home writing responses between participants |

| | |
|---|---|
| Session 3: <i>In person</i> | <ol style="list-style-type: none"> 2. Presentation skills training continued (structuring speeches, role modeling, etc.; Anderson, 2016) 3. Discussion on recognizing cognitive distortions and identifying dysfunctional cognitions related to public speech acts (based on Beck, 2011) 4. Mindfulness meditation practices (continued) using the “Befriending Meditation” (transitioning to a more positive emotional association with an imaginary intercultural audience; Williams & Penman, 2011, p. 195-204) |
| Session 3: <i>Individually at home</i> | <ol style="list-style-type: none"> 1. <i>Befriending Meditation</i> using guiding audio 2. Public speaking practice using imaginal (Group 1) or in-virtuo (Group 2) exposure training approach 3. <i>Writing</i>: Self reflections of home practice successes, difficulties, etc. |
| Session 4: <i>In person</i> | <ol style="list-style-type: none"> 1. Sharing of Session 3 home writing responses between participants 2. Program overview and key takeaways 3. Foreign Language Classroom Anxiety Scale (FLCAS) completed by participants 4. In-vivo exposure training (individual two-minute speeches in front of fellow participants) 5. Individual interviews with participants 6. Reveal of the in-virtuo exposure training methods to Group 1 and offer of future use of VR materials |

Exposure training techniques used at home were explained in the in-person sessions and were based on the principles laid out in the Neudeck and Wittchen-edited work “Exposure Therapy: Rethinking the Model – Refining the Method” (2012). Imaginal exposure participants were instructed to act out their speech practice as if going through a real-world public speaking event, using a private space in their home for the practice and incorporating gestures and other non-verbal techniques they would normally use. While practicing, imaginal exposure participants were asked to imagine an intercultural audience comprised of people from various backgrounds, or members of the culture using the foreign language they study at university. See Appendix A for an example of the print participants used for the home exposure practice between in-person sessions (and for recording reflections of this practice).

Exposure training techniques for the in-virtuo exposure group were done in a similar way within the in-person sessions using the principles of modern exposure therapy techniques drawn from Neudeck and Wittchen (2012). Use of the VirtualSpeech smartphone application was demonstrated in person using a smartphone attached to the classroom projector. Students were given headsets during the training session and were asked to practice using the application with their own smartphones and the headsets in the presence of the lead author. This ensured participants would be able to do the in-virtuo practice successfully at home after the training session was completed. Prints used at home for the in-virtuo exposure training were nearly identical to the ones used by the imaginal exposure group (see Appendix A), with the exception of the explanations related to how to conduct the speech practice after the initial steps (emotional regulation techniques, mindfulness training, etc.) had been completed. For images within the VirtualSpeech app and examples of the virtual audiences and speaking environments, see the VirtualSpeech website (<https://virtualspeech.com/>).

3.4 Data Collection

This program used a convergent mixed-methods approach, with both quantitative and qualitative data collected simultaneously, and analysis conducted upon completion of the study.

3.4.1 Anxiety Measurements

In order to ascertain changes in public speaking anxiety levels as a result of this program (H1), participants were asked to self-assess their anxiety on a 1 to 10-point scale (with 10 indicating maximum anxiety) during the Session 1 and Session 4 individual interviews, and to provide reasoning for their responses. The rationale for any changes to this self-reported anxiety level was explored in the Session 4 interviews.

Foreign language anxiety was also measured using the Foreign Language Classroom Anxiety Scale (FLCAS; Horwitz, 1986) and changes in foreign language anxiety as a result of this program were also measured (H2). Permission for use of the FLCAS was obtained from the original author prior to this study's implementation. The Japanese translation of the FLCAS (Yashima et al., 2009) was presented alongside the original English-language items to ensure comprehensibility by the participants. Horwitz (1986) reported Cronbach's alpha for this instrument to be .93, and therefore it was considered highly reliable and appropriate for use in this study.

3.4.2 Individual Interviews

Qualitative measurement was also crucial to this program, as the nature, extent, and reasoning for public speaking anxiety of the participants can inform educators, trainers, and those studying intercultural communication of best practices for combatting this issue (RQ1) and may be difficult to assess through quantitative data alone. The interviews were also necessary for exploring participants' reactions to the exposure training methods and their impressions of imaginal and in-virtuo approaches, as well as the other program activities (RQ2). Interviews were conducted in a semi-structured fashion, and participant responses to the pre-study questions (Session 1) and the post-study questions (Session 4) were explored further through follow-up questions during the interviews. Interviews were conducted bilingually using a mix of English and Japanese (based on each participant's preference) and documented using an audio recorder. Interviews were held privately between the lead author and individual participants in the classroom used for the in-person training, with the other participants waiting outside the classroom and preparing the contents of their in-vivo speech practice done near the end of Session 1 and Session 4.

4. Results

4.1 Public Speaking Anxiety

Raw scores for the self-reported public speaking anxiety levels declared in the Session 1 and Session 4 interviews are reported in Table 2. A manipulation check of the initial anxiety scores (Session 1) was performed using a Mann-Whitney U test where the distribution of scores were similar based on a visual inspection. Initial public speaking anxiety scores were not significantly different between Group 1 ($Mdn = 7.25$) and Group 2 ($Mdn = 7.5$), $U = 59$, $z = .684$, $p = .529$, using an exact sampling distribution for U (Dineen & Blakesley, 1973), and therefore the two groups were considered balanced in terms of anxiety levels at the start of the program.

Table 2. Self-reported Public Speaking Anxiety Scores from 1 (Lowest Anxiety) to 10 (Highest Anxiety) and Change Over Time (n=20)

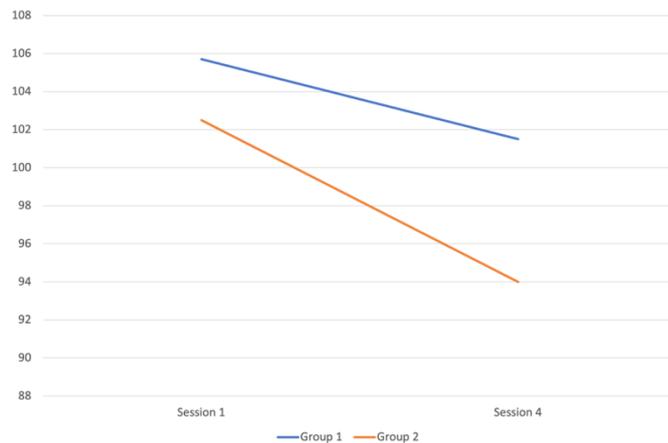
| Group 1 | Session 1 | Session 4 | Change | Group 2 | Session 1 | Session 4 | Change |
|---------|-----------|-----------|--------|---------|-----------|-----------|--------|
| G1A | 3 | 3 | 0 | G2A | 7.5 | 5 | -2.5 |
| G1B | 4.5 | 3.5 | -1 | G2B | 10 | 7 | -3 |
| G1C | 7.5 | 4.5 | -3 | G2C | 9.5 | 5 | -4.5 |
| G1D | 5.5 | 3.5 | -2 | G2D | 7 | 4.5 | -2.5 |
| G1E | 8 | 5 | -3 | G2E | 5 | 4 | -1 |
| G1F | 7 | 5 | -2 | G2F | 9 | 5 | -4 |
| G1G | 10 | 3 | -7 | G2G | 6 | 4 | -2 |
| G1H | 8 | 5 | -3 | G2H | 8 | 5 | -3 |
| G1I | 9.5 | 5.5 | -4 | G2I | 7.5 | 5 | -2.5 |
| G1J | 5 | 4 | -1 | G2J | 6 | 2.5 | -3.5 |
| Mean | 6.8 | 4.2 | -2.6 | | 7.55 | 4.7 | -2.85 |
| Median | 7.25 | 4.25 | -2.5 | | 7.5 | 5 | -2.75 |

Note. G1=Group 1 participant (imaginal practice), G2=Group 2 participant (VR-based practice)

Both mean scores and median scores are reported in the table above. However, due to the sample size ($n=20$), non-parametric tests, which require the use of median scores to test for significant change, were chosen for quantitative data analysis. For the within-subjects factor of public anxiety level change over time (from Session 1 to Session 4), Wilcoxon Signed Rank tests were used to measure changes in self-reported anxiety within Group 1 and Group 2, with the difference scores for both groups appearing approximately symmetrically distributed, as assessed by a histogram with superimposed normal curve. For Group 1, a statistically significant median decrease in public speaking anxiety ($\Delta Mdn = 2.5$) was observed from pre-intervention ($Mdn = 7.25$) to post-intervention ($Mdn = 4.25$), $z = -2.68$, $p = .007$, with a large effect size ($r = -.60$). Group 2 also saw a statistically significant median decrease in public speaking anxiety ($\Delta Mdn = 2.75$) from pre-intervention ($Mdn = 7.5$) to post-intervention ($Mdn = 5$), $z = -2.81$, $p = .005$, with a large effect size ($r = -.63$). Therefore, for both groups the null hypothesis for H1 can be rejected.

4.2 Foreign Language Anxiety

One of the study's aims was to explore the relationship between public speaking anxiety and foreign language anxiety (RQ1), and therefore the question of whether targeting public speaking anxiety directed at intercultural audiences would also help reduce foreign language anxiety was posed. The FLCAS was administered pre-treatment and post-treatment to measure this potential effect. FLCAS scores are divided into low (33-75), medium (76-119) and high (120-165) levels. Mean FLCAS scores for Group 1 and Group 2 and the changes measured from Session 1 and Session 4 can be seen in Figure 1 below.



Note. FLCAS range = 33 (lowest anxiety) to 165 (highest anxiety)

Figure 1. Mean FLCAS Scores for Each Group and Change from Session 1 to Session 4 (n=20)

The above figure shows the changes in mean FLCAS scores for each group. However, when testing for significant change, the use of non-parametric tests within this study requires the analysis of changes to median FLCAS scores. For the within-subjects factor of time (pre-treatment to post-treatment), Wilcoxon Signed Rank tests were used to measure changes to both groups' FLCAS scores, with the difference scores for both groups appearing approximately symmetrically distributed, as assessed by a histogram with superimposed normal curve. For Group 2, there was a statistically significant median decrease in foreign language anxiety ($\Delta Mdn = 3.5$) from pre-intervention ($Mdn = 98$) to post-intervention ($Mdn = 94.5$), $z = -2.13$, $p = .033$, with a moderate effect size ($r = -.47$). For Group 1, there was a median decrease in foreign language anxiety ($\Delta Mdn = 1$) from pre-intervention ($Mdn = 103.5$) to post-intervention ($Mdn = 102.5$), but the difference was not statistically significant, $z = -.766$, $p = .443$, with a small effect size ($r = -.17$).

4.3 Individual Interviews

Interview data obtained from the individual conversations with participants in Session 1 (pre-treatment) and Session 4 (post-treatment) were transcribed and analyzed for notable themes. The approach to this thematic analysis was based on Braun and Clarke (2006) and utilized a realist framework using inductive analysis and a semantic approach. Emphasis was placed on reporting the subjective reality of participants' experience with public speaking anxiety in intercultural communication and classroom settings and the program treatments, and interpretation was based on the descriptions provided within the scope of the interviews themselves (based on Patton, 1990). Interviews were conducted in both English and Japanese, based on each participant's preference. Quotes originally in Japanese have been translated into English in this section.

4.3.1 Session 1 Interview (Pre-Treatment)

The goal of the Session 1 interviews was to analyze the feelings participants held toward public speaking and their experiences prior to the study. Participant responses for Question 1B (*rationale for the self-reported public speaking anxiety level expressed in Q1A*), Question 2 (*sources of public speaking anxiety*) and Question 3 (*explanations of trouble during previous public speech acts*) were divided into three major themes: Internal Factors, External Factors,

and Technical/Speech-related Factors. Table 3 shows the percentage of responses for each question in relation to these themes.

Table 3. *Session 1 Interview - Questions 1B, 2, & 3 Themes and Percentage of Responses within Each (n=20)*

| Q1B – Rationale for self-assessment rating of public speaking anxiety | | Q2 – Sources of public speaking anxiety | | Q3 – Sources of difficulty during previous public speech acts | |
|---|-----|---|-----|---|-----|
| Internal Factors | 67% | Internal Factors | 41% | Internal Factors | 59% |
| External Factors | 28% | External Factors | 55% | External Factors | 30% |
| Technical / Speech-specific factors | 5% | Technical / Speech-specific factors | 4% | Technical / Speech-specific factors | 11% |

Internal Factors (Q1B, Q2, & Q3; $n=20$) – Notable codes

- Language-specific fears - 19 responses (*“Now I’m studying Spanish and I have a lot of presentations in Spanish, so yeah, it’s scary kind of.”* (G1B))
- Memory issues – 13 responses
- Not knowing what to say – seven responses (*“My words became jumbled up and I thought, ‘What am I going to do?’”* (G2G))

External Factors (Q1B, Q2, & Q3; $n=20$) – Notable codes

- People watching you speak – 11 responses
- Hyperawareness of the audience’s feelings/attention – nine responses (*“I really care about people’s expressions and facial expressions. So, even if it doesn’t mean something bad, I really feel that if their face is like not smiling, I really care about them.”* (G2J))

Technical/Speech-specific Factors (Q1B, Q2, & Q3; $n=20$) – Notable codes

- Trouble with notes or supporting materials – four responses
- Speech time limit issues – four responses

Participant goals for public speaking improvement were explored in Question 4. Major themes found were Content-oriented Improvement (38%), Performance-oriented Improvement (33%), and Psychologically-oriented Improvement (29%). Content Improvement-related codes included *foreign language improvement* (four responses) and *fluency improvement* (four responses – *“I’m an English major, so I want to speak more smoothly.”* (G1J)). Examples of Performance Improvement-related responses were *better speech delivery* (e.g. use of gestures; seven responses) and *engaging better with the audience* (four responses). Psychologically-oriented goals included a *desire for decreased nervousness/anxiety* (seven responses) and *increased confidence* (five responses).

4.3.2 Session 4 Interview (Post-Treatment)

Question 1B in the post-treatment interview asked participants to rationalize their self-reported public speaking anxiety levels (explored in Q1A) and any changes that had occurred over the course of the program. Major themes were Improvements (87%) and Unresolved Issues (13%).

Improvements (Q1B; $n=20$) – Notable codes

- Belief in the effectiveness of the program techniques - 11 responses (*“After trying all of the techniques we learned, my anxiety was reduced and I feel like I have more confidence.”* (G1G); *“Now I learned some techniques to reduce my anxiety, so I*

think I know how to reduce my anxiety.” (G2I))

- Reduced nervousness/anxiety – 11 responses

Unresolved Issues (Q1B; $n=20$) – Notable codes

- Remaining nervousness/anxiety – four responses (“*This session do some techniques [sic] and so...But not reduce all of [my anxiety]. I feel, feeling remain afraid of presentations.*” (G2B))

Post-treatment interview Question 3A asked participants in Group 1 to express their thoughts on the imaginal exposure training done at home, and Group 2 to discuss the home in-virtuo exposure training. Question 4 related to the mindfulness meditations that had been done at home before each of the speech practice activities. Major themes of these items and percentages of each are shown in Table 4.

Table 4. *Session 4 Interview - Question 3A & Question 4 Themes and Percentage of Responses within Each*

| Q3A (Group 1) – Thoughts on imaginal exposure training practice at home ($n=10$) | | Q3A (Group 2) – Thoughts on in-virtuo exposure training practice at home ($n=10$) | | Q4 – Thoughts on mindfulness meditation done as part of home practice ($n=20$) | |
|--|-----|---|-----|--|-----|
| Positive comments | 89% | Positive comments | 71% | Positive comments | 68% |
| Negative comments | 7% | Negative comments | 29% | Negative comments | 17% |
| Neutral comments | 4% | | | Neutral comments | 15% |

Common codes regarding positive outcomes with imaginal exposure training (Question 3A; $n=10$) referred to *feelings of accomplishment* (four responses), *ability to concentrate on the speech act* (three responses) and *feelings of relaxation* (three responses). Negative codes from Group 1 included *difficulty imagining the audience* (one response). The Group 2 participants (Question 3A; $n=10$) talked positively about the VR practice in regard to *feelings of relaxation* (six responses), *feelings of immersion within the VR space* (four responses) and *advantages of the VR app* (four responses) (e.g., the ability to practice in multiple contexts). Common negative codes related to VR were *desire for in-vivo practice* (two responses) and *eventual habituation with the VR environment* (two responses – “*First is good [sic], but little by little I accustomed to VR. And I attached [this headset] and presentation, but this is VR so not real I think.*” (G2B)).

The most common codes connected with positive feelings toward the mindfulness meditation performed at home (Question 4; $n=20$) were: *feelings of relaxation* (10 responses – “*When I did the meditation before bed, I could really sleep well that night.*” (G1E)), *general enjoyment of the meditation* (six responses), and *a desire to continue mindfulness meditation* (five responses). Notable negative codes were *difficulty concentrating on the meditation* (three responses) and *trouble with sleepiness while meditating* (two responses). *First experience with mindfulness* (four responses) was notable among the neutral codes recorded.

Post-treatment Question 3B asked if participants believed the at-home exposure training helped to reduce their public speaking anxiety. Within Group 1, 100% of participants answered Yes, while Group 2 was split between Yes (70%), Yes and No (20%), and Not Sure (10%).

When asked to describe their goals for future public speaking improvement after completion of the program (Question 5), major themes found were Psychologically-oriented (30%), Content-oriented (27%), Performance-oriented (26%), and Program-related (17%) goals.

Psychology-oriented Goals (Q5; $n=20$) – Notable codes

- Further decrease in nervousness/anxiety - six responses

- Increased confidence - four responses
- Content-oriented Goals (Q5; $n=20$) – Notable codes
- Clear messaging communication – four responses (“*[I want to] try to like say something, teach them something.*” (G1I))
 - Fluency improvement with spoken output - three responses
- Performance-oriented Goals (Q5; $n=20$) – Notable codes
- Engaging better with the audience – seven responses (“*If I learn to focus better on the audience, I can do things like ask them questions. I want to try things like that.*” (G2G))
 - Delivery methods (use of gestures, facial expressions, etc.) – four responses
- Program-related Goals (Q5; $n=20$) – Notable codes
- Desire to continue techniques learned in the program – eight responses

Cohen's Kappa (κ) was used to determine if there was agreement between the two authors' judgement on themes present in the Session 1 and Session 4 interview responses and test for inter-rater reliability. When calculating Cohen's κ , sets of questions were analyzed based on overlapping themes. Judgements for the strength of κ were drawn from Altman (1999). For the Session 1 interview Questions 1B, 2, and 3, there was good agreement between the two authors' judgements, $\kappa = .748$, 95% CI [.421 to 1.075], $p < .001$. For Session 1 interview Question 4, there was good agreement between the two authors' judgements, $\kappa = .714$, 95% CI [.214 to 1.214], $p = .012$. For Session 4 interview Question 1B, there was perfect agreement between the two authors in relation to this question's themes, with no variation in labeling. For Session 4 interview Questions 3A and 4, there was fair agreement between the two authors' judgements, $\kappa = .339$, 95% CI [-.159 to .837], $p = .032$. And for Session 4 interview Question 5, there was moderate agreement between the two authors' judgements, $\kappa = .571$, 95% CI [-.159 to .837]. However, this result was not significant at the $p < .05$ level ($p = .121$). This slight variation in coding was not seen to have a large effect on the analysis of Question 5 (Session 4) in terms of assessing the overall themes of participants' future goals. Based on these results, it can be said that the inter-rater reliability for this thematic analysis was sufficiently high for the purposes of this study.

5. Discussion

5.1 Changes in Public Speaking Anxiety and Foreign Language Anxiety (H1, H2, RQ1)

The significant median decrease from pre-treatment to post-treatment in self-reported public speaking anxiety and large effect size seen for both groups supports H1, and is consistent with previous findings on the effectiveness of exposure training for public speaking anxiety reduction purposes (Neudeck & Wittchen, 2012). The suite of treatments used in this program, including public speaking practice in a variety of settings, CBT education/writing practice, and mindfulness meditation, may have also contributed to this result, and is consistent with the findings of other studies utilizing these techniques in combination with exposure training (Hofmann, Gutner, & Asnaani, 2012; Safir, Wallach, & Bar-Zvi, 2012). Exercises and explanations aimed at changing participants' relationships to public speaking audiences, and intercultural audiences in particular, may have also contributed to this outcome. These results support the idea of H1 that public speaking anxiety can be effectively targeted over a short-term program, and may be encouraging for educators, workplace trainers, or others wishing to work with these populations within a limited time span.

The significant reduction to foreign language anxiety and moderate effect size seen within Group 2 over the course of the study is promising as well. However, the lack of significant foreign language anxiety reduction in Group 1 over the course of the program indicates that differing methods for exposure training within intercultural speaking situations may affect foreign language-related anxieties in disparate ways. The fact that foreign language anxiety reduction occurred to a significant degree in Group 2 may have been a result of the visual stimulus provided by the VR app (where participants saw non-Japanese individuals watching them speak) and the potential difficulties the Group 1 participants had with imagining an intercultural audience (as was indicated by some in the post-study interviews). These findings partially support the idea that foreign language classroom anxiety can be targeted by helping students improve their public speaking skills in intercultural communication settings (H2), and demonstrate that further analysis of the connections between public speaking anxiety reduction and foreign language anxiety reduction are worth exploring (RQ1).

Despite the positive findings from Group 2 (VR-based presentation practice), several issues were discovered that indicate improvements to virtual presentation practice applications of this kind (e.g., VirtualSpeech) may be necessary. These problems with the application included eventual habituation by the participants with the virtual environment due to the looping nature of the audience video in the virtual presentation rooms. The VirtualSpeech application features pre-recorded videos of an audience “watching” the user and moving slightly while listening and maintaining eye contact, which may add to the realism of the speech practice experience. However, the videos within the practice environments eventually restart (after a period of a few minutes), and the repetition of the audiences’ movements can become clear after multiple sessions using the application. Although the virtual audiences effectively stimulated an anxiety-producing response in many participants in the first practice sessions (per their feedback in the Session 4 participant interviews), some noted that this response eventually lessened as the repetitive nature of the audience movements was noticed (e.g., the participant became aware of the VR video looping during the course of a practice session).

A notably positive result of this study is that both groups experienced significant reductions in self-reported public speaking anxiety over the course of the program (median decrease of 2.5 for Group 1, median decrease of 2.75 for Group 2 on the 10-point self-assessment scale). For those working with populations experiencing communication-related apprehension (both within intercultural communication settings and without), this may be interpreted as a positive outcome, in that practitioners can feel free to use the tools at their disposal. Teachers, workplace trainers, and others with access to smartphones and VR headsets may expect significant reductions in public speaking anxiety if those technologies are used, while those without access to these resources or who work with populations uncomfortable with VR may feel hopeful that imaginal and in-vivo exposure techniques alone may be effective at helping to reduce apprehension related to public speaking. This study supports the findings of previous research that VR-based exposure training can significantly reduce public speaking anxiety (Safir, Wallach, & Bar-Zvi, 2012; Anderson, et al., 2013), but fills a gap in the literature in regard to whether these effects will hold true within intercultural communication settings during VR and imaginal exposure practice, and how imaginal and VR-based practice compare in these types of public speaking situations.

5.2 Sources of Public Speaking Anxiety (RQ1)

One of the research aims of this program was to ascertain the nature and sources of public speaking anxiety (especially in intercultural communication situations) among students studying foreign languages. Better understanding of students’ feelings in this regard could prove helpful in devising methods for educators in dealing with intercultural communication

apprehension, public speaking anxiety and more. Using the thematic analysis methods promoted by Braun and Clarke (2006), key themes emerged from the pre-treatment (Session 1) and post-treatment (Session 4) interview data. Interestingly, participants seemed to waver between attributing public speaking-related apprehension to internal or external forces based on the question being asked (Session 1 interview Q1B, Q2, & Q3). For example, when asked to discuss fears of public speaking generally, participants more often attributed negative feelings to external factors (e.g., being observed by an audience, worries about audience reactions) than internal sources. However, when asked to speak in specific terms about negative public speaking experiences or to justify their self-assessment ratings of public speaking anxiety, internal factors (e.g., troubles with foreign language skills or memory, physical reactions to anxiety) were cited more often. Educators and trainers may find success targeting this disconnect in attribution and addressing these internal sources of apprehension primarily, while also helping to reshape people's attitudes toward the externally-based emotional triggers of imagined and future intercultural audiences.

Examining the speech preparation habits and goal setting of students (Session 1 Q4, Session 4 Q5) may also aid in this training process. Understanding that students may often divide their speaking goals along psychologically-oriented, content-oriented, and performance-oriented lines may help teachers and presentation skills trainers better address these separate concerns, rather than a blanket approach of improving public speaking skills and intercultural communication skills generally. The fact that many participants desired to continue practicing the techniques they learned in this program helps to bolster the argument that direct intervention and education can aid in this goal setting and achievement effort.

5.3 Participant Reactions to the Program Techniques and Exposure Training (RQ2)

Feedback regarding the program's effectiveness and contents were positive on the whole. Many participant comments referred to the perception of personal improvement (87% of Session 4 Q1B responses) and described increased confidence toward public speaking in intercultural communication settings and reduced anxiety. At the same time, unresolved issues (e.g., lingering public speaking anxiety, continuing gaps in foreign language speaking skills) were cited as well. These comments will be used to help improve the methodology of this program in its future development. This helps answer the question of RQ2 in that students found a short-term program such as this one effective. This may encourage others to undertake programs of this type, even if contact time with individuals they work with is brief.

The reaction to the mindfulness meditation taught in the in-person sessions and then practiced at home (explored in Session 4 interview) was also promising. Nearly 70% of responses to Q4 were positive, and in line with the arguments set forth by Williams and Penman (2011) that the benefits of mindfulness can begin working over a fairly short time frame. However, negative comments concerning mindfulness (e.g., troubles with sleepiness, difficulty focusing) may indicate that improvements to in-person instruction and to the guiding audio provided to participants are necessary. The increased public speaking confidence within intercultural communication settings seen in both groups may have been bolstered by this use of mindfulness meditation and the breathing techniques and attention-focus practice involved.

How students would respond to the imaginal exposure training and in-virtuo exposure training was also measured through the Session 4 interview (Q3A, Q3B). All of the Group 1 participants responded that the at-home imaginal exposure training (in combination with the CBT-based writing prompts and mindfulness meditation) lead to a reduction in their anxiety – a definitively positive reaction to the treatment. Imaginal exposure training-related comments (Q3A) also trended positively (87%) and were in line with the success of exposure methods

overall (Neudeck & Wittchen, 2012). Positive comments related to imaginal exposure (e.g., feelings of accomplishment, ability to concentrate on the speech act, feelings of relaxation) also indicate that educators and trainers may adopt these exposure techniques and expect effective results training for intercultural public speaking.

Reactions to in-virtuo exposure training at home (Session 4 interview Q3A) were more mixed, with issues and limitations of the VirtualSpeech application (e.g., negative habituation to the virtual audiences' repetitive movements) and desire for more in-vivo practice cited. However, the majority of responses related to in-virtuo speech training were positive (e.g., feelings of relaxation, feelings of immersion, advantages of the many practice settings available in VirtualSpeech), and therefore evidence for the benefits of in-virtuo exposure for reducing public speaking anxiety in intercultural communication settings was found. Educators and psychotherapists may find success in the use of these technologies, and more wide-scale adoption of these methods will hopefully continue to be supported. Although the qualitative responses to the imaginal exposure tended to be more positive than the in-virtuo exposure method, this difference may be as a result of specific issues related to the VirtualSpeech smartphone application (explored above). The researchers hope that these limitations will continue to be addressed, and that low-cost or freely accessible technologies for public speech act rehearsal will continue to improve.

6. Limitations

Several key limitations to this study exist. The sample size (n=20), although considered by the researchers as sufficiently robust for this study, should be expanded in future studies. Participant bias and expectancy bias may have also come into play, as participants may have altered comments in the pre-treatment and post-treatment interviews to fit the perceived expectations of the researchers. However, no evidence that these biases were present within the data has been found at the point of writing. In addition, a lack of a control group may be a limitation as well, and was not included due to the researchers wanting each of the 20 participants to be able to receive the treatment. Future studies will include a control group in addition to a larger sampling overall.

Also, the use of the VirtualSpeech smartphone application may have affected some aspects of the results, in that the lack of interactivity and the repetitive motions of the audience, along with other limitations of this specific technology, may have made the exposure training less effective for some participants. In the future, other options for virtual public speaking practice should be pursued.

7. Future Directions

The promising results of this study imply that further investigation of these techniques and technologies should be undertaken. Future programs implemented by the authors will address the limitation of the sample size by recruiting larger numbers of participants. Future studies may also utilize a variety of smartphone VR applications in addition to VirtualSpeech (if available) to test for effectiveness within the application development space and suggest improvements for these technologies toward the purpose of anxiety reduction. In addition, while our study focused on stressful speech events in intercultural settings for those majoring in foreign languages, future iterations of our study may target non-language majors as well, and explore whether foreign language anxiety and public speaking anxiety can be reduced for those populations.

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Appendix

An example of the print instructing participants in how to conduct the at-home exposure practice is provided below. This example was for the imaginal exposure group and was completed between the second and third in-person training sessions. In-virtuo exposure group participants were given a nearly identical print for home practice, with the relevant spaces related to imaginal exposure replaced with explanations for participants to use the VirtualSpeech app (while acting out the speech act in as realistic a way, making eye contact with the virtual audience, and using non-verbal speech techniques).

Participant Number: _____

Session 2 Home Exercises**A. Positive Imagery Example**

Write some examples of positive images you could use to calm your first feeling of fear before a presentation. These can be any images of things from your life or activities that make you feel happy or peaceful. Use the copy of the in-person session slides (if necessary) to remember examples from our in-person training.

B. Positive Self-Talk

Write some positive things you can say to yourself inside your head before, during, and after public speaking. Use the examples from the Session 2 in-person training or make some of your own positive phrases.

C. Image Training

Use the following steps to practice public speaking image training at home. Please do this **at least 2 times before Session 3**. After each practice, please write a reflection on your experience.

Use the methods for image training laid out during the in-person sessions. Find a private space, and while speaking stand up and act out the speech as if this were a real public speaking event. During the practice, imagine an international audience of people from various cultures and backgrounds watching you speak. Before the practice, use the focusing and emotional control methods we practiced in Session 2:

Step 1

Practice the **Mindful Breathing Meditation** using the link provided to you in the in-person session.

Step 2

Think of one of your **positive images**. Hold this image in your mind for at least one minute while continuing your mindful breathing.

Step 3

Say a few of your **positive-self talk** phrases to yourself in your mind.

Step 4

Practice a **2-minute speech** using one of the topics below. While you speak, imagine what you are providing the audience with this speech (enjoyment, information, etc.). Breathe, use good posture and delivery, and make eye contact with your imagined audience. As explained in the session and in the explanation above, imagine an intercultural audience watching you and focus on communicating effectively with that audience.

| | |
|-------------------------------|---|
| <i>Speech Practice Topics</i> | Favorite band or musician A restaurant you love A member of your family A book you read recently A class that you enjoyed |
|-------------------------------|---|

Step 5

Write your **reflections** on this image training using the spaces below:

Practice 1:



Practice 2:

