



## Audience Response Systems in a Korean Cultural Context: Poll Everywhere's Effects on Student Engagement in English Courses

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This study sought to examine the use of Poll Everywhere as an Audience Response System (ARS) within the English conversation classroom at a Korean university. The findings of this study addressed student engagement in English conversation courses and the relationship it has with Poll Everywhere. Over the course of two semesters, students were exposed to instruction laced with an ARS in the form of Poll Everywhere to stimulate English conversation. The students were then asked to respond to how it affected their motivation and desire to speak English in class. Students overwhelmingly noted that the use of Poll Everywhere in the classroom enhanced their learning experience, allowed them to be more enthusiastic, interested, and motivated to respond in English, and generally increased their engagement in English instruction. Furthermore, it was noted by the students that factors such as anonymousness, novelty of teaching style, and the ability to aid in the expression of English allowed for them to engage more in English lessons as they produced English language in a classroom setting. The results of the study hypothesized that Korean university students respond positively to Poll Everywhere integration that allowed for enhanced engagement in English conversation classes.

**Keywords:** interactive technology, English conversation, audience response system, student engagement, Korean university

### Introduction

New technology continues to challenge the paradigm of language instruction and provide new opportunities to engage students in language learning (Chen & Chen, 2008; Chun, Lee, & Kim, 2012; Han & Finkelstein, 2013; Heflin, Shewmaker, & Nguyen, 2017; Jeong, 2017; Park & Lee, 2012; Pemberton, Borrego, & Cohen, 2006; Selwyn, 2016; Sung & Mayer, 2012; Warren, 2016). Technology integration in the classroom has been lauded specifically for its ability to increase student engagement if meaningfully implemented (Gebre, Saroyan, & Bracewell, 2012; Han & Finkelstein, 2013; Henderson, Selwyn, Finger, & Aston, 2015; Pemberton et al., 2006; Rashid & Asghar, 2016). Gebre et al. (2012) found in their research on student engagement in technology rich classrooms that students of classrooms where the professor actively utilized technology to help students analyze and evaluate knowledge rather than just transmit understanding were more cognitively engaged in their learning. Pemberton et al. (2006) stated that utilizing technology in education is linked to increased motivation, development, learning, and enjoyment (p. 145). From this train of thought, additional studies have theorized that interactive technology can be a valuable tool in increasing student engagement in the classroom (Blood & Neel, 2008; Cardoso, 2011; Han & Finkelstein, 2013; Pemberton et al., 2006). Over the past decade, the rise of interactive technology such as interactive whiteboards, audience response systems, virtual and augmented reality, and mind mapping, among others, has led researchers to consider the effectiveness of such

technology integrated into classroom instruction on levels of student engagement (O'Shea, Michell, Johnston, & Dede, 2009). More specifically, educators over the past decade have been presented with the prospects of using Audience Response Systems (hereafter ARS) in the classroom. ARS's have the potential to engage students in language classrooms (Damron & Mott, 2006). In this study, Poll Everywhere was used as a form of ARS in the hopes of increasing student engagement among Korean university students.

Despite the growing consensus of research, Korean university classrooms lack significant amounts of technology integration as a part of commonly used classroom instruction (Webster & Son, 2015). In Korean culture, education and interactive technology such as ARS's are not as easily mixed, although Korean students do have a desire to use technology in relevant and meaningful ways in the classroom (Joo, Kim, & Kim, 2016). Korean university classrooms maintain teacher-centered pedagogies that drive instruction and interaction. Active learning approaches such as discussion, various forms of debate, games, and interactive technology are not commonly implemented among university classrooms (DeWaelche, 2015). For many Korean students, teacher lecture and test taking remain the norm. This does not, however, imply that Korean university students are satisfied with the current system. Korean students expect to use more various forms of technology for academic purposes within the classroom (Joo et al., 2016). Indeed, there remains a desire among younger Korean university students to integrate their technological literacy into the university classroom.

## **Definitions and Method of Operation**

### **Student engagement**

For many researchers and teachers, especially those in the field of language education, student engagement remains the key to student success and classroom achievement (Brown, 2014). Student engagement, for the purpose of this study, is defined as the combination of enthusiasm, interest, participation, and interaction as it is incorporated in deeper learning and self-regulation (Kahu, 2013). If these certain factors can be achieved within a language classroom, it can be argued that students will be more engaged in classroom instruction and therefore more receptive to new knowledge and information which they can, in turn, use in a variety of situations.

### **Poll Everywhere**

Poll Everywhere – one of many ARS's available online for free or purchase – served as the software of choice for this study. In the past, ARS's consisted of polling software and clicker hardware that educational institutions or even individual educators could purchase for use in their classrooms. These systems were usually limited in scope due to the physical limitations of what could be input from the clickers themselves and scale as the software of the ARS's usually allowed only multiple choice or true/false questions. Additionally, these systems tended to be expensive to purchase and complicated to manage. With the advent of the smartphone, companies that developed ARS's began to innovate with the potential uses that smartphones afforded. The integration of smartphones allowed for users to answer not just multiple-choice type questions but also open-ended, picture recognition, and a variety of other types of questions. This expansion allowed educators to utilize Poll Everywhere and other ARS's in ways that proved more malleable to various forms of classroom instruction.

The basic premise of an ARS such as Poll Everywhere remains simple: the user receives a question in a variety of formats from the instructor and the user then submits an answer in response to that question. The answer can too be input in a variety of ways including but not limited to multiple choice, true/false, open-ended responses, Q&A, picture recognition and selection, matching, ranking, timed questions for competitions, and more. Once the answer has been submitted by the user, the collective answers of the class are displayed on a projection in a variety of formats depending on the type of question asked. This

rapid feedback allows instructors to engage with and evaluate answers from students in a manner that progresses lessons and has the potential to introduce positive effects on the learning experience of students (Bruff, 2009; Cardoso, 2011). Figure 1 and 2 demonstrate a simple display of a typical multiple-choice and open-ended question from Poll Everywhere, respectively:

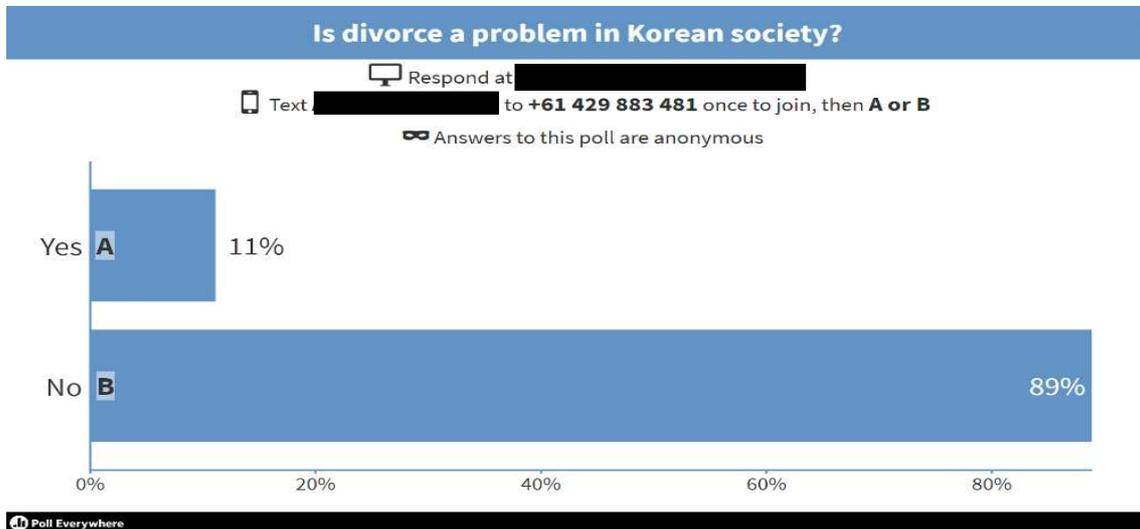


Figure 1. Poll Everywhere multiple-choice response display. Images were displayed with permission from Poll Everywhere, Inc.



Figure 2. Poll Everywhere open-ended response display. Images were displayed with permission from Poll Everywhere, Inc.

## Literature Review

### Audience Response Systems and Student Engagement

ARS's have been noted to increase student participation, improve attitudes, and increase learning across several studies (Blood & Neel, 2008; Bruff, 2009; Caldwell, 2007; Cardoso, 2011; Cohn & Fraser, 2016; Guthrie & Carlin, 2004; Latessa & Mouw, 2005; Stowell & Nelson, 2007). Several factors have

been identified by researchers as elements derived from ARS's that enhance student engagement. Latessa and Mouw (2005) found that when an ARS was utilized in medical teaching, participants were found to be more attentive during lectures than if the ARS was absent. Additionally, Stowell and Nelson (2007) uncovered in their study that although an ARS did not have a significant impact on academic achievement, an ARS did increase honesty of feedback and participation rates of students. The authors deduced that the use of an ARS reduced negative academic emotions such as anxiety and shame that could prevent more introverted students from participating in lectures and tasks (Stowell & Nelson, 2007). Cohn and Fraser (2016) found in their study that middle school students who engaged in an ARS during class saw very large differences between non-users of ARS in areas ranging from more positive attitudes, an enhanced learning environment, and heightened achievement. Their study resulted in an affirmation of the efficacy of ARS approaches in the classroom (Cohn & Fraser, 2016).

## **Audience Response Systems and Language Learning**

An examination of the literature on the use of ARS's in language classrooms reveals a significant lack of data. Most studies of ARS's in the classroom have broad applications for most educational fields (Blood & Neel, 2008; Cohn & Fraser, 2016; Damron & Mott, 2006; Gewirtz, 2012; Sellar, 2010; Stowell & Nelson, 2007). Although the findings of these studies have numerous implications for the language learning classroom, few studies have dealt with the topic of ARS's inside the language learning classroom specifically (Bruff, 2009). When the use of ARS's in an English language learning classroom in Korea is considered, the literature remains virtually non-existent.

A handful of studies have been conducted on the use of ARS's in language learning classrooms. One such study conducted focused on an introductory language course (Cutrim Schmid, 2007) where student participation and motivation remain common issues. In the study, the researcher focused on the use of the ACTiVote system, a segment of Promethean Interactive Whiteboard, in an English for Academic Purposes course with thirty students at a British university. As a result of using the ARS in the classroom, students were found to have boosted levels of motivation, student engagement, performance comparison, coordination with other students, and self-evaluation. A similar study also conducted by Cutrim Schmid (2008) under the same guise and procedure found that the use of ARS's increased student interactions and allowed for an increase in student motivation, two crucial elements in student engagement.

Another study conducted by Rodriguez and Shepard (2013) delved into the perceptions of using an ARS in a classroom of Spanish-speaking adult English language learners. In this study, the researchers focused on individuals who were found to be generally progressing through their silent period (see Krashen, 1981) and, therefore, less willing to speak out loud to answer prompts and questions. The study theorized that the use of clickers would encourage classroom participation among students in the early stages of language learning. Participants in this study noted that using an ARS system in a language learning classroom allows for students to interact with content and language without the pressure or fear of embarrassment and intimidation.

Another study conducted by Song, Oh, and Glazewski (2017) sought to uncover both the effects that ARS's have on student interaction and student achievement in Korean second language classrooms at an American university. The results of the study concluded that the use of an ARS to generate student questions and student answers stimulated conversational interactions. Furthermore, the researchers found that after the use of an ARS, student scores on a class pre-test and post-test saw significant increases (Song et al., 2017).

Although not all studies focused on student achievement, these studies presented trends in student engagement. The four studies showcased in this research noted that the use of ARS in language learning classrooms increased student interaction when producing a foreign language inside the classroom (Cutrim Schmid, 2007, 2008; Rodriguez & Shepard, 2013; Song et al., 2017). Furthermore, two of the studies theorized that the use of an ARS in their classrooms also boosted student motivation to participate in classroom material and language production (Cutrim Schmid, 2007; Song et al., 2017).

Although the positive effects of ARS's in Western classrooms seem evident, the evidence for a similar conclusion in Korean classrooms remains less explored. Choi and Rhee (2014) note that different engagement strategies do not have the same affect in all situations. Current research cannot conclude the effectiveness of ARS's in Korean university language classrooms. Additionally, Selwyn (2016) warns that if the technology of a classroom does not fit with the students' expectations of what their university experience should be like, they will likely reject that specific teaching strategy and, therefore, lack crucial elements of student engagement.

## **Overview of Poll Everywhere as an ARS**

Some studies and reviews have been conducted on Poll Everywhere and its ability to produce engaging instruction in the classroom (Gewirtz, 2012; Kappers & Culter, 2014; Sellar, 2010; Shon & Smith, 2011; Warnich & Gordon, 2015). Shon and Smith (2014) in their study on the implementation of Poll Everywhere found that the software allowed for students to re-engage with material and instruction. Additionally, the authors uncovered that the open-ended answer mode required students to participate in questions at a higher-leveled cognition (Shon & Smith, 2014). In their pilot study on Poll Everywhere, researchers Warnich and Gordon (2015) found that students were more active to participate and remained happier to do so. Furthermore, the researchers uncovered that students found using Poll Everywhere more satisfactory than using a traditional textbook to learn and cover material (Warnich & Gordon, 2015). Additionally, Kappers and Culter (2014) found in their study that the use of Poll Everywhere resulted in higher satisfaction and positive engagement among a majority of their university students when introduced to the software in an introductory class.

Where more traditional ARS strategies from the past decade rely on clickers and special hardware and are limited in scope and function (see Guthrie et al., 2004), Poll Everywhere utilizes smartphones and PCs to input answers through a specific URL or by texting a phone number with an answer. Students have noted that one of the factors that remained most appealing about using Poll Everywhere and other ARS's was the ability to use mobile devices as a part of their learning (Sellar, 2010; Shon & Smith, 2011; Warnich & Gordon, 2015). Research has found that students consider the smartphone to be useful not only to their daily lives but also to education and self-learning, an important factor in student engagement (Dobbins & Denton, 2017; Heflin et al., 2017; Khaddage, Muller, & Flintoff, 2016; Kukulka-Hulme & Shield, 2008). One study found that utilizing smartphones in lectures with an ARS increased student engagement among 86% of the students involved (Dobbins & Denton, 2017).

## **Korean Culture and the Classroom**

The perceived usefulness and efficacy of Poll Everywhere in an English language classroom in Korea remains unexplored. One of the main purposes of this study is to examine the effects on engagement that Poll Everywhere can have on Korean university students enrolled in English courses. Research has shown that Koreans find satisfaction from enjoying and doing well in school (Park & Huebner, 2005). Specifically, Korean English-language learners with moderate to high proficiency levels who find enjoyment or a sense of accomplishment in learning have increased intrinsic motivation (Shin et al., 2018). Positive perceptions of classroom interaction is also linked to intrinsic motivation in Korean students (Wang, 2017). Despite this, there remains an intense test-taking culture which robs many students of any enjoyment in their educational experience due to high peer pressure to achieve (Choi, 2008; Whitehead, 2016). In light of this, Korean classrooms and especially English subject classrooms struggle with motivation and engagement issues (Song & Kim, 2017). Although Korean students want to learn English and other subjects in meaningful ways, a preconceived notion of what makes a good student persists: "being quiet in class, listening carefully, and taking precise notes" (Lee, 2009, p. 143). However, for the English conversation classroom, this remains problematic. Face-saving culture and teacher-centered instruction hinders students from sharing thoughts or participating in activities where English is

required (DeWaelche, 2015). Activities that protect anonymity but also encourage cooperative learning can greatly improve a Korean students' desire and ability to speak out and engage in an English production classroom (Choi & Rhee, 2014). Choi (2008) advocates that a way to overcome this block in activating student engagement is to use mixed-methods teaching that combine culturally familiar teaching methods with more active ones.

Despite their attitudes on English education, Korean university students value technology and feel that using mobile devices – a central facet to Poll Everywhere and other ARS's – makes learning more relevant (Joo et al., 2016). In one study, Koreans expressed that the use of mobile phones is useful and enjoyable (Chun et al., 2012). Additionally, Koreans feel that smartphones are good for well-being (Park & Lee, 2012). Koreans' attitudes towards smart devices and integration of such devices in the classroom remains positive, yet Korean classrooms fall behind in such an integration. One study by Jeong (2017) found that in Korean classrooms, technology was only widely used in elementary schools but then dropped after students enter middle school. This is not to say that Korean students do not want to integrate more forms of technology into their education. The attitudes of South Korean students towards mobile device integration in education remain highly positive (Sung & Mayer, 2012). In light of these findings, teacher-centered teaching methods can be a demotivating factor while utilizing new learning methods inside the classroom prove to be re-motivating factors (Song & Kim, 2017). Some studies also support the possibility that it could be beneficial to engage Korean students with interactive technology in a learning environment (van de Grift et al., 2017).

## **The Study**

This study sought to explore and gather data rather than test any given hypothesis by utilizing an exploratory data analysis method (Pertl & Hevey, 2010). The primary goal of this study was to investigate the attitudes of Korean university students enrolled in English speaking classrooms towards the use of Poll Everywhere to pose questions to the students and ignite discussion in an effort to increase student engagement in conversation-based activities. Through the data collected, this study also hopes to uncover new teaching methods and opportunities for teachers of Koreans in English classes to utilize that could increase classroom engagement and motivation in an effort to increase English production. The research questions are as follows:

1. Does the use of Poll Everywhere as an instructional strategy aid in giving Korean university students motivation to express themselves in English conversation courses?
2. What effect does the use of Poll Everywhere as an instructional strategy have on the student engagement of Korean students in regard to their combination of enthusiasm, interest, participation, and interaction when expressing themselves in an English conversation course?

## **Methodology**

This study lent itself to a qualitative approach as the questions presented to the students over the course of the research were open-ended or non-numerical in nature (Dörnyei, 2007). The research was conducted over the course of two semesters where 41 students, upon the completion of an English-speaking course that utilized Poll Everywhere, voluntarily answered a paper survey and participated in interviews where they expressed their attitudes and opinions on Poll Everywhere. This study utilized a constant comparative analysis approach in order to formulate a hypothesis based on the data collected (Glaser & Strauss, 1967). According to Glaser and Strauss (1967), a constant comparative method follows four steps: "(1) comparing incidents applicable to each category, (2) integrating categories and their properties, (3) delimiting the theory, and (4) writing the theory" (p. 105).

## Participants

This study focuses on Korean university students attending a Korean university near Suwon, South Korea. The data gathered for this paper were gathered over the course of two semesters in which the same professor taught using the same teaching methods. In all, 41 Korean students participated in the survey and interview process. All students range from age 21 to 28 with a vast majority of students being third or fourth-year undergraduate students. Of the 41 participants, 18 were male and 23 were female. All students attended advanced English conversation classes. Of the 41 participants, 38 were English majors in the university and the remaining three were business majors taking English elective courses. Of the interview participants, four were female and three were male, all of whom were English majors. All participants in the study demonstrated English abilities equivalent to IELTS levels 7 or 8 within the course taught before partaking in the study. In addition, all students who partook in the research remained very literate and adept in using a variety of technological formats ranging from many functions within the smartphone and the PC. The profile of the students could be equated with Jeong's (2017) definition of a digital native as being someone "who [has] sophisticated digital literacy through abundant exposure to [several kinds of] technologies" (p. 2). All participants were informed before taking the survey and the interview that they did not have to do so if they did not wish. The students were also informed that the survey would be anonymous. No payment was given to the students, and their participation was completely voluntary. All ethical standards were met with the university before proceeding with research.

## Data Collection

All data was gathered through a paper survey that was given at the end of the semester. Additionally, a small focus group of students was selected at random to participate in individual interviews with the researcher. Throughout the duration of the courses where the data was collected, the teacher gave extensive instruction through Poll Everywhere before engaging in English conversation. All of the classes taught were English conversation classes that required students to share ideas and participate in group work. Specifically, in classes such as debate, students were required to share ideas that can be considered controversial and, based on Korean culture, difficult for students to speak up about (Choi & Rhee, 2014). Utilizing online polling, students anonymously input answers through the use of smartphones before sharing openly in class using English. Students answered a wide array of questions from same-sex marriage, abortion, climate change, terrorism, politics, crime, etc. Poll Everywhere was utilized in these classes frequently but not in every class period. Additionally, Poll Everywhere was used for anticipatory sets as well as guided practice that required group work before always moving onto discussions.

## Materials

A paper survey was used for the initial 41 students who participated in the study. In the survey, the students were asked a multiple-choice question with three options: "yes," "no," and "not sure." Based on these responses, the researcher was able to differentiate positive from negative opinions. The students were then asked to explain their response in a follow-up open-ended question. The researcher placed a mix of questions so as to elicit a larger amount of details and variance in answers (McDonough & McDonough, 1997). The complete survey can be found in Appendix A, and the survey was reviewed by a colleague familiar with both the subject matter of the study and the constant comparative methodology. Following the survey, a select number of students were chosen to participate in a voluntary interview with the researcher. The interviews were done one-on-one and addressed points that were explained in the results of the paper survey.

## Procedure

At the end of every course, the students were asked to fill out a voluntary survey. These surveys were filled out after the final exam had been given and graded. All students were told that this survey would be given independently of their grade and that it was completely optional. All students were given the option to opt out of the survey if they wished. Over the course of the two semesters, all 41 students completed the survey. Students were given the option to write their responses in English or Korean. All students chose to record their responses in English. The surveys were administered by a student proctor on the last day of class each semester after the final exam had been given. The use of a proctor allowed for students to feel more willing to share truthful answers and eliminate the fear of being identified by the researcher if a negative response were to be relayed. All surveys were conducted in the classroom at the university where the students took the corresponding courses. After the surveys had been completed, the student proctor returned the surveys to the researcher.

Following the collection of the surveys and initial data analysis and coding, the researcher selected at random a focus group of seven students to partake in individual surveys (Dörnyei, 2007). The students were each individually interviewed by the researcher based on themes garnered from the initial coding. Subsequent data was then coded after data collection.

Before beginning the discussions with the participants, the researcher made sure to express the purpose of the interview follow-ups and ensured that the participants understood that their opinions and ideas were immune to any objections or challenges, as outlined by Dörnyei (2007, p. 145). The researcher took careful notes of the comments that the students made. The researcher also recorded the interviews to allow for greater accuracy. The researcher received the participants' permission to record the interview sessions.

All participants of both the paper surveys and the interviews were informed of the full intentions of the research and gave their informed consent before partaking in the research, and permission was granted from the appropriate university authorities before conducting the research.

## Data Analysis

The data analysis of student surveys took a constant comparative analysis approach (Strauss & Corbin, 1990). As stated earlier and in alignment with general practices of constant comparative analysis studies, the primary purpose of this study was to generate theory (see Glaser & Strauss, 1967, p. 21). Firstly, the data was collected and compiled in the form of paper surveys given to students. The data was then read and analyzed by the researcher. The raw data were then transcribed and reviewed for accuracy. The grammar and syntax of all responses were input exactly as they were written by the participants so as to preserve their original intent and avoid any unintended bias on the part of the researcher.

After the researcher immersed himself in the data, the researcher organized and coded the data using a line-by-line open coding approach (Khandkar, 2009). Responses were first placed into three categories based on the multiple-choice questions presented to the participants. Three categories were used: "yes," "no," and "not sure." Based on student answers to the multiple-choice question, student responses to open-ended questions were then placed under the appropriate categories. The researcher then coded the data using the line-by-line method. The researcher then re-read and re-analyzed the data within each respective category for accuracy and consistency.

Following the preliminary coding and review, the researcher gathered data from the seven participants in the individual interviews. Data from these participants were then transcribed and coded using a line-by-line coding approach (Khandkar, 2009). Similar to the data transcribed from the surveys, grammar and syntax remained original in form and style.

Following the preliminary coding of both sets of data, the researcher then began a secondary round of coding. The two data sets were then critically analyzed to garner central themes and concepts. Through this, the researcher was able to identify persistent and recognizable themes in the data and coding. The

researcher then used the secondary codes to aid in the generation of theory based on the concepts identified (Tracy, 2013). Throughout the coding process, the researcher enlisted a colleague with expertise in English education of Koreans to review the transcripts and coding for greater accuracy and elimination of bias.

## **Limitations**

As most of the students who partook in the survey were third or fourth-year students, it would be beneficial for more research to be conducted on more age brackets and different academic levels to determine more broadly the efficacy and effectiveness of using Poll Everywhere as an engagement technique. Furthermore, a quantitative analysis of this subject matter would also aid in bolstering the variety of research data available with ARS usage with Korean university students.

## **Findings**

The results of this survey demonstrated a vast majority of students who see the use of Poll Everywhere in class as both helpful and motivating to express their opinions in class. When asked if the use of Poll Everywhere was helpful in class, 95% of respondents recorded “yes” as their answer. Furthermore, when asked whether the use of Poll Everywhere made them feel more enthusiastic or interested to express their opinions in class, 98% responded affirmatively as “yes.” Additionally, every student interviewed by the researcher felt that the use of Poll Everywhere enhanced their motivation to participate in English in class. The results of the formal research are unmistakable: a solid majority of students over the course of two semesters feel that the use of Poll Everywhere aided either classroom instruction and interaction or allowed them to express their opinions more easily. Excerpts from several respondents can be seen in the following sections.

### **Students’ Rationale for the Helpfulness of Poll Everywhere**

Throughout the two semesters in which data were collected, Poll Everywhere was utilized for a wide variety of situations including to aid with the introduction of new topics, to induce discussion of topics that could or could not be considered controversial, and to help build self-reflection skills among students. Respondents on the survey answered “yes” to the question “Do you think the use of Poll Everywhere was helpful to you in class or when talking with others in class in English” with 95% affirmative. The other two options on the survey were “no” and “not sure.” Two students out of 41 selected “not sure” while the remainder answered “yes.” Students then responded in open-ended questions asking them to explain their answer to the previous question.

#### **Students express the importance of anonymity**

Many students throughout the surveys and interviews felt that the use of Poll Everywhere in class helped them to overcome certain cultural and social barriers that would normally hinder them from sharing their opinion.

Korean students are sometimes very shy to share their opinions. However, we can share our opinions in a much easier way. (Student 2)

Many students shared the same sentiment in that they were able to observe the opinions of their classmates and were able to open up more directly about their thoughts. Specifically, because all of the

online polling questions used in class were anonymous, students expressed their appreciation for the protection that an anonymous question afforded them.

Korean students don't try to talk about their opinion in front of other students. But PollEv keeps answers anonymous but allows others to see other opinions. (Student 4)

It was helpful because I was able to see all of the different students' opinions and we were able to share it! (Student 12)

Out of the 41 responses, 21 students, or 51% of respondents, indicated in some form that Poll Everywhere and its interactive ability to share real-time responses to a question anonymously helped them in their classroom discussions.

In the interview phase, participants noted that the anonymousness allowed the participants to overcome fears of responding with grammatically incorrect sentences than sheltering them from the personal inclinations of others. The ability to share freely in English first in written form anonymously was helpful, according to interviewees, when they later segued into sharing information in spoken form. The following is a quote from some of the students explaining their insights into the helpfulness of Poll Everywhere in expressing opinions.

Because I sometimes have fear of speaking and being wrong when using English, the polling website helped give me a chance to share my ideas, because of privacy, I think. (Interviewee 3)

Sharing ideas is hard for Koreans. We are not used to talking about personal ideas. However, using [Poll Everywhere] in class, it was helpful to share my ideas because it was secret. But also, I could see others' ideas, too. I actually felt, like, I had less risks. (Interviewee 6)

Anonymousness remained a reoccurring theme in the responses of over half of the students in this section of the survey as well as all participants in interviews.

### **The intrigue of a new approach**

Another theme that remained persistent in the responses of the students was the freshness of using Poll Everywhere and smartphones in the classroom.

[Using Poll Everywhere] was so fresh cause I've never experienced that kind of participatory class. All of us really enjoyed it. (Student 39)

Other students shared the same ideas in regard to the differences that they have experienced from other university classrooms where technology is limited or not utilized at all. Students felt that the use of interactive polling and smartphones remained helpful in class.

It was quite a creative idea and fun way to get everyone to participate in the class." (Student 41)

"It's interesting because we have not used it in other classes. (Student 7)

Additionally, some students felt that the use of smartphones in class actually helped to increase their engagement and focus in class. One student's response is as follows:

It was fun. Just a listening class could be boring, however by using a smartphone and PollEv, I could focus more in class. (Student 23)

Students who participated in the interview process of the data collection thought that the novelty of Poll Everywhere usage in class allowed for them to participate more in class and gave them a new

perspective in English learning. More so than the responses to the survey, the interviewee students spoke extensively to the novelty of using interactive technology in the classroom to stimulate English language learning. An excerpt of their responses follows:

Korean professors do not do anything but PPT. Lecture and speaking only. So for students, it can be hard to practice English, even though it is English class. If the lesson is all in Korean and we cannot speak, then what about English practice? I think, the polling site, it was really good. It gave us a chance to use English more than other classes. (Interviewee 1)

After anonymity, the novelty of a new teaching style and the deviation from a traditional lecture class which is common among Korean universities appeared to also be a strong theme among student responses and interviews.

### **Aiding in English expression**

Consequentially, the students also noted in their responses that using Poll Everywhere aided them in expressing their opinions in English. It was observed by the researcher that many students would utilize online dictionaries to fill in the answers that they desired for certain questions. The time afforded to the students to answer on the polling site allowed them to search for words that they wanted to use and then submit them real-time to the class answer roster on the projector screen. Several students noted in their responses that this was actually helpful to them as they continue to learn to express themselves in English.

I have a weakness when using English. But, thanks to [Poll Everywhere], I could express my ideas shortly without getting any burden. (Student 28)

Although English is hard, I was able to learn more easily and interestingly. (Student 34)

Additionally, participants in the interview phase of the research echoed the sentiments of the survey responses:

[Poll Everywhere] gave me time to think about what I wanted to say. English is hard for students. But if I think usually slowly, I can usually write English well and thoroughly. (Interviewee 7)

The students responded that using Poll Everywhere increased some students' abilities to utilize English to express their opinions both in written and spoken form.

### **Students' Rationale in regard to Changes in Interest and Enthusiasm**

In the second opinion question of the survey, students were asked the following question: "Did the use of Poll Everywhere make you feel more enthusiastic and interested to express yourself in class?" Students had the option to respond "yes," "no," or "not sure." 98% of students responded with "yes" while only one student responded with "not sure." As with the previous opinion question, students were asked to explain their answers in an open-ended question. Students were also asked about their enthusiasm and interest levels in the interview.

### **Continued theme of anonymity**

Anonymity remained the most persistent theme in student responses. Out of 41 students, 23 responded to the second question with something to do with anonymousness and its effect on the comfort level of students.

Actually speaking voluntarily is hard for most students. After checking various opinions and answers, I could say my mind easier. (Student 5)

Students regularly answered that because the ARS allowed for students to anonymously answer questions, the students felt that their interest increased in class.

Since we did it in an anonymous way, I was interested to express what I really think. (Student 17)

We don't need to write our name on [the answers]. It is anonymous. So we can easily join and express our feelings. It makes us more free to express ourselves. (Student 38)

Because it is an anonymous poll, everyone can be more honest. (Student 21)

Student responses continued the same thread that by answering anonymously, students were able to shield their opinions and free themselves from the judgement of others. Words such as "freely" and "honestly," showcased in the responses above, remain important themes that threaded the responses of the students together.

Students also noted in the interviews that anonymousness allowed for the students to feel more enthusiastic and interested to express themselves in class. There was a clear distinction in the interviews between the idea of anonymously writing out an answer to the interactive site and then later verbally saying that same opinion in English. The students noted that they were perfectly comfortable to write out their responses but that they still had some anxiety to speak out their ideas and opinions, although the prior exposure to the class's ideas and opinions did reduce their fears.

Honestly, for me, grammar is a big problem. I am so scared that I will make a grammar mistake. That is more a problem for me than opinion of others. But when I answer anonymously in class, it makes me more interested to participate, because I don't care about grammar mistakes. I just do my best. But when I speak, it is hard. I still feel nervous, but I already know about the class and their status. (Interviewee 5)

Grammar and opinions for others make me uncomfortable so I am not interested in speaking. [Poll Everywhere] gave me some peace of mind. I don't have to worry about [grammar] because it is anonymous. I don't have to be perfect. But when I speak, being perfect is important. But I know from the poll that everyone has no perfect sentence. So I am ok after that. (Interviewee 2)

Students in the interviews noted that the anonymous polling allowed for them to observe for themselves the grammatical errors and personal opinions of their peers in class. This factor, according to the students, allowed for them to gain a level of comfort to express themselves.

### **Convenience of smartphones and ease of access**

Several students responded that the convenience of smartphones and the ease of access of the website made them more enthusiastic or interested to express one's self. Just as with the previous opinion question, the students felt that smartphones are useful and convenient for study in an English classroom.

Smartphones are useful because with only one-touch I can finish expressing myself. (Student 8)

Students felt that using smartphones in class made classroom English conversation instruction interesting. Additionally, students felt that the ease of access of the website and elements of interactive poll taking such as real-time responses and novelty allowed for students to feel more comfortable expressing themselves.

Students can see other people's ideas in real-time. It also feels like we are having a speed quiz. Positive and interesting. (Student 11)

[The format] is fun and interesting to answer questions and work with other students. Yes, I think it made me more enthusiastic to try. (Student 34)

These student responses indicate that elements of the interactive software were the cause for an increase in interest. Specifically, students felt that using the software was "not like an assignment" and that it made it fun to "work with other students." After anonymity, survey responses that featured ideas about smartphone usage and ease of access ranked second in how Poll Everywhere made students feel enthusiastic and interested to express their opinions in class.

In the interviews, however, only one response was gleaned from the participants that could be categorized as stating that the use of cellphones in class allowed for them to feel more enthusiastic and interested to express English.

It is a kind of modern idea. I do not feel uncomfortable to use my cellphone but instead I feel enthusiastic to use it. Everyone uses their phones, so why not in class? It made me feel more casual and comfortable to participate. (Interviewee 1)

### **Aid in English conversation**

Another factor as noted by students was the ability of Poll Everywhere to initiate conversation and peak interest. Some participants in the survey stated that knowing the opinions of others and being able to first write about the answers that they would later talk about helped them feel more comfortable to express themselves.

I think most important thing is communicate with the classmates if I take the English class. So that means this kind of website helps me a lot to speak with classmates. So, it made me so more interested, and it might be a service to somebody who really wants to speak more English. (Student 12)

Students indicated that using Poll Everywhere allowed them to feel more enthusiastic to speak English to express themselves. Students mentioned that elements of writing and conversation initiators were ways that they felt more comfortable to speak their opinions.

Interviewed students also noted that using Poll Everywhere allowed for them to improve their English in individual ways.

Personally, through the use of this site, it made me more comfortable to talk to others. The way we used it in class was good. It gave me time to hear and think and then talk to my classmates. For me personally, it helped. (Interviewee 7)

The students in the interviews noted that using Poll Everywhere allowed for them to feel more comfortable and interested in speaking both in regard to grammatical correctness and in sharing personal opinions and ideas with others on advanced English topics.

### **Discussion**

It appears from the results of the data gleaned that using Poll Everywhere as an ARS has the potential to raise the engagement levels of students in English conversation classes. To review, student engagement is defined as the combination of enthusiasm, interest, participation, and interaction as it is incorporated in

deeper learning and self-regulation (Kahu, 2013). From the responses that were gathered through the surveys and interviews, it can be observed that students were spurred on to active learning and participation with higher levels of motivation, interest, and enthusiasm. The evidence suggests that students were invited to take risks and use English to produce ideas and opinions that they may not have felt inclined to do so in other language classrooms. The findings of this research are consistent with that of other researchers from other areas of the globe (Blood & Neel, 2008; Cohn & Fraser, 2016; Damron & Mott, 2006; Gewirtz, 2012; Kappers & Culter, 2014; Sellar, 2010; Shon & Smith, 2011; Stowell & Nelson, 2007; Warnich & Gordon, 2015). What is unique, however, is that the findings of this research originated in a Korean rather than Western context. Based on the findings of this study, a hypothesis can be formulated: using Poll Everywhere as an ARS allows for Korean students in English conversation classes to more actively participate and engage more effectively in classroom instruction due to its anonymity, novelty of teaching style coupled with unique smartphone usage, and aid and encouragement in expressing English more precisely.

Indeed, in line with other researchers in other cultural contexts, the findings of this study imply a positive correlation between the use of ARS's and Korean classroom engagement (Blood & Neel, 2008; Cohn & Fraser, 2016; Damron & Mott, 2006; Gebre et al., 2012; Han & Finkelstein, 2013; Stowell & Nelson, 2007). The findings of this study support the findings of the Song and Kim (2016) study that stated that Korean students want to find ways to study English in manners that fit their personal preferences or are comfortable. This research indicated that Korean university students were more comfortable and willing to participate in English conversation because of ARS usage, a finding that reflects Rodriguez and Shepard (2013) in their study of adult Spanish speakers. Additionally, the study by Song et al. (2017) echoes the findings of this study through their assertion that language students are more willing to communicate through the use of ARS. However, the findings of the study were somewhat in disagreement with that of Selwyn (2016). Selwyn (2016) stated that if students felt that technology used in the classroom did not meet their expectations of what a university classroom should look like, they will often reject it. In the research, it was clear that the technology used in this researcher's classroom was novel and did not match expectations of typical Korean lecture halls. Instead of rejecting it, however, the students say the ARS remained an enhancement for the English classroom and encouraged active participation and enthusiasm to communicate in English.

Additionally, Korean students expressed their interest in using Poll Everywhere because it allowed for students to respond to questions anonymously. The findings of this study suggested that students were engaged in lessons containing ARS activities because they were allowed to answer questions anonymously and, therefore, freely and honestly. These findings are in line with that of other researchers who have stated that anonymity remains paramount in Korean culture (DeWaelche, 2015; Lee, 2009). Anonymity remained the number one reason for positive responses to using Poll Everywhere. Interestingly, the data gathered from the interviews pointed out a divergence in why the anonymousness of Poll Everywhere was so important. Unlike the paper surveys, students in the interviews noted that grammar as well as peer pressure both played a role as to why students were not willing to share their ideas initially. In other words, students were afraid of making a mistake in grammar as much as they were in stating an opinion that could be taken critically by another classmate. This seems to reinforce what was said in earlier research about an ARS's ability to reduce classroom anxiety and shame associated with answering questions (Stowell & Nelson, 2007).

Furthermore, the findings of this study suggest that students enjoy class more when using an ARS program (Bruff, 2009; Caldwell, 2007; Cardoso, 2011; Cohn & Fraser, 2016). Park and Huebner (2006) stated in their research that Korean students find satisfaction from enjoying and doing well in school. The student responses are in line with this conclusion. Students suggested that when an ARS was introduced into the classroom, students enjoyed class more than traditional lecture-based classrooms, potentially increasing engagement. This enjoyment also demonstrated in the student responses an increase in enthusiasm to communicate more freely in class through the use of Poll Everywhere, a notion that is supported by other students in other cultural contexts (Kappers & Culter, 2014).

Finally, in line with other researchers, the Korean students that partook in the survey and interviews noted that the use of smartphones in class in an interactive manner actually enhanced the classroom experience and allowed them to be more engaged in English conversation activities (Chun et al., 2012; Joo et al., 2016; Park & Lee, 2012). In conjunction with the study conducted by Guthrie et al. (2004) where traditional clicker systems actually devalued the interactive capacity of an ARS, the use of smartphones was noted to increase student communication and English expression notably due to its wide variety of uses in the program. The findings of this study are in opposition to the findings of Heflin et al. (2017) who stated that utilizing smartphones in the classroom could actually lead to disengagement among students. In this study, no student discussed the usage of smartphones having any negative effect on perceived student engagement.

Overall, the findings of this study demonstrated what other researchers have stated about technology in Western classrooms. Korean students are open and ready to use Poll Everywhere and perhaps other ARS software in their classrooms, and, when it is utilized, Korean students have the potential to possess heightened engagement in their classroom instruction. Korean students in English conversation classrooms at a Korean university soundly stated that using Poll Everywhere in the classroom not only helped them to respond more extensively in English but to do so with increased motivation driven by an elimination of shame and anxiety to participate.

### **Implications**

The implications of this research have the potential to be far-reaching when considering common pedagogical practices in Korea. The findings of this study not only confirm the research done by other scholars but adds Korea to the chorus of other student bodies who can be engaged and motivated as language learners through ARS technology (Blood & Neel, 2008; Bruff, 2009; Caldwell, 2007; Cardoso, 2011; Cohn & Fraser, 2016; Guthrie & Carlin, 2004; Latessa & Mouw, 2005; Stowell & Nelson, 2007). In a country where students are confronted with lecture-based lessons, students responded positively to having Poll Everywhere laced within the instruction of English conversation. Teachers have the potential to incorporate Poll Everywhere and other ARS programs into their English language classrooms to increase classroom engagement and motivation to participate in English conversation, something that teachers in Korea have expressed interest in (Park & Son, 2014). The research denotes the effectiveness and appropriateness to incorporate more ARS technology to enhance language learning in Korean universities. Although this research cannot claim itself to be a generalizable representation of all Korean students, it can serve as a call to further innovate language learning styles in the Korean cultural context. Where past research focused on Western classrooms, this research suggests that Korean classrooms may too need to develop and innovate pedagogical practices to better engage technologically literate students in language instruction so as to improve language development.

### **Limitations and a Need for Further Research**

Limitations remain in regard to the scope of the study. This research focused on the engagement levels of students based on their participation and motivational levels. This study did not focus on the actual academic achievements as a result of using Poll Everywhere in the classroom. This study also did not delve into whether smartphones in and of themselves are a distraction or engager in regard to memory subsumption or academic achievement.

In addition to testing the level of academic achievement, more research needs to be conducted on the changes to language subsumption as a result of using an ARS as a teaching strategy.

Finally, more research needs to be conducted on the vast variety of ways that interactive technology can be conducted in the classroom. This research focused on one ARS as a sole form of technology.

There are many other methods including but not limited to augmented reality, virtual reality, etc. that could be utilized within Korean English-language classrooms.

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## Appendix

### **Korean Students Perspectives on using Poll Everywhere in the Classroom**

1. Gender:
  - a. Male
  - b. Female
2. How old are you? \_\_\_\_\_
3. What class are you taking? \_\_\_\_\_
4. Do you think the use of Poll Everywhere was helpful to you in class when expressing your opinions in English or when talking with others in class in English?
  - a. Yes
  - b. No
  - c. Not Sure
5. Please explain why you think Poll Everywhere was helpful or not helpful.
  
6. Did the use of Poll Everywhere make you feel more enthusiastic and interested to express yourself in class?
  - a. Yes
  - b. No
  - c. Not Sure
7. Please explain your answer to number 6.
  
8. Is there a difference in the approach used this semester than in other classes that you have experienced? Explain.