

Fluency Practice on Mobile Phones: Implementing a Recording System and Following Students' Respons

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Introduction

Giving students opportunities to develop their speaking fluency is quite difficult where English is being taught as a foreign language, since students rarely use or get to use their English (L2) outside the classroom. In order to give English majors at a Japanese women's university more fluency practice, in the 1990s we began requiring first year students to record free conversations outside of class. Though various forms of digital recording developed over that time, we continued using analog recording (on cassette recorders) as we were unsure which digital recording system could best replace it. When a curriculum revision made digital recording more imperative, we enacted a system for recording on mobile phones using free recording software, with recordings submitted via uploads to an online learning platform (Moodle). We implemented this system in 2013.

Implementation gave us the opportunity not only to assess this specific solution, but also to find out how students felt about mobile technology in general, how they responded to this innovation, and how we as teachers worked together in the course of implementing it, both with learners and amongst ourselves. This paper recounts our experiences. Student attitudes were ascertained through a series of questionnaires as well as our ongoing interactions with them, while our own collaborative experiences as teachers were shared both through our coordinated efforts in implementing the system, and through written and spoken reflections shared as a group.

Implementing the Digital Recording System

Out-of-class recording for fluency practice has been detailed elsewhere (Kluge & Taylor, 1999, 2000; Schneider, 1993). It was adopted at the current university in the 1990s because we felt that first year English majors were not getting enough speaking practice in a single weekly lesson. We had positive results, and several other institutions in our area also began to adopt the system (Kluge & Taylor, 2009). An alternate form of out-of-class fluency practice emerged in the form of "English only" spaces on campus, specifically the World Plaza at Nanzan University (Croker & Ashurova, 2012). This significant alternative to recording nevertheless required resources, staff, learner training and a degree of administrative involvement that were not feasible for us. Provenzano and Yue (2011) had students record their conversations as homework, and found that by giving students opportunities to have conversation

practice outside the classroom reduced students' anxiety and increased students' confidence and speaking fluency. Additionally, they were also interested in the use of conversation strategies by the students. Taking the ideas of Provenzano and Yue (2011) even further, allowing students to post their conversations allows them to publish their ideas, which is a major component of participatory culture (Jenkins, 2007)

Student recording in our system requires at a minimum that students record free speaking in English in pairs (or trios) most weeks of the term, and submit recordings to the teacher, who monitors and assesses them to verify that the recordings are complete and in the target language, typically by spot checking. Cassette recording is so archaic now that the advantages of digital recording hardly need to be explained (sound quality, ease of monitoring, etc.). In the larger context, the growing use of digital devices in everyday life has had great effect on the use of technology in education over the past few years. According to Warschauer and Matuchniak (2010), this role of media and technology in society "serves to highlight their important role in education, and especially in promoting educational equity" (p. 180). Japanese English language learners' use of social media, such as Facebook and Twitter, has significantly increased, thus affecting classroom learning. With concern to language learning and the increase of the digital divide, Egbert and Yang (2004) suggest focusing "on the divide at the classroom level in computer-assisted language learning (CALL) that is centered on those who have or do not have the technology, but on those who have it use it in the pursuit of effective language teaching and learning" (p. 281). The program needed to make a change from cassette to digital recordings. Nevertheless, we had found through experiences in other courses that processing digital recordings, especially as email attachments, was actually more cumbersome than working with cassette tapes. Problems included; lost emails, missing attachments, confusing subject headings, unfamiliar file types and recording applications, length limits for cell phone "voice memo" applications, and there were additional complications with using "IC recorder" devices.

In our switch from analog to digital recording we wanted to avoid these problems. Our solution was conceived through consultation with a technologically adept member of our group who taught in a different department. Based on his own class data, he determined that well over half the students would have some kind of smart phone (it turned out to be close to 100%). There were enough for recording pairs. With smart phones, students could download free recording applications that enabled long recordings (such as Voice Record Pro for iPhones or RecForge Lite for Android). Since courses at our institution were already registered on a Learning Management System (Moodle), recordings could be uploaded onto each class assignment folder directly from students' phones. Teachers could then monitor and assess all student recordings quickly and easily from a single page without sorting through emails and attachments.

We implemented this digital recording system in 2013 in a two skills (speaking and writing) first year course that was part of a revised curriculum. Students were streamed into five classes based on English ability. Five teachers participated, with the particular help of the technical advisor previously mentioned and a new participating teacher who was also technically adept.

By the end of the year, the system seemed a qualified success and a worthwhile investment of time and effort. We felt an optimal solution to the logistics of student recording had been achieved. Submission, monitoring and assessment were decidedly improved compared to analog recording or digital submission by email. Student responses are described in the next section, but our overall impression was that students worked well with the system and that the use of mobile technology in particular gave students more freedom to record when and where they wanted to, hence more autonomy as learners. As teachers, the collaborative effort (including several technical tutorials, informal conferences, and ongoing trouble-shooting) was a valuable experience in professional development.

Nevertheless, implementation was not trouble free, mostly due to all participating teachers not being equally adept with technology. Though the department approved our system, for logistical reasons we were not able to arrange a general orientation for all students before classes started, meaning that teachers had to orient students in class. This involved finding out what phones our students had, demonstrating how to download applications, directing students to enroll on Moodle, making a test recording, and uploading test recordings to the LMS.

Two teachers lacked technological confidence to orient students, and elected to continue with the analog system, though they made the digital switch in the second semester. Thus the system got off to a decidedly uneven start. Once classes began, the remaining teachers still needed help introducing the system, and the more technically advanced teacher was compelled to run around giving short demonstrations in other classes, even while his were still in session. Many of the technical glitches that came up could also only be resolved by more technically adept teachers, even for students not in their classes. These “knowledge gaps” narrowed considerably as the year progressed and everyone gained more facility with the system. On the other hand, when the two teachers who delayed the introduction of smart phone recording went digital in the second semester, we had lost some of the initial cohesion of our project. In this way, the lack of a general tutorial for all students had unintended detrimental consequences. On the other hand, since “analog” and “digital” groups were present, we could compare them as part of the study.

Goals of the Project

The goal of this study was two-fold: to explore student perceptions of a new digital recording system utilizing smartphones, recording apps, and Moodle, a learning management system (LMS). Specifically, the researchers wanted to examine students' comfort level and self-assessed ability using the above technologies. Second, student opinions concerning the general activity, partner free conversations, were also measured.

Research Design

Investigating the multifaceted nature of students' comfort level and self-reported ability to use their smartphones, recording apps, and Moodle both individually and in sync, required an equally complex means of analysis and design. A multivariate design was used to deal with the large number of variables.

Two separate surveys were administered to two different groups, a digital group and an analog group, respectively. Although both surveys contained the same two independent variables (time and teacher), the digital survey had 40 dependent variables, while the analog survey contained 31 dependent variables. A higher number of dependent variables arose in the digital group as the process itself contained more steps than its analog counterpart. However, only a select number of variables were exclusive to either group (e.g., the process related questions), while many variables remained the same or shared considerable overlap. The dependent variables were categorized into broader categories, such as Moodle's graphical user interface (GUI), and analyzed separately and together using factorial repeated measure ANOVAs and factorial MANOVAs.

Instruments

As the data gathered concerned student perceptions and attitudes, the researchers collected responses by means of a close-ended paper based questionnaire. To help insure the data collected was not influenced by any cultural factors regarding the middle point on odd numbered scales (Chen, Lee, & Stevenson, 1995), a 6 point Likert-scale questionnaire was implemented. Moreover, a Likert scale was utilized for its ease of comprehensibility (for respondents) as well as its uniformity across different collection periods. In order to collect the most accurate attitudes and perceptions, the questionnaire was translated from English into Japanese. The researchers followed a team based approach (Dörnyei & Taniguchi, 2010; Harkness, 2008) to the translation of the instrument. This entailed multiple reviews by proficient Japanese speakers as well as a final review by a native Japanese speaker with expert familiarity in the genre of linguistic surveys.

Participants

5 teachers and 92 first year students represented the participants of this study. The students were nearly equally distributed across the five different levels of the speaking and writing course. In addition to this division, digital and analog groups were also created. Students were placed into these two groups by the type of technology employed by their teachers. The analog group consisted of 39 students separated into two classes. The digital group, on the other hand, comprised the remaining 53 students who were divided among three classes.

It should also be noted that upon the second round of data collection, both of the analog classes transitioned to the digital system comprised of smartphones, recording apps, and Moodle. These classes were still given the analog survey to measure how (if any), their perceptions and opinions concerning analog recording differed in their post-digital switch. The current study will focus more on digital results, though the results of the analog data will be discussed where relevant.

Data Collection Procedure

A paper copy of the questionnaire was administered a total of three times over one academic year (2013-2014) and completed across each of the five sections. All participants were enrolled in the same

two skills course, which met on the same day and time. Students were given 15 minutes to complete the questionnaire at the end of class. Participating instructors were also included in a list-serve, which provided updates regarding the questionnaire throughout the study. This was one way survey administration dates were decided and distributed. Although the researchers had initially planned on administering the survey at beginning and ending of each semester, for a total of four times, a decision was made to exclude the end of the first semester to avoid a possible conflict with a higher priority departmental survey.

Analysis

Before addressing the descriptive statistics, first we will discuss the responses and continue to the methods and tools used to analysis the data. The return rate of questionnaires as well as the number of valid responses per question was nearly 100 percent across all the administrations of the surveys. The raw data from the paper questionnaires were entered by the same person into two computer programs, once into Excel and once into SPSS 19 for Windows. The two data sets were cross-referenced against each to improve reliability. Discrepancies among the data sets were checked against the original survey and corrected where necessary. Each survey was coded specifically to its digital or analog group, time of administration (3 periods), teacher (5 teachers), and a numerical value based on the number of students in a section was assigned. For example, D_B1_3, would denote data collected from a digital group in Bob's section, taken May 2013, from student 3.

General descriptive statistics as well as frequencies were then generated for each group, time period, and teacher on an individual and overall basis. The significance level set for the study was 0.05, with factorial repeated measure ANOVAs calculating the percentage of variance (partial eta squared), which could be attributed to the different variables. The post-hoc test, least significant method (LSD), in ANOVA was applied to results, which were found to be significant.

Results

As mentioned before, the transition to the digital system felt like a worthy investment, which paid itself over by the end of the year. Specifically, it appeared that exposure to the new system and teachers over time resulted in an improved handle on all aspects of the process, from recording to uploading. Although the results for both groups seem to corroborate this, the independent variable, teacher, accounted for more variance in the digital group data set than time did. On the other hand, it was *time* which represented more pull in the analog data set than teacher. This was an unexpected finding and will be further addressed in the discussion section.

Teachers seemed to feel that students also enjoyed the partner free conversation. While statistical significance was found for the digital and analog groups regarding the statement, "I feel that doing free talk conversation recording improves my speaking ability," ($p=0.000$ and $p=0.012$ respectively), the independent variables were different. For the digital group, it was the teacher who seemed to pull the greatest influence. However, for the analog group it was time, which accounted for

some of the variance in perceptions.

As for the digital/analog divide, the results appear to suggest that students enjoyed the freedom and digital medium of partner recording afforded by the smartphone, recording app, Moodle based system. Moreover, data from the process related questions concern students self-assessed ability to upload, record, and navigate the various digital interfaces suggests that the digital system was able to bypass some of the downfalls of other digital methods, such as the IC record and email based approach.

Discussion

In implementing a fully digital system, the “digital divide” we experienced fell more on the teachers than the students. For this system to function smoothly, the teachers themselves need to be comfortable using both the school’s LMS and the smartphone applications used for recording. Ideally, these skills should be developed before attempting to introduce the system to the students. Obviously, more preparation was needed on the part of teachers to be fully confident in the system. At the current university, this divide was exacerbated by teachers’ lack of co-ordination and regular meetings to both set up and monitor the digital recording program. This is particularly crucial in the opening weeks of instruction, when students encounter the most problems and frustrations. Clearly this is an area that begs improvement, and one that schools considering a similar program need to consider. As well, the ever-present possibility of staff turnover needs to be addressed, possibly by creating an orientation program or guide for teachers who join in future years.

Not surprisingly, students recoiled at using cassette tapes. For many, these devices are alien to them and not something they are comfortable using. The data showed clearly that, from the beginning, students were receptive to the idea of using their smartphones as tools of education as well as entertainment. Over the course of the year, student confidence in learning digital technology rose continuously. They became accustomed to both using recording software and the process of uploading their conversations to the university’s course management system. Those students who began the year using cassette tapes showed a lower overall satisfaction in their use. Switching to digital for the second term showed a clear jump in satisfaction to levels similar to those in the classes which used digital recording for the full year.

However, the question of whether or not the students actually felt there was value in the exercise was not as obvious. The data showed that students were ambivalent as to whether or not using smartphone applications were actually useful in improving their English. Similarly, results were mixed when students were asked if the actual activity was enjoyable. In both of these areas, student responses were more negative at the end of the academic year than at the beginning. Possible reasons for these results are that the initial “fun factor” of using their smartphones for educational purposes wore off, or perhaps simple fatigue at the weekly recording schedule.

This ambivalence was not seen in students who switched from analog to digital mid-year. Once again, their feelings mirrored those of classes which used digital recording from the beginning- that is to say, their feelings became more positive upon switching from cassettes to digital recording. Changing

to using smartphones (and perhaps social relief at finally being the same as the majority of their peers) overcame the feeling of fatigue felt by many of the students who used digital technology from the beginning of the year.

The dichotomy between the students' ability to use digital technology and their perceptions of its usefulness as an educational tool highlight another possible "divide" in this program. To combat this divide, teachers need to provide ongoing feedback and support to the students. As well, teachers need to monitor whether students are falling behind in their recording, and determine whether the cause is technical or motivational in nature.

Present and Future Directions

Given that smartphones are now a standard accessory among university students, we have been able to move forward with streamlining and fine tuning the program. From the new academic year (2014), digital recording has been included as part of the standard orientation process that all students undergo.

We will also have usable data in the form of the students' recordings to analyze and evaluate. At present, we assume that this system will result in fluency gains in students merely through the physical act of speaking and recording. This data can be used to discern any actual fluency gains over the course of a year through conversation analysis. Such data could also be used to convince incoming students that the conversation recording system does have benefits for their English ability. The recorded conversations are also a digital portfolio for students currently in the program. They can be accessed through the school's LMS at any time. Students can listen to their own conversations, and (hopefully) discover that their fluency has grown, and use this as motivation to continue.

With English classes at the current university being divided by ability, fluency gains (if any) could also be measured and compared by student English level. In this way, any correlation between fluency gain and initial competence could be explored. Finally, as the students continue the recording program in their second and third years of study, we can measure their gains over time, and discover if their gains continue or plateau at some point.

We are in the digital age. Embracing available technology both empowers students and increases their control of their own education. Digital conversation recording is potentially an effective tool with which to combine something which students enjoy (using their smartphones) and something they need (conversation practice).

References

- Chen, C., Lee, S. Y., & Stevenson, H. W. (1995). Response Style and Cross-Cultural Comparisons of Rating Scales Among East Asian and North American Students. *Psychological Science*, 6(3), 170-175.
- Croker, R., & Ashurova, U. (2012). Scaffolding students' initial self-access language centre experiences. *Studies in self-access learning journal*, 3(3), 237-253.
- Dörnyei, Z., & Taniguchi, T. (2010). *Questionnaires in second language research : construction, administration, and*

- processing*. New York; London: Routledge.
- Egbert, J., & Yang, Y. (2004). Mediating the digital divide in CALL classrooms: Promoting effective language tasks in limited technology contexts. *ReCALL*, 16(2), 280–291.
- Harkness, J. A. (2008). Round 4 ESS translation strategies and procedures. Retrieved May20, 2013. http://www.europeansocialsurvey.org/index.php?option=com_docman&task=cat_view&gid=109&Itemid=80
- Jenkins, H. (2007). *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. MacArthur Foundation.
- Kluge, D., & Taylor, M. (1999). Outside taping for fluency: A practical system. In Barfield, A., Betts, R., Cunningham, J., Dunn, N., Katsura, H., Kobayashi, K., et al. (Eds.), *On JALT98: Focus on the Classroom: Interpretations. The Proceedings of the JALT 24th Annual International Conference on Language Teaching/Learning & Educational Materials Expo* (pp. 27 - 32). Tokyo: Japan Association of Language Teaching.
- Kluge, D., & Taylor, M. (2000). Boosting fluency through partner taping. *The Internet TESL Journal*. Retrieved October 3, 2007 from <http://iteslj.org/Techniques/Kluge-PartnerTaping.html>
- Kluge, D. & Taylor, M. (2009). Controlled independence in a partner taping system for university English majors. In Carroll, M., Castillo, D., Cooker, L., & Irie, K. (Eds.). *Proceedings of the Independent Learning Association 2007 Japan Conference* (online): *Exploring Theory, Enhancing Practice: Autonomy across the Disciplines*. Kanda University of International Studies, Chiba, Japan, October 2007. Retrieved December 22, 2013, from http://www.independentlearning.org/uploads/100836/ILA2007_021.pdf
- Provenzano, C., & Yue, S. (2011). Take it outside! - Speaking homework for English communication classes. *Intercultural Communication Studies*, 20(2), 220.
- Schneider, P. (1993). Developing fluency with pair taping. *JALT Journal* 15 (1), 55 - 62.