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**Abstract**

Our pilot project created blended/online courses to accommodate the growing needs of pre-collegiate and collegiate students interested in learning Korean and Japanese. In the initial phase, we conducted a survey of students' experiences with and perceptions about blended/online Asian language learning. We found a general lack of familiarity with, and moderate resistance towards, online language learning modes. With learner attitudes in mind, we developed online modules for beginning Korean and Japanese courses. In this paper, we report the survey results and the process of developing these innovative blended and online modalities of content delivery, focusing on the strengths of the modules and the unforeseen development challenges. The impacts that these technology-enhanced environments may have on student perceptions of transactional distance and tele-/co-presence are explored. We suggest that transforming conventional East Asian language courses into blended/online modes is not only feasible but also beneficial for foreign language teaching and learning.

**Keywords**

Blended learning, Online modules, Digital technology, Multimodality, Foreign language education, Learner attitudes towards technology-enhanced language learning, Standard-based curriculum design

## 1. Introduction

East Asian languages are among those less commonly taught languages that appear very daunting for American students to master due both to their structures which seem completely different from that of English and to the lack of target language immersion opportunities within the U.S. Nevertheless, the requests for offering East Asian language courses have been unexpectedly increasing. The most recent Modern Language Association (MLA) Report on U.S. college language enrollments (Goldberg, Looney, & Lusin, 2013) confirms this trend nationwide for Korean noting a 45% increase in Korean enrollments since 2009. Since 2002, enrollments in Japanese have increased 28%, making Japanese the 6<sup>th</sup> most commonly studied language in college, ahead of Chinese in the 7<sup>th</sup> place while Korean represents the 14<sup>th</sup> most commonly studied language. At our institution, Korean and Japanese instructors have recently encountered a growing demand for flexible credit-bearing course offerings from high school and college-level students within and outside the local community.

This high demand reflects 1) students who are interested in learning more foreign languages but cannot take a face-to-face (F2F) class in their regions due to the issues of distance, schedule, paucity of resources, etc., and 2) a growing need for transformative learning experiences from a generation of students, referred to as the “Net generation” (Carlson, 2005) or the “Millennials” (McGlynn, 2005)—those born after 1982 and coming of age within dynamic multimedia environments. Today’s generation is wired in the immersive social networking sphere augmented by the ubiquity of emerging technologies (Spry, 2013). This prevalent digital mania shapes our students’

“Neomillennial learning styles”—characterized by multitasking, experiential learning, flexibility, and communal learning (Dede, 2005). Our task is thus to transform the conventional way of delivering language instruction so as both to fully engage the net generation and to include more students—and a greater range of students who might otherwise not be able to take these language courses. In creating online instructional alternatives, we are also able to address other concerns which F2F instructors sometimes express, such as the fear of lagging behind the pre-set course schedule and the need for students to have continued language practice when physically attending the class is not feasible. In creating technology-enhanced curricula, however, we must be mindful of potential student concerns, such as a desire for peer interaction, scaffolded learning, and meaningful assessments.

At our institution, the demand specifically for flexible Korean and Japanese courses, coupled with concerns regarding this method of language content delivery, propelled us to undertake this project in order to implement our first blended Korean course and online Japanese course. Following an action research approach, our project began with a needs analysis survey where we investigated students’ experiences with online language learning, their perceptions of online foreign language courses, their expectations for online course content, and their expectations for instructor and student interaction in an online environment. We then developed two different types of introductory Asian language courses—a blended Korean course and a fully online Japanese course—taking into account information gleaned from the survey. Our decision to explore two types of technology-enhanced Asian language courses, rather than one,

was driven by factors of feasibility, instructional priority, and instructor preference.

Despite differences in the percentage of content delivered online, both our Korean and Japanese courses capitalize on innovative technologies and standards-based curricula in order to enhance content delivery and critical thinking, asynchronous and synchronous interaction, learner motivation and engagement, cultural awareness and understanding, as well as evidence-based and performance-oriented assessments. In the following, we will present our report on the needs analysis survey results, our blended Korean course (piloted in Spring 2015) and online Japanese course (offered in Summer 2015). We will then discuss the challenges we have encountered designing these innovative courses while demonstrating how both of these types of courses can be successfully implemented, bringing these languages and cultures to a wider, more technologically engaged, audience.

## **2. Online and Blended Learning Environments for Foreign Language Education**

Typically when people think of student and teacher interactions, they picture a traditional F2F classroom where students and teachers communicate directly. However, in today's landscape filled with educational technology—such as Learning Management Systems (LMS), streaming or lecture-capture videos, and web conferencing software—we need to broaden our focus to include mediated communication in traditional and virtual classrooms (Bacow et al., 2012; Garrison, Anderson, & Archer, 2001; Sener & Shattuck, 2006). Planning for learners as media users poses new challenges to instructors,

requiring us to consider the affective and cognitive dimensions of this new learning medium (Anderson & Walberg, 1974). We must also plan for how our students will perceive our presence, and how they will dialogue with us, with each other, with the course content, and with the technology itself (Lombard & Ditton, 1997; Munro, 1998; Ekwunife-Orakwue, K. & Teng, T., 2014). In addition, we must plan for the amount and type of content that is best delivered outside of the F2F format. Allen and Seaman (2010) developed operational definitions to categorize courses based on modes of educational content delivery and distribution of time in those modes (see Table 1).

*Table 1. Operational definitions of course classifications based on mode of content delivery*

<b>Type of Course</b>	<b>Typical Description</b>	<b>Proportion of Content Delivered Online</b>
Traditional Face-to-Face (TF2F)	No online technology is used and content delivery is via writing or orally.	0%
Web Facilitated	A traditional F2F course supplemented by/augmented with a web-based technology such as a Course Management System (CMS), or assignment- or syllabus-related web pages.	1 to 29%
Blended/Hybrid	A hybrid of online and traditional F2F delivery; with more online meetings than F2F meetings.	30 to 79%
Online	Most or all of the course and its content is delivered online, with none/negligible F2F meetings.	80+%

*Allen and Seaman (2010, p. 5) based on a survey of 2,500 Colleges and Universities*

McGee and Reis (2012), while acknowledging Allen and Seaman's classification, note that the literature on blended and hybrid courses does not often discuss the amount of time spent in various modes, and when this factor is mentioned, the amount of online content delivered can range from 10-90%. They argue for a definition of "blended"

learning which focuses on how components of instruction and learning, online and F2F, are melded together in unique ways. They suggest the following definition for a “blended” course:

Blended course designs involve instructor and learners working together in mixed delivery modes, typically face-to-face and technology mediated, to accomplish learning outcomes that are pedagogically supported through assignments, activities, and assessments as appropriate for a given mode and which bridge course environments in a manner meaningful to the learner. (p. 3)

Bearing in mind Allen and Seaman’s classification and McGee and Reis’ definition, we categorize our Korean course (described below) as “blended”: 25% of the course meetings, and many components of the activities and assessments, were conducted online so as to enhance meaning for the learners. Our Japanese course was fully online, with all of the content delivery being technologically mediated.

Blended learning has been acclaimed for its flexibility that transcends the constraints of time and distance (Young, 2002). It accommodates the needs of both students and teacher and blends them into an environment that can be more conducive to teaching and learning (Garrison, & Kanuka, 2004). For instance, teachers can devote more time to the design of course content and materials as well as provide more frequent feedback to help students stay on task. The blended mode also provides students with 24/7 access to course materials and content at their own pace before they get ready to participate in F2F class discussion (Aycock, Garnham, & Kaleta, 2002). Research also shows that blended learning leads to better learning outcomes than a traditional face-to-

face class alone (Dowling, Godfrey, & Gyles, 2003; O'Toole., & Absalom, 2003). That is, students take more responsibility for their own learning by actively participating in online discussions and team project work, and they think more critically as opposed to being reticent towards participating in class.

A salient advantage of the blended learning modality is that it lifts the obstacle that prevents students or faculty from being physically present in class each time, due to their work schedules or difficulties with commuting. With the blended modality, students can still benefit from participating in online discussions, accessing course materials and connecting with the teacher and peers either online or in class (Shedletsky & Aiken, 2001). Compared with a traditional class, the interaction between the teacher and students is more positive, strengthened by students' ownership of learning, sense of community and reinforcement of motivation (Rovai & Jordan, 2004). It also has the economical value for being cost-effective (e.g., alleviation of the constraint by a physical classroom and the possibility of accommodating more students via the online mode). Educators and administrators in higher education, hence, are starting to jump on the blended learning bandwagon to provide more course offerings and to make education more accessible (Bonk, Kim, & Zeng, 2005).

The above-mentioned advantages of blended learning are also true of online learning environments—flexibility, ubiquitous access, enhanced learner motivation and satisfaction. There have been few studies that directly compare blended and online delivery modes, though a notable exception is Lim, Morris & Kupritz (2007). Their study focused on a course in Program Evaluation within an undergraduate Human Resource



Development program. Approximately half of the students (N=69) were enrolled in the blended version of the course while the other half (N=59) took the online version. The researchers investigated differences in perceived and actual learning outcomes between the two modes via closed and open-ended questions on an online questionnaire. They found that there were no differences in perceived or actual learning between the two groups. However, online students perceived that they had a greater workload and that they lacked learning support and clear, learner-centered directions for activities as compared to the perceptions of the students in the blended course. These results suggest that both are effective modes of content delivery, though online instructors will have to work harder at providing support and clarity while closing transactional distance (Moore, 1993) between the student and instructor.

Despite the benefits of blended/online learning addressed above, content delivery, task design and assessment tools in an online/blended language course differ from those in other delivery modes. Prior studies have indicated key areas of concern in conducting online/blended foreign language courses such as the possible lack of peer interaction, collaborative tasks, teacher presence and scaffolding, aural/oral practice, and performance-based assessments (Oliver, Kellogg, & Patel, 2012). These aforementioned concerns propelled us to propose this project in order to explore, design and implement blended/online Korean and Japanese courses that capitalize on innovative technologies and standards-based curricula to enhance content delivery and critical thinking, asynchronous and synchronous interaction, learner motivation and engagement, cultural

awareness and understanding, as well as evidence-based and performance-oriented assessments.

One component of successful blended/online language courses must be possibilities for extensive aural/oral practice in both individual and collaborative environments. Successful online and blended environments must have relevant multimedia software and instructional designs that can increase teacher presence (Anderson, Rourke, Garrison, & Archer, 2001), reduce transactional distance (Moore, 1993), and promote students' learning outcomes. To address the concerns above, we have developed multimodal modules to enable individual vocabulary acquisition and aural/oral practice. The digital flashcards for Korean and Japanese, for example, are designed to help learners directly link words to concepts by using images, sounds, and example sentences as primary cues because word-by-word translations are extremely misleading between non-cognate languages.

### **3. Action Research: Development of Blended/Online Asian Language Courses**

Based on blended/online learning design principles, a joint task force across disciplines, departments and faculty in our institution was formed to conduct action research in order to problematize the urgent but unresolved situation as previously mentioned: "Are blended or online foreign language courses such as Korean and Japanese feasible at Stony Brook University? If so, how will students who are accustomed to traditional foreign language courses delivered in the F2F mode react to

this novel way of language learning? Will the blended or online mode lead to better learning outcomes and positive perceptions for our students?” To address these questions and urgent needs, our project included 1) a needs analysis where students were invited to document their experience with online language learning technologies and to contribute their ideas for creating an innovative student-centered instructional model for Asian language learning; 2) transformation of an existing in-class Korean course into a blended course enriched with digital tools and online practice activities; 3) development of a completely online Japanese course using standards-based, performance-oriented and technology-enhanced learning modules. Both our blended and our online courses have incorporated enhanced intercultural communication experiences through virtual interactions and technology tools.

In the following, we report on both our needs analysis survey and the process of developing a blended Korean course and an online Japanese course from piloting to implementing stages. Examples of digital tools adopted in the two innovative online modules will also be presented to illustrate the technological and curricular aspects of each module.

### ***3.1. Stage 1: Needs analysis survey***

During the fall semester of 2014, we invited all 1,500 students enrolled in any level of a language class to complete an online survey to gauge their exposure to blended and online learning, their interest in these modes of learning, and their perceptions of the online environment specifically for language learning. We obtained a better-than-average response rate of 17% (251 responses).

The sample (N = 251) was 28% male, 70% female, and 2% other. African Americans constituted 3.5% of the sample, Asian 28.7%, Caucasian/White 54%, Latino/Hispanic 11%, and Other ethnicity 3.0%. Undergraduates comprised 94% of the sample, and graduates 6% of the sample. Only 11% of our respondents (N=28) had prior experience with blended/online learning environments. General lack of familiarity with these modalities of content delivery may therefore prove the most significant hurdle to overcome in promoting these types of novel courses. It is perhaps due to lack of familiarity that only 6% of respondents (N=16) indicated that they were interested in online language courses, while 94% (N=235) were interested in the face-to-face format. To a question about interest in the blended format, there was greater reported interest: 46% of respondents (N=80) indicated a preference for the blended format where there are some online components and some face-to-face components of the language course.

### **3.1.1. Measures and instruments**

Three major constructs were developed to measure student concerns about, and perceptions of, their online learning environment specifically for language learning. The constructs were *expectations of instructor and student interaction (EISI)*, *expectations of online course content (EOCC)*, and *perceptions of online foreign language courses (POFLC)*. A five-point (1-5) Likert scale, with anchor points ranging from 1 (strongly disagree) to 5 (strongly agree) was used to measure each construct. Initially, 24 items were developed from all three factors to measure student concerns about, and perceptions of, their online learning environment: EISI (6 items), EOCC (7 items), and POFLC (11 items), as shown in Appendix 1.

To answer the question about the underlying factor structure of each of the constructs, factor analysis was conducted. The 11 items of the POFLC construct were subjected to principal components analysis (PCA) using SPSS Version 22. Prior to performing PCA the suitability of data for factor analysis was assessed. For POFLC, Cronbach's alpha( $\alpha$ ) reliability coefficient was 0.80 ( $N = 216$ ), which is above 0.70 for a reliable instrument (Cronbach, 1951; Nunnally, 1978, Wallen & Fraenkel, 1993). Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) value was 0.842, which is above 0.6 (Kaiser, 1974) and the Barlett's Test of Sphericity (Bartlett, 1954) reached statistical significance ( $p=.000$ ), supporting the factorability of the correlation matrix.

PCA revealed the presence of three components with eigenvalues exceeding 1, explaining 40.1%, 12.0%, and 10.6% of the variance respectively. An inspection of the scree plot revealed a clear break after the second component. These three components explained 62.7% of the variance. Using Catell's (1966) scree test, we decided to retain these three components for further investigation. This was further supported by the results of Parallel Analysis, which showed only three components with eigenvalues exceeding the corresponding criterion values (4.409, 1.317, 1.171) for a randomly generated data matrix of the same size (11 variables x 216 respondents) (see table 2).

*Table 2: Comparison of eigenvalues from principal components analysis (PCA) and the corresponding criterion values obtained from parallel analysis*

<b>Component number</b>	<b>Actual Eigenvalue from PCA</b>	<b>Criterion value from parallel analysis</b>	<b>Decision</b>
1	4.409	1.3689	accept
2	1.317	1.2537	accept
3	1.171	1.1773	accept
4	0.847	1.1116	reject
5	0.712	1.0472	reject

To aid in the interpretation of the three components, Oblimin rotation was performed; first with the three components, and then with two components. The rotated solution revealed the presence of a structure with a number of strong loadings greater than 0.32. Seven variables loaded substantially on component 1, one variable loaded substantially on component 2, and two variables cross loaded on both components. Item 8 did not load on any of the components and was dropped. The two-component solution explained a total of 52% of the variance, with Component 1 contributing 40.0% and Component 2 contributing 11.9%. The results of this analysis support using either component 1 or both components as measures of the POFLC construct. Table 3 below shows item loadings for the Oblimin rotated solution. Items for Component 1 show that the underlying latent variable being measured by component 1 is “perceived preference for online or blended foreign language course” while component 2 is measuring “perception of tasks in online or blended foreign language course.”

Table 3. *Final POFLC Items based on Principal Components Analysis with Oblimin Rotation*

<b>Items Loaded on Component 1: perceived preference for online or blended foreign language course</b>	
1) Online courses in foreign languages will be more successful than online courses in other subject areas	2) Using interactive digital tools will provide more opportunities for me to practice speaking and listening than I have in a face-to-face classroom
3) I prefer online foreign language courses because they make learning fun	4) I prefer online foreign language courses because I can learn the target language anywhere without commuting to school
5) I can finish assignments in online language courses faster than those in face-to-face classes	6) I don't need to spend as much time doing assignments in online courses as in face-to-face classes
7) Online foreign language courses are as demanding as face-to-face courses	10) I prefer courses which are taught totally online
11) I prefer blended courses (with 50% of the class time online and the other 50% is face-to-face in class)	
<b>Items Loaded on Component 2: perception of tasks in online or blended foreign language course</b>	
5) I can finish assignments in online language courses faster than those in face-to-face classes	6) I don't need to spend as much time doing assignments in online courses as in face-to-face classes
9) I think my final grade in the online foreign language courses will be higher than in face-to-face ones because online courses are easier to pass.	

The 7 items of the student Expectation of Online Course Content (EOCC) construct and the 6 items of the student Expectation of Instructor and Student Interactions (EISI) construct were also subjected to PCA using SPSS Version 22.

For Expectations of Instructor and Student Interactions (EISI), inspection of the correlation matrix revealed the presence of some coefficients of .3 and above. The KMO value was 0.65, and the Barlett's Test of Sphericity reached statistical significance ( $p=.000$ ), supporting the factorability of the correlation matrix. PCA revealed the presence of two components with eigenvalues exceeding 1, explaining 43.3% and 22.1% of the variance respectively. The two components explained 65.4% of the variance.

However, an inspection of the scree plot revealed a clear break after the third and fifth components. Parallel Analysis also showed three components with eigenvalues exceeding the corresponding criterion values (1.23, 1.11, 1.03) for a randomly generated data matrix of the same size (6 variables x 216 respondents) (see Table 4a). However, only the first two components were retained for further investigation. Both Oblimin and Varimax rotations yielded a two-component solution. The final items are shown in Table 4b.

*Table 4a: Comparison of eigenvalues from principal components analysis (PCA) and the corresponding criterion values obtained from parallel analysis for EISI*

<b>Component number</b>	<b>Actual Eigenvalue from PCA</b>	<b>Criterion value from parallel analysis</b>	<b>Decision</b>
1	2.598	1.2368	accept
2	1.326	1.1123	accept
3	0.779	1.0355	accept
4	0.645	0.9519	reject
5	0.504	0.8796	reject
6	0.148	0.7839	reject



Table 4b. *Final EISI Items based on Principal Components Analysis with Oblimin Rotation*

<b>Items Loaded on Component 1: Expectations of Interaction with Instructor and peers</b>	
1) Timely feedback from the instructor should be an important part of an online course	2) Appropriate guidance from the instructor on a regular basis is crucial in an online course
3) Interaction with peers/other students for communication practice, fun activities, and collaborative research should be an important part of an online course	
<b>Items Loaded on Component 2: Preference for synchronicity of online course</b>	
4) I prefer having the online course in an asynchronous format where I can interact with peers and the teacher totally offline at my own pace	5) I prefer having the online course in a synchronous format where I can always interact with peers and the teacher in real time
6) I prefer having the online course in a blended format where I can interact with peers and the teacher both online and in-class/face-to-face	

For Expectations of Online Course Content (EOCC), inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The KMO value was 0.83, and the Barlett's Test of Sphericity reached statistical significance ( $p=.000$ ), supporting the factorability of the correlation matrix. PCA revealed the presence of two components with eigenvalues exceeding 1, explaining 58.18% and 14.32% of the variance respectively. The two components explained 72.5% of the variance. An inspection of the scree plot revealed a clear break after the second component. Parallel Analysis showed three components with eigenvalues exceeding the corresponding criterion values (1.25, 1.14, 1.06) for a randomly generated data matrix of the same size (7 variables x 216 respondents) (see Table 5a). However, only the first two components were retained for further investigation. Both Oblimin and Varimax rotations yielded a

two-component solution; with all but item 7 loading on component 1. The final items are shown in Table 5b.

Table 5a: Comparison of eigenvalues from principal components analysis (PCA) and the corresponding criterion values obtained from parallel analysis for EOCC

Component number	Actual Eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	4.073	1.2542	accept
2	1.003	1.1419	accept
3	0.670	1.0657	reject
4	0.497	0.9961	reject
5	0.368	0.9218	reject
6	0.258	0.8516	reject
7	0.131	0.7687	reject

Table 5b. Final EOCC Items based on Principal Components Analysis with Oblimin Rotation

<b>Items Loaded on Component 1: Expectations of Online Course Content</b>	
1) Grammar should be an important part of online course content	2) Examples of how language is used in day-to-day communication should be an important part of online course content
3) Culture notes should be an important part of online course content	4) Digital tools for communicative skills (reading/writing) should be an important part of online course content
5) Digital tools for literacy skills (speaking/listening) should be an important part of online course content	6) Resources for learning language and culture and their relevance in a global context should be an important part of online course content
<b>Items Loaded on Component 2: Expectation of Assessment Format</b>	
7) Self-grading quizzes/tests should be an important part of online course content	

### 3.1.2. Results

Survey results of the components that best capture each construct are presented, that is, Component 1 from each of the three constructs: Student Perception of Online Foreign Language Course (POFLC), Student Expectation of Online Course Content (EOCC), and Student Expectation of Instructor and Student Interactions (EISI).

**Table 6. Survey data of student responses for each construct**

		Perception of Online Foreign Language	Expectation of Instructor- Student Interaction	Expectation of Online Course Content
N	Valid	216	183	184
	Missing	69	102	101
Mean		23.9398	12.5574	24.0543
Std. Deviation		6.38465	2.06641	4.22163
Minimum		9.00	5.00	6.00
Maximum		41.00	15.00	30.00

Based on the mean scores of each construct, we find that students have a neutral perception of online foreign language courses (mean = 23.94, which corresponds to neither agree nor disagree), have high expectations for instructor-student interactions (mean = 12.56, which corresponds to agree on the Likert scale), and also have high expectations for online course contents (mean = 24.05, which corresponds to agree on the Likert scale).

Students reported that the online format lends itself best to flexibility and paced learning as compared to the traditional face-to-face format, while they preferred the face-to-face format for asking questions and direct interaction and feedback. Some students

also indicated that another area of concern for online language courses is the difficulty in motivating oneself to log on and/or to participate in this less direct, perhaps asynchronous environment.

In face-to-face courses, student motivation and willingness to communicate are key areas of concern (MacIntyre, 2007; MacIntyre, Clément, Dörnyei & Noels, 1998). Our survey indicates that these new blended and online courses will face similar concerns. It also reveals that developing a pedagogically-sound blended/online learning module that can transform the traditional face-to-face format, while simultaneously addressing students' qualms about this innovative approach, continues to be a challenge to faculty in foreign languages who are willing to teach outside the box.

### ***3.2. Stage 2: Piloting digital technologies***

After analyzing the data from the student interest surveys, we started to pilot digital tools and platforms that were potentially feasible for the development of our blended/online modules. Specifically, we aimed to pilot innovative technologies that can optimize features such as 1) teacher presence (Anderson et al., 2001), where instructors can simulate oral interviews with students by recording oral tasks with oral feedback provided in the asynchronous mode; 2) multimodality (Kress & Van Leeuwen, 2001), where students can use multimodal tools (voice, text, image, video) to provide and receive comments on assigned tasks in the virtual community; 3) vocabulary building, where teachers can create digital flashcards for students to practice new words; and 4) guided writing practice, where students can practice writing and view their production in an engaging way.

Based on the criteria indicated above, several digital tools were field tested—*digital flashcards*, *VoiceThread*, *ProProfs*, *Storyline*—each described below.

### 3.2.1. Digital flashcards<sup>1</sup>

Acquisition of Asian vocabulary is a challenge for English speakers because English shares very few cognates with Asian languages. Thus, we decided to create digital flashcards for beginners of Japanese and Korean, to introduce approximately 200 basic content-specific words. Free flashcards available on websites tend to display just text. If they have images and audio, images are usually photos or clip art, and the audio is often machine generated. However, photos often have too much information, clip art may have a different focus, and machine generated sounds lack in authenticity. Thus we created simple black and white illustrations and signs in a consistent pattern as well as recordings of native speakers' speech. To avoid confusion, English is provided in small font. Additionally, an example sentence is provided for each word in text and with audio so the users can learn words in their broader context. This also allows them to acquire basic grammar through predicting, just as they unconsciously deduce grammar through being immersed in the context where only the target language is spoken. Because students can hear how the entire sentence is pronounced, they can also learn sentential intonation, allophonic patterns, and prosodic properties simultaneously.

Furthermore, our flashcards can be sorted according to themes and categories in order to facilitate word association (see figure 1). Words are divided into 15 *thematic categories* (actions, animals, body parts, color, food/beverage, nature, numbers, people, places, property, relative location, study, things, time, and transportation) and three *syntactic categories* (nouns, verbs, and adjectives). To help their kana acquisition, the program is equipped with a compact pop-up character table.

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<sup>1</sup> The Japanese flashcards were completed and piloted. They will be made open to the public through the University's website in fall 2015. We are currently applying adjustments to Korean flashcards to add cultural authenticity.



Figure 1. A digital flashcard in Japanese sorted by themes and categories

### 3.2.2. VoiceThread

VoiceThread is a web-based platform that allows users to manipulate multimodal tools, such as images, videos, audio and documents, in order to conduct asynchronous discussions centering around those multimodal representations. Different from a linear way of discussion, which is typical in a discussion forum on Blackboard, VoiceThread enables users to interact with peers via its dynamic commenting feature using microphones, webcams, drawings, or uploaded audios. In other words, users can choose their preferred type of commenting format, at anytime, anywhere, without being constrained by the linear and conventional way of text commenting.

VoiceThread can also be embedded in websites, blogs, Facebook, Twitter, or even electronic learning management systems (e.g., Blackboard), provided with HTML embed code. Pedagogically, the instructor can create a VoiceThread as a collaborative space

exclusively for his/her class where each student can create, share and comment on a VoiceThread assignment via a variety of multimodal channels. Below is a screenshot of one of the online Japanese learning modules using the drawing commenting feature on a VoiceThread lesson:

**Lesson 1 (1)**

Read each character aloud as you write it using the digital pencil.

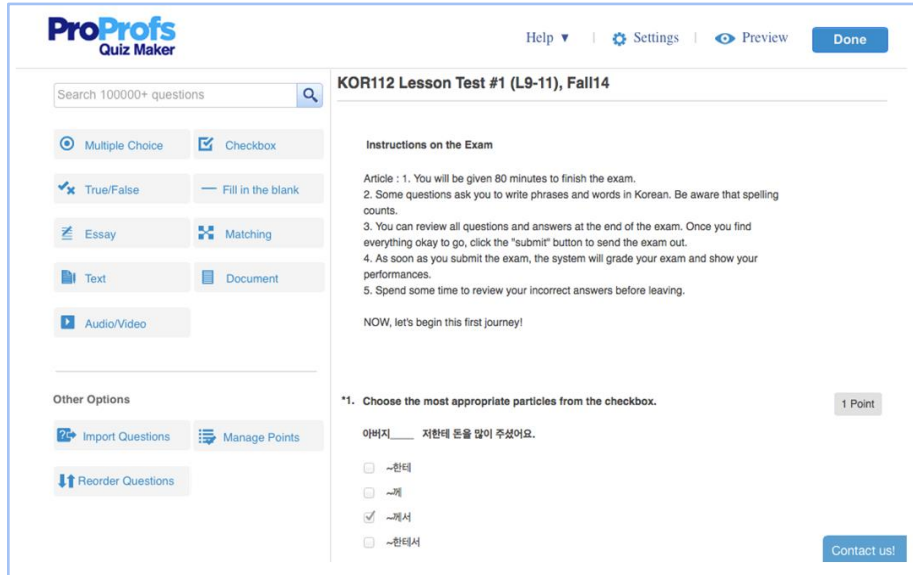
あ	ニ ア あ
い	ニ イ い
う	ニ ウ う
え	ニ エ え
お	ニ オ お
か	ニ カ か
き	ニ キ き
く	ニ ク く
け	ニ ケ け
こ	ニ コ こ

The screenshot shows a drawing of the character 'あ' (a) with a red circle highlighting the first stroke. Below the drawing are several colored pencils. At the bottom, there is a 'Stop Recording' button.

Figure 2. A Japanese module demonstrating the use of the drawing commenting feature of VoiceThread

### 3.2.3. ProProfs

ProProfs, one of many quiz makers on the market, has many features to accommodate academic needs including quizzes, exams, surveys, and training. It is easy to create and offers the flexible options to incorporate multimedia files. The exams of the Korean language course were given online using ProProfs.



*Figure 3.* Edit page of ProProfs for a Korean exam demonstrating the layout of menu options on the left and the edit page on the right.

### 3.2.4. Articulate Storyline

Articulate Storyline is a new multimedia-based presentation tool that allows for interactive course development where students can engage actively. Course modules or presentations can benefit from its enhanced use of visuals, animated sources, and, in particular, interactivity such as simulation, drag-and-drop interactions, variables, triggers, states, and slide layers.



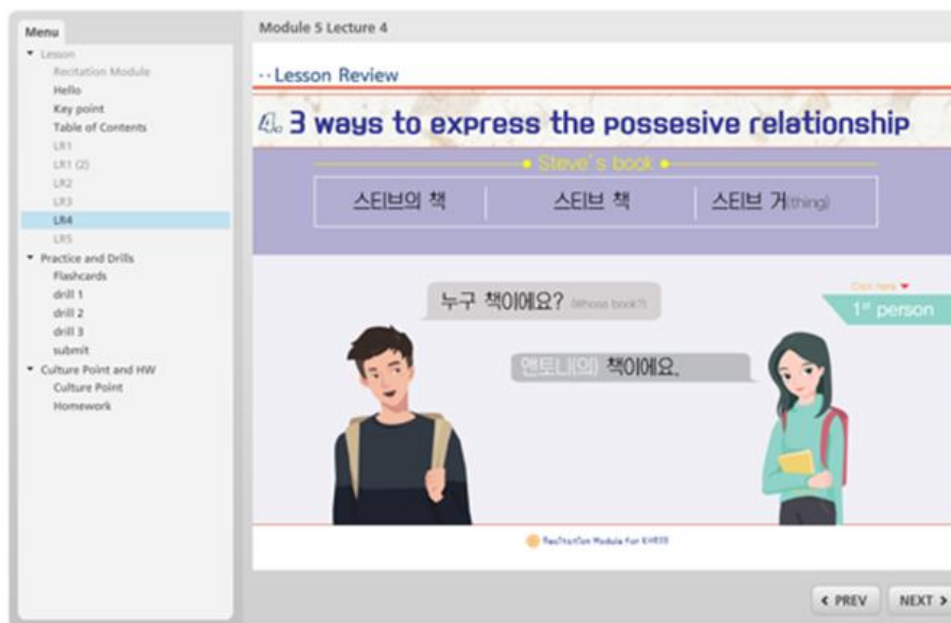


Figure 4. A Korean module using the Articulate Storyline to illustrate the grammar point in possessive relationship.

### 3.3. Stage 3: Implementation

#### 3.3.1. Blended Korean course

The way that students behave in a face-to-face context is often different from the way they behave in an online context. Some students are less motivated and less responsive in an isolated online environment than in offline classes while some students who are stereotyped as shy and reserved in traditional classes engage more actively in tech-enhanced blended/online courses. The Korean project started with the thinking that, for the best outcomes for learners of different learning styles and preferences, the online offerings should be tailor-made, as much as possible, to suit the differences of these learners.

### **3.3.1.1. Different Levels of Online Interactivity**

In the long term, our Korean project aims to make different levels of online instruction available for students. Its goal is to turn first and second semester beginning Korean courses into blended/online courses ranging from 25% online content (where the one hour recitation section occurs online) to 50% (where one lecture hour and one recitation hour occur online), to 75% (two lectures and one recitation online) and eventually to 100% online. The blended courses are to be offered in different levels of online interactivity (25%, 50%, 75%) in subsequent stages alongside the development and the field-testing of the modules, providing choices of level of online components to students on campus, while 100% online courses will be offered to those who do not have access to campus, including the students in SUNY Korea and beyond.

For this first year pilot project, we developed computer-mediated communication (CMC) modules for first semester beginning to deliver 25% of the class meetings online, outside the F2F class time, in order to maximize the use of the target language beyond the classroom. The blended components were designed to provide asynchronous environments with personalized, collaborative, and engaging settings that a F2F classroom environment may lack.

### **3.3.1.2. The Five Cs in Recitation Modules**

The current F2F Korean curricula implement the *ACTFL (American Council on the Teaching of Foreign Languages) World-Readiness Standards for Language Learning*,

five Cs (*Communication, Culture, Connections, Comparisons, and Communities*).<sup>2</sup> Our online modules, therefore, were developed with special consideration to enhance the functionality of the main curricula to maximize the effects of the five Cs in the course.

The CMC (computer-mediated communication) modules include four components: 1) weekly interactive lesson modules which include review of grammar and expressions, drills and practice, vocabulary activities, and cultural points which introduce some Korean culture through videos and Q&A that facilitates the students' language learning (*Communication, Culture*), 2) an intercultural communication project in which students are partnered with Korean college students in the Korean language teacher certification program in Korea and meet with them online for weekly cultural learning and community building, to address given topics and questions (*Community, Culture*), 3) blogging for unpacking and demonstrating their linguistic and cultural learning in a more casual online setting with other classmates who share similar experiences (*Connection, Comparison, Community*), and 4) a final oral project that requires students to introduce their Korean partner using visuals in Korean (*Communication*).

The weekly modules with VoiceThread assignments constitute a student-centered learning platform where students review, synthesize, and make use of each week's main study materials through combining the four skills of reading, listening, writing and speaking. They are to expand the F2F learning via simulated reality to enhance *Communication*. For example, the following review points present audio-visual instructions with listening, reading and writing with click functions.

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<sup>2</sup> ACTFL's World-Readiness for Learning Languages (5Cs) can be accessed at: <http://www.actfl.org/publications/all/world-readiness-standards-learning-languages>

Figure 5. This page shows the interactive module to practice the possessive particles in different case forms.

Students click words or sentences to listen and repeat. They also practice reading and conjugating the various forms. These modules can be reviewed multiple times if needed. Once students are ready to move on, they will continue to individual drill activities. In the drill section, students apply their linguistic knowledge to solve diverse problems ranging from simple conjugations to complex sentence formation, to task-based problem solving based on interactive game-like features. Students create weekly voice recordings, assigned in VoiceThread, to improve their oral proficiency, including pronunciation and use of diverse expressions.

**Module 7 Lecture 6**

Choose the Correct Answer(s) using the Calendar

오늘은 4월 8일 이예요.  
퀴즈는 언제 봐요?

15일    내일    이번 수요일    다음 목요일

다음주 금요일에 누구 만나요?

수지    낚시    이사    어이유

언제 낚시해요(Fishing)?

19일    이번 일요일    지난 화요일    다음 토요일

이사 (Change residence/move)는 언제 해요?

안녕요    화요일    28일    월요일

일	월	화	수	목	금	토
		1	2	3	4	5
6	7	오늘 퀴즈	10	11	12	
13	14	15	16	17	수지 낚시	
20	21	22	23	24	25	26
27	이사	29	30			

Figure 6. This page demonstrates a task-based problem solving activity where students combine their cognitive and linguistic knowledge.

*Cultural learning* in conjunction with linguistic learning is the most crucial aspect in this course design. Weekly cultural topics ranging from floor-heating systems to kimchi, to traditional performance and Confucian culture, are incorporated in the CMC modules with video and Q&A.

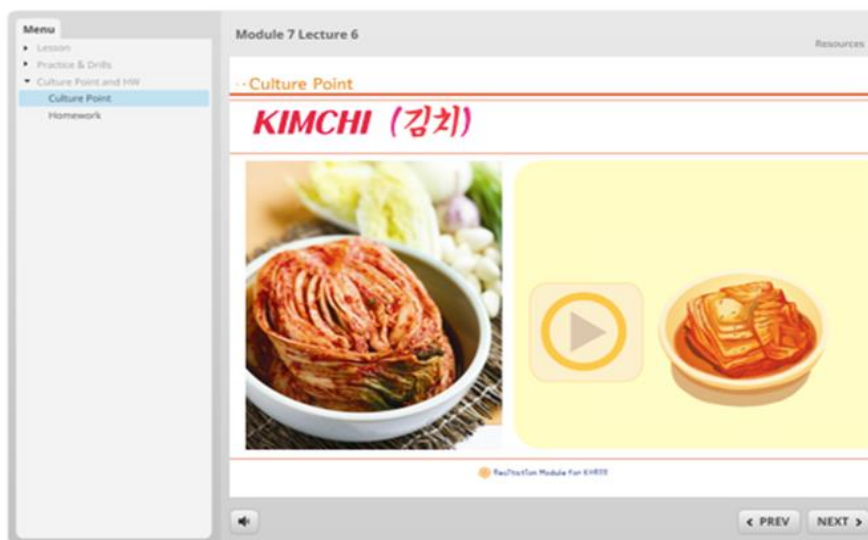


Figure 7. Cultural Model, Kimchi

Each module presents a cultural topic with video and Q&A. This module features Kimchi, fermented vegetables, and discusses how the natural, cultural and social elements together have conditioned the development of certain unique aspects of culinary culture in Korea.

The intercultural communication project is to virtually pair American students with their Korean peers on a weekly basis to give them more direct and hands-on opportunities to *connect*, engage, and communicate linguistically as well as to immerse themselves into a *culturally* rich, target language learning environment. It also offers a great opportunity to form a social *community* that can last beyond the class meeting with native speakers of the target country.

The students also report on their weekly meetings and cultural experiences in the course blog where they *compare*, contrast and discuss the cultural information that they gained. At the end of the semester, each student makes a 3-5 minute oral presentation to

the class about their Korean partner using only the Korean language in which they demonstrate their *communicative* as well as presentational skills in Korean.

### **3.3.2. Our First Online Japanese Course**

Stony Brook University regularly offers a one-semester Elementary Japanese I (JPN 111) for beginners in a traditional F2F classroom setting. JPN 111 consists of 29 lessons, which are divided into 4 units. Each lesson introduces the content through an authentic dialog followed by "Guess & Try" questions and covers all four skills of language (speaking, listening, reading, and writing). Our goal was to create a 100% online section of JPN 111 to be offered every summer. Our initial strategy was to build a comprehensive digital module using the platforms that our university already owned. We decided to use Blackboard, VoiceThread and Google Apps for Education as major platforms. This approach allows us to receive full technical support from the university's educational technology office, which is essential for the sustainability of this online Japanese course. It also allows us to confirm and protect student identity because these platforms can only be accessed through a university-authenticated user ID and password. Our challenges in adapting our F2F course to a fully online course were to:

1. mitigate psychological distance between the students and the instructor as well as between the students and their peers;
2. adopt the five Cs (Communication, Cultures, Connections, Comparisons, and Communities) in ACTFL's World-Readiness Standards for Learning Languages.

### **3.3.2.1 Psychological distance**

Online courses may provide temporal and locational flexibility to learners. Conversely such courses may also make students feel isolated, confused, insecure, and less motivated. To mitigate these issues, we required weekly journals using Google Docs and offered regular group video conferences led by TAs (three days a week via Google Hangouts). Weekly journals proved to be an excellent tool for communicating with each student separately, providing individual attention, and supplementing and adjusting instruction. Through weekly journals, we found that VoiceThread made students feel as if they were in a face-to-face classroom, but video conferences were the most valuable element to make students feel connected and supported. We also found it to be very useful for the instructor to send out frequent email reminders to prevent students from falling behind.

### **3.3.2.2 The five Cs**

We implemented the five Cs of ACTFL's World-Readiness Standards for Learning Languages in our curriculum design:

#### **(1) *Communication***

Listening and speaking tasks in interpretive, interpersonal, and presentational modes are all implemented in our digital module that utilizes Google Docs, VoiceThread, and Google Hangouts. For example, the following image shows the VoiceThread episode for self-introduction:

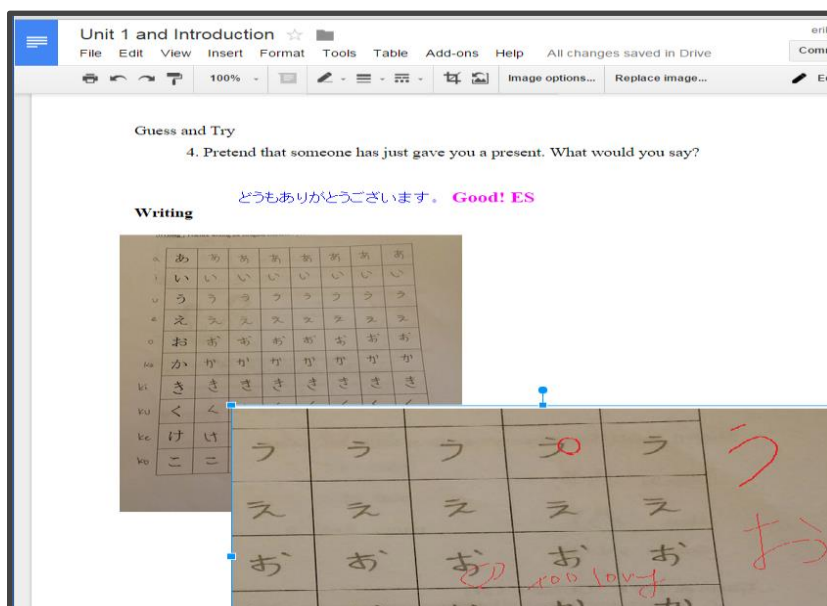




*Figure 8. A Japanese module demonstrating the communicative task for self-introduction.*

Bowing is complex and is not easily acquired by most students of Japanese. However, almost all students bowed extremely naturally in the video in VoiceThread. This shows that VoiceThread can provide valuable verbal and non-verbal communicative information to the learners, creating a virtual real-life immersion context.

Our module also supports reading and writing portions. The acquisition of Asian characters is one of the major obstacles for students. Students can learn how to write Japanese characters using VoiceThread as a virtual whiteboard. For example, the VoiceThread slide where the instructor writes a character stroke by stroke as she orally explains the crucial parts can be seen in Figure 2. Students are also asked to write characters in the same manner using VoiceThread. In addition, they are asked to hand write characters multiple times and copy-and-paste the images onto a Google Doc file. The instructor can add a handwritten comment right on the digital images as shown below:



*Figure 9. A Japanese module demonstrating an instructor's handwritten comments on characters.*

After acquiring characters, students read and write short essays in each lesson using Google Docs and VoiceThread.

## **(2) Culture**

Students are asked to compare and contrast socio-cultural aspects of Japanese and English (or another language/culture with which they are familiar) whenever relevant to their lesson and share their ideas by leaving a voice comment on VoiceThread.

**Lesson 15 (5)**

Customers are generally considered as “gods” in Japan and salesclerks are trained to treat them very politely. When customers enter a store, the salesclerks welcome them with a bow, saying いらっしゃいませ (Welcome!). They use a polite speech style and formal expressions specific to a business context. This is most obvious in prestigious department stores. You will notice that store clerks tend to speak in a higher pitch range when they talk with customers. Office workers and salesclerks in Japan are trained to do so when they deal with customers and clients.

Leave a voice comment on this topic, comparing the situation in your own country or in some country you visited in the past.

0:08 / 7:29

*Figure 10. A Japanese module that invites students' comments on Japanese culture.*

### **(3) Connections**

Students are asked to research some aspect of Japan in connection with a different subject area such as history, literature, and science whenever relevant to their lesson and share their findings with their peers through VoiceThread. The following image illustrates a task of doing research on one of the figures on Japanese paper currency and sharing their findings through VoiceThread.

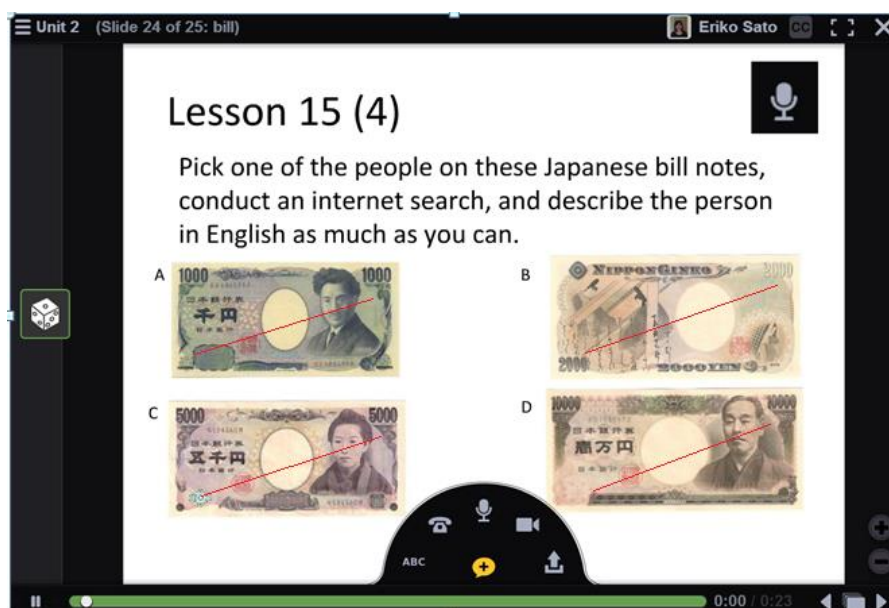


Figure 11. A Japanese module that shows Japanese bank notes.

#### (4) Comparisons

Students have ample opportunities to compare and contrast cultural and linguistic differences between Japanese and their own language through VoiceThread. An example for a culture element was shown just prior in the paper currency example in Figure 11.

#### (5) Communities

Students are asked to share some resources that allow them to engage in a Japanese-speaking community whenever relevant to their lesson. For example, the students pretend to visit a Japanese restaurant, place an order in Japanese, and ask the wait staff whether there are any Japanese grocery stores or bookstores in the neighborhood. They are asked to share the result with their peers through VoiceThread.

## 4. Evaluation of the Pilot Effectiveness

We invited students enrolled in several courses in the Department of Asian and Asian American Studies at Stony Brook University in Fall 2014 to evaluate and discuss their experiences using digital tools (specifically VoiceThread) in their face-to-face language courses. Anonymous evaluations were solicited in the following courses: AAS 220: China: Language & Culture, a course which focuses on the diversity of regional languages and cultures of China; JPN 410: Business Japanese, a course designed to introduce students to Japanese communication skills in a business context and to promote understanding of socio-economic variables and socio-cultural values in Japan; and KOR 112: Second semester, Beginning Korean Language and Culture, a course focused on building interpretive, interpersonal and presentational language skills based on intercultural understandings.

Data from evaluations distributed in AAS 220<sup>3</sup> allow us to paint a picture of student reactions to technologies that may be used in blended and online courses. Our AAS 220 course was a large, 200 student course, focusing on Chinese language and culture, but taught in English in a face-to-face format, incorporating some new digital technologies. Approximately 24% of the students (N = 48) completed our post-course survey on the use of digital technology in that course. Their responses to survey questions indicated a generally positive attitude towards technologies used for instructional purposes. To the statement, “I liked that the instructor used different technological tools,” 58% (N=26) agreed or strongly agreed, 53% (N=24), agreed or strongly agreed that they

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<sup>3</sup> AAS220 is the only course for which evaluations have been analyzed to date; the remaining evaluations will be analyzed hereafter.

performed better in assignments that used technology, liked to use technology to interact with class members for group projects outside of class, and would like to use technology in a synchronous format to interact with both the instructor and with other students outside of class, though they may not have had the opportunity to do so in this class.

These responses suggest that students are not averse to using various digital tools which will be crucial in blended and online formats. When queried specifically about VoiceThread (VT), a technology which was pilot tested for group project use in this course, survey responses suggest that there were some technological difficulties in implementing this particular digital tool--only 53% (N=24) of respondents found VT to be user-friendly. This may be due to the fact that it was the first time the instructor implemented VT in her class and had not fully mastered all the features of VT that could have eased certain technical glitches (e.g., students complained that they were bombarded with all the email notices whenever someone in the class was commenting on a VT thread). Nevertheless, a majority 60% (N=27) of respondents agreed or strongly agreed that "VT created a virtual environment that enabled me to participate more actively." One student responded that he felt more comfortable using VT because he self-identifies as an introvert and noted that he only used the text feature of VT because, "I don't talk that much in real life."

In future blended and online courses, additional tools will need to be tested, and the full spectrum of their features (audio, video, text) will need to be exploited to assist students not only in their areas of strength but also to help them overcome areas of language weakness.

## 5. Implications and Future Directions

In this section, we will identify the issues arising from the project piloting to implementation stages, highlight the benefits of incorporating digital technology into Asian language learning, and make recommendations for pedagogical considerations in designing blended and online learning modules.

### *Issues:*

- Online/blended course preparation is taking longer than expected as it is labor intensive and thus quite time-consuming.
- It was difficult to find student assistants who understand the nature of the instructional projects and can provide necessary technical support on campus.
- Technical exploration of different tools has been very challenging as well as time-consuming.
- Efforts made by faculty to develop online/blended courses are not commensurate with their promotion and tenure pipeline.

### *Technology-enhanced environment:*

- Digital tools are very stimulating for students. They can give students a chance to observe their peers' performance much more closely through digital tools than just being in a traditional classroom.
- Digital tools help students collaborate very easily. They can receive dozens of suggestions from their peers overnight.
- Digital tools foster independent learners because they can move forward whenever they feel ready.

*Recommendations:*

- Make sure to know what the University currently offers and try those resources first before looking for additional resources.
- Make sure to find out what sort of support the institution can offer, because this makes a difference for day-by-day teaching and assignments.
- It is important to start trying tools before making a full plan because you'll find many different ideas only after actually trying tools with students.
- Developing and teaching online courses requires different attitudes from instructors and new approaches to instructional priorities, revised student-instructor relationships, new course requirements and expectations, as well as innovative pedagogical tools. It is important to be aware, though, that technology will not automatically solve the problems and limitations we have in offline classes; instead, it seems that a key to the success of online learning and teaching depends on the level and quality of tech-enhanced human interactions. It takes time to develop such tools.
- The biggest obstacle for academic users is that it takes longer to learn certain technological tools and develop course scenarios into interactive presentations. It would be beneficial if the school could offer a team of software specialists who assist in upgrading instructional presentations using new software. The Korean language course modules, for example, used Storyline as their software tool to create and publish the interactive modules. However, it turned out that this software was completely new to our university's technical support team and



student assistants had to spend a long time learning its basic tools. Inevitably the level of interactivity had to remain limited due to the lack of technical assistance, but the software presented a new modality as a next generation presentational tool replacing PowerPoint.

## **6. Conclusion**

Our project which is focused on blended/online Korean and Japanese courses has the potential to impact the creation and development of other blended and online language courses by paving the way towards more innovative, student-centered language instruction across the country and beyond. We find that students participating in innovative online/blended language courses can develop positive perceptions towards these technologies and be persuaded to embrace foreign language learning in blended and online learning environments.

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## APPENDIX

## Appendix 1: Initial 24 Needs Analysis Survey Items for EISI, EOCC, and POFLC

EISI	EOCC	POFLC
1) Timely feedback from the instructor should be an important part of an online course	1) Grammar should be an important part of online course content	1) Online courses in foreign languages will be more successful than online courses in other subject areas
2) Appropriate guidance from the instructor on a regular basis is crucial in an online course	2) Examples of how language is used in day-to-day communication should be an important part of online course content	2) Using interactive digital tools will provide more opportunities for me to practice speaking and listening than I have in a face-to-face classroom
3) Interaction with peers/other students for communication practice, fun activities, and collaborative research should be an important part of an online course	3) Culture notes should be an important part of online course content	3) I prefer online foreign language courses because they make learning fun
4) I prefer having the online course in an asynchronous format where I can interact with peers and the teacher totally offline at my own pace	4) Digital tools for communicative skills (reading/writing) should be an important part of online course content	4) I prefer online foreign language courses because I can learn the target language anywhere without commuting to school
5) I prefer having the online course in a synchronous format where I can always interact with peers and the teacher in real time	5) Digital tools for literacy skills (speaking/listening) should be an important part of online	5) I can finish assignments in online language courses faster than those in face-to-face classes
6) I prefer having the online course in a blended format where I can interact with peers and the teacher both online and in-class/face-to-face.	6) Resources for learning language and culture and their relevance in a global context should be an important part of online course content	6) I don't need to spend as much time doing assignments in online courses as in face-to-face classes
	7) Self-grading quizzes/tests should be an important part of online course content.	7) Online foreign language courses are as demanding as face-to-face courses
		8) I have more chances to practice the foreign language in face-to-face classes than in online courses
		9) I think my final grade in the online foreign language courses will be higher than in face-to-face ones because online courses are easier to pass
		10) I prefer courses which are taught totally online
		11) I prefer blended courses (with 50% of the class time online and the other 50% is face-to-face in class)