Development of Teaching Materials and Utilization of Web 2.0 in Japanese Language Teaching and Learning

Maserah Shabudina,* Aznur Aisyah, Saadiyah Darus, Nezu Mimiko

Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor, Malaysia

Abstract

The Japanese language is among the international languages which are highly demanded in the education system in Malaysia, all the more so since the Look East Policy Program was launched in July 1981 by the 4th Prime Minister of Malaysia, Tun Dr. Mahathir Mohamad. Japanese language course has been offered at the National University of Malaysia (UKM) as early as 1975. The course uses the textbook Minna no Nihongo and Introduction to the Hiragana and Katakana Japanese Writing. However, the exclusive dependence on both textbooks has created a passive and teacher-centred learning environment. In line with the present development of information and communication technology, it is felt that an innovation in terms of Japanese language pedagogy should be carried out to balance the needs of the Internet (I is always capitalised) generation. The Net and digital generation is a social generation that actively communicates, cooperates, and connects using technology in the virtual realm. One of the technologies that can be utilised is by using Web 2.0 applications. Therefore, an eclectic method of intervention is needed by integrating and practising Web 2.0 elements to realise an educational environment and system that is even more conducive, modern and futuristic. This study focused on students taking the Japanese language course SKVA2723 at the School of Language Studies and Linguistics in UKM from February to December 2012 for 2 semesters. A total of one teacher and 55 students were involved in this study. The applications of Web 2.0 such as JING, Screencast.com, YouTube, OnlineNihongo website, and Wordpress were utilised in the teaching and learning of Japanese language. The period of learning for the Japanese language subject was four hours for fourteen weeks per semester. Through questionnaires, observations and tests conducted, the findings showed that the group of students who were exposed to the 2.0 applications showed more motivation, enthusiasm, excitement and higher scores compared to the group that was not exposed to the applications. The implication from this study is that the use of Jing can be applied to more complex kanji orthography, particularly those that require more than 10 strokes. It is hoped that applications such as Screencast.com, YouTube and Wordpress can inspire new ideas, encourage student-centred learning and can be shared with Japanese language and foreign language courses from other universities and other institutions.

Keywords: Pedagogy, Teaching and Learning, Web 2.0, Japanese language, Action Research

1. Introduction

In the age of globalization, the need to learn foreign languages has become crucial in order to produce graduates who are clever at playing their roles in facing multicultural or intercultural competency environments. The Japanese language is among the international languages that is highly demanded in the education system in Malaysia, all the more so since the Look East Policy Program was launched in July 1981 by the 4th Prime Minister, Tun Dr. Mahathir Mohamad (Maserah & Hieda & Normalis 2010; Normalis & Hieda & Nezu 2012). In line with the development of information technology and communication at the present time, an innovation in terms of Japanese language pedagogy should be carried out to balance the needs of the Internet generation. The Net and digital generation is a social generation that actively communicates, cooperates and connects through the use of technology in the virtual realm. One of the technologies that can be utilized is by using Web 2.0 applications. Research on teaching and
learning that is based on Web 2.0 is being actively carried out around the world (Anzai 2012; Aoki & Molnar 2010). Nevertheless, in Malaysia, research on Web 2.0 applications in the teaching of Japanese language is still minimal. Therefore, this role should be taken up by the Japanese language instructors in providing the physical requirements to fulfil learning in learning environments that change according to the changing times. There are several early initiatives in the use of Web 2.0 in the teaching and learning of Japanese language such as the one carried out by Normalis et al. (2012). Nevertheless, its usage is limited to the application of culture and grammar based on the existing website, namely Erin No Chousen: Nihongo ga Dekimasu! (www.erin.ne.jp/). Previous studies also suggest that the use of Web 2.0 in teaching and learning can increase students’ motivation and creativity that can in turn generate the culture of independent learning and open up more opportunities for the students to explore and gain knowledge from the virtual realm (Oakley, 2012). Moreover, the use of Web 2.0 applications can encourage student centred learning (Skocko, 2012) in accordance with current educational needs. Accordingly, an intervention of the eclectic method is needed by integrating and practicing Web 2.0 elements to realize an education environment and system that is even more conducive, modern and futuristic.

2. Statement of the problem

Among the problems faced by students is the lack of interest to participate actively in learning. Foreign language learning that is conventional in nature and solely based on textbooks and is teacher-centred simply make the students lose interest and focus and often become passive, thus making the learning characteristically a one way and boring process (Ashinida 2012). Therefore, in order to overcome this problem, Web 2.0 application intervention is utilized in developing teaching materials such as Jing, Screencast.com, YouTube and Wordpress. These Web 2.0 applications are seen as capable of making the learning more active and this readily available platform in the virtual realm allows students to refer to and review their learning at any time.

3. Research objectives

In line with the development of science and technology, the objectives of utilising Web 2.0 in this action research are as follows:

i) Identify whether the use of Web 2.0 applications is more effective in teaching Japanese language compared to the traditional method of using the textbook only.

ii) Carry out observations on students who used Jing and YouTube applications.

ii) Obtain feedback from the students who utilized the Screencast.com and Wordpress applications through questionnaires and their feedback in class.

Research methodology

Action research can be defined as research that is conducted by the teacher by using the data collected in the classroom and analysed to solve the teaching and learning problem (Mikami 2010). The research methodology used in this study is based on the material development plan chart suggested by Jolly and Bolitho (1998) in formulating a new and effective teaching material. The material design steps with action plan’s view have been proposed by Aznur Aisyah et al. (2013). The process is shown in Figure 1.

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**Figure 1:** Material Development Plan Chart

1. **Step 1: Identification**
2. **Step 2: Exploration**
3. **Step 3: Contextual realisation**
4. **Step 4: Pedagogical realisation**
5. **Step 5: Physical production**
6. **Step 6: Students’ use**
7. **Step 7: Evaluation by teachers and students**

**PLAN:**

- **DO:**
- **ACTION:**
- **REFLECT by researcher**

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The intervention required and implemented

To overcome the problem that has been stated in the research problem, Web 2.0 intervention such as Jing, YouTube, Wordpress and the Online Nihongo websites are needed. The following describes why the intervention is needed and how the intervention can provide a solution to the problem stated.

(i) Jing Intervention

Jing is a cross-platform application that can be downloaded for free from the website of www.jingproject.com. Jing allows us to capture the image screen or screen shot according to the size and space that is required and even record short videos or any other activities on the computer screen (screen cast) within a period of five minutes. Next, through the combination with www.screencast.com, the screen shot or screen cast that has been captured can be uploaded. Your screen shot or recorded picture or image can also be saved in the form of PNG image file while the recorded video file can be saved in the form of Shockwave Flash (SWF) if you do not want to combine it with www.screencast.com (Amin 2011; Margarita & Dave 2012). Compared with katakana drawings produced by the teacher twice or thrice, the drawings of the katakana orthography in the form of ‘Image Screen’ that we recorded in this study were utilized from the website www.onlinenihongo.com. We also recommended the students to browse this website to improve their skills in reading and writing katakana orthography. The application of Jing in the Teaching and Learning of katakana has enabled the students to do the exercises or to practice while referring to the drawings produced by Jing as frequently as possible. The drawings produced by Jing will be demonstrated in sequence one by one and is also more accurate, beautiful and balanced in comparison to the teacher and other graphic pens or tablet pens as shown in Figure 2. Through observations by the teacher, it was found that as a result of using Jing in the classroom, the students no longer request the teacher to draw the katakana orthography repeatedly compared to the previous conventional method where the teacher needs to draw the katakana orthography with a marker pen on the whiteboard over and over again. The observation also revealed that students understood better the way of writing the sequence of the katakana orthography correctly and that the students’ writing was more beautiful, accurate and balanced.
Teaching and learning resources based on website are seen as one of the methods that guarantees students’ ability to think and students’ imagination. These resources are capable of creating futuristic learning environment as well as inspiring a modern education system. The website utilized in this study is an educational website that can be accessed through the link http://www.onlinenihongo.com for free. Nihongo Online is a website that allows students to listen to the way of reading or pronouncing the kana orthography, namely hiragana and katakana, and the way of drawing the orthography sequence correctly and accurately. The screen shot recorded through Jing was done by utilizing this website. Apart from displaying the correct sequence of drawing, this website also provides drills according to three levels, starting from simple exercises to the difficult ones. This website also provides drills in the form of multiple-choice questions and filling in the blanks as displayed in Figure 4. These activities not only improve visual literacy, but they also test listening skills. These drills require the students to listen to the questions presented first before choosing one of the answers provided. Whether the answer given is right or wrong, the website will provide the answer spontaneously. The students were encouraged to browse the website through the media lab provided by their respective School.

Screencast.com is TechSmith's private video and image hosting site. A person can store their content on the servers for personal or commercial usage at no charge. After installing most TechSmith software, the user will be prompted to set up a Screencast.com account. The free site offers control over privacy levels, links for content URL's and embed code, content view numbers and allows other users to comment on videos among other features. Screencast.com is not only used for uploading content created by TechSmith's products. Photos and videos from other sources can also be sent to Screencast.com for hosting, embedding and sharing. When you use TechSmith software to create great content, Screencast.com makes it possible to share it easily. You can post your captured image and videos to Facebook, Twitter, or your blog via the short URL or embed code Screencast.com gives you – saving time and avoiding the sharing runaround (http://www.techsmith.com/screencastcom.html). Figure 3 shows a screen shot or the recorded image of the katakana orthography drawing using the JING application which has been uploaded in screencast.com and the students can continue to access it at any time or download the materials in the
form of Shockwave Flash (SWF) or Joint Photographic Expert Group (JPEG). The teaching aid materials that used the application of JING were then uploaded via www.screencast.com and then the URL in the Screencast was linked in the Japanese language blog which has been developed, namely https://va2723bja.wordpress.com/ or iFolio.

Figure 4: The way in which the katakana orthographic drawings can be accessed through screencast.com

Teaching notes in the form of PowerPoint and Microsoft Word can also be uploaded via screencast.com but must be converted into Portable Document Format (PDF) first, before being uploaded into screencast.com. Next, there are links on the materials that have been uploaded and the links for the URL content and embed code in screencast.com will be linked to iFolio (integrated Portfolio Management System) which is one of the Learning Management System (LMS) used in UKM and directly connected to each student’s e-mail or linked to the blog https://va2723bja.wordpress.com/. Through this method, students do not have to spend time copying notes from the PowerPoint slides shown in the class and can fully concentrate on what is presented by the teacher. For teachers, the time that can be saved in copying notes in class can be used to perform a variety of oral activities such as role play, question and answer, simulation and many others. If students do not want or are not able to upload the notes because of slow Internet network, the students can still directly access the notes provided in the form of slide share as shown in Figure 5.

Figure 5: Notes for the Japanese language subject can be accessed in the form of slide share

In order to attain certainty about the effectiveness of the materials in the form of notes which were uploaded via screencast.com, the researcher had distributed questionnaires with 4 point Likert scale, namely do not agree, not quite agree, agree, and strongly agree. The survey result shows that out of 25 students, 20 students expressed 'strongly agree' and 5 students stated 'agree' that the materials uploaded into screen.cast.com which are linked to iFolio and this blog, has helped them a lot in understanding the lessons taught, can be used as a reference when doing their revision and can be accessed at any time. The links for the notes and information in screen.cast.com can also be shared and recommended by the students to their friends through Facebook and Twitter via the ‘like’ button that has been provided.
(iv) YouTube Intervention

YouTube is one of the new media forms of Web 2.0 that is popular at the present time. YouTube is a popular video sharing site used to upload, watch and share video footage such as animation, recording of public events, personal recordings of close friends or almost everything that we would like to be broadcasted (Mohamed Amin 2011). As a social application that is becoming well-known, YouTube intervention in Japanese language pedagogy has become an educational and motivational tool that is very exciting and influential. In the course SKV A2723 Basic Japanese 2, students are required to learn the Japanese language verb in the form of TE (TE form / て 形). To facilitate the students in remembering the way the verb changes in the form (MAS form / ます 形) to the TE verb form, teachers have taken the initiative to introduce the verb change patterns through the song intervention which can be uploaded via YouTube. This intervention is to create an activity that can enhance students’ understanding as described by Stempleski & Tomalin (1990), “Combination of moving pictures and sound can present language more comprehensively than other teaching medium”. This method is easier nowadays with the help of YouTube and internet resources. The selection of the song titled ‘Oh My Darling Clementine’ and the video clip is based on the rhythmic beats played on a keyboard that was obtained from the link http://www.youtube.com/watch?v=2harf94SQU. The lyrics in the form of ‘changes in the verb form of TE /て形’ for the collection of Group 1 verbs in Japanese language written in hiragana orthography are as follows:

The lyric production stage was carried out using the software ‘Aegisub’. The lyrics entered into the software were timed according to the video clip as displayed in Figure 6. The lyrics that have been timed can be made in the form of karaoke by using the same software. The font and font size for the lyrics and karaoke were chosen based on suitability. In developing this material, the same lyrics were repeated a total of three times; for the first and second time, the voice of the native speaker instructor was inserted and it is only in the third lyrics that the students will be singing together. Next, the video clip produced was uploaded through a YouTube account. Observations of the students showed that through the use of YouTube, the students could easily understand and remember, and during the exercises and test conducted for the TE /て形 verb form, the students were heard singing the lyrics of the song softly and there were also those who wrote the lyrics of the song at the corner of their exercise and test papers.

Figure 6 explains how YouTube helped the students in learning the Japanese language verbs in the form of TE /て形.
(v) Wordpress Intervention

The next intervention used in development of teaching materials is the Wordpress. In general, a web log or blog (weblog) is a personal diary, a collaborative space, a news channel and a collection of links to your personal view memos for public viewing. In short, your blog can be anything you want. There are various forms and types of blogs, and there are no fixed rules about it. In brief, a blog is a website for you to make postings continuously. New things are displayed at the very top so that visitors can read the latest posts. They then can comment on your entries or make links to it or send e-mails to you. In the field of education, blogs are used to fulfil the varied forms of communication needs to help in the practice of e-learning (Sergio Luján-Mora & Susana de Juana-Espinosa 2007) Web 2.0 in the form of blog utilized in this study is Wordpress which is a free online publishing tool. Wordpress is web-based software that allows anyone to build and maintain or edit their own website or blog. Wordpress intervention is needed to facilitate teachers in making announcements, adding lecture notes, exercises, assignments and information on culture, society and Japan as shown in Figure 7 which can be accessed through a link https://va2723bja.wordpress.com/. Through open-ended questionnaires about the advantages of using Wordpress that has been developed which were given to 25 students, the students reported that it is easy, quick and can be accessed at any time without having to download the materials. In comparison to the use of iFolio, Wordpress looks more striking, attractive, interactive and easier to understand, and the materials can be categorized, can be downloaded faster and will not always be interrupted as iFolio. Wordpress is also an ideal platform for the teachers to provide and the students to suggest links which are perceived as giving benefit in Japanese language pedagogy, including information about Japanese society’s socio-culture that are not explained in detail in the textbooks. However, there are also some disadvantages of Wordpress. Students sometimes forget the Wordpress URL (link), they need to scroll down to obtain previous materials and find it difficult to locate previous posts.
Findings and Conclusion

This study was aimed at identifying the effectiveness of utilising Web 2.0 applications in comparison to the conventional method of merely using the textbook. This study also involved carrying out observations of students using Jing and YouTube applications and getting feedback from the students who utilized the Screen.cast.com application and Wordpress through questionnaires and feedback in class. In terms of evaluation, the findings show that the test scores of Group B, namely the group of students who were exposed to Web 2.0 applications obtained an average score of 79/100 which is better when compared to the score of Group A, namely the group that used the traditional approach; students in Group A scored an average mark of 76/100. In terms of writing, Group B tends to show better, nicer, neater and more balanced writing style. Through observations, students who were exposed to Web 2.0 activities such as Jing and YouTube experienced a learning environment that was more vibrant, interactive, lively, and conducive and showed positive motivation. Through the questionnaire conducted for the Screen.cast.com application, it was discovered that from the 25 students, 20 students chose ‘strongly agree’ and 5 students ‘agree’ that the materials uploaded into screen.cast.com that was linked to iFolio and Wordpress have really helped them in understanding the lessons taught, can be made a reference when revising and can be accessed easily at any time. For the teachers, the time that can be saved from copying notes in the classroom by the students can be utilized to conduct various oral activities such as role play, question and answer, simulation and so on. If the students did not want or could not download the notes because of the slow Internet network, the students could still directly access the notes prepared in the form of slide share. The questionnaire sent out to the 25 students on the advantages of using Wordpress revealed that the students considered it easy, quick and can be accessed at any time without having to download the materials. In comparison to iFolio, Wordpress appears to be more striking, attractive, interactive, and can be easily understood, while the materials can be categorized, can be downloaded faster, and will not be interrupted often like iFolio. Wordpress is also a platform that is suitable for teachers to provide and students to suggest links that are felt to give benefit in Japanese language pedagogy including information about the Japanese society’s socio-culture especially those related to the learning topics that are not available in the textbooks. However, there are several weaknesses of Wordpress in that the students need to scroll down to get past materials, and find it difficult to look for previous posts.

The implication from this study is that the use of Jing can be applied to the more complex kanji orthography, especially those requiring more than 10 drawings such as 機械 kikai; machine, 複雑 fukuzatsu; complicated, 行政 ringisei; bottom-up decision making process and thousands of other kanji orthography. This process is also time-saving because the instructors need only to record once only i.e. the sequence of the desired kanji through suitable websites, but the recording can be used over and over again. This process also reduces the students’ dependence on the teacher because they can carry out the exercises while referring to the Jing display. This teaching and learning technique also combines the traditional method that uses the textbook with the method that utilizes and leverages on technology contained in Web 2.0 which is more modern and futuristic. It is hoped that applications such as Screen.cast.com, YouTube, and Wordpress would ignite new ideas, promote student centred learning, and could be shared together with Japanese and foreign language courses from other universities and institutions.

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