

## **Developing Sakura - An Interactive Website for Japanese Language Learners**

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### **Abstract**

A series of over 160 Web-based interactive exercises were developed from 1999 to 2002 for use by beginning-level students of Japanese language at Monash University. Designed to supplement and extend the in-class components of the course as well as provide new forms of out-of-class learning, these exercises have been made available for remote access by students and others via a website called Sakura. These online exercises fall into twelve general types, the design, and implementation of which is discussed in this article. Comparisons are made between each type of online exercise and their more conventional paper-based analogues that can be found in exercise and drill books. The advantages and disadvantages of each are discussed. Due to the ability of online exercises to provide immediate feedback, the electronic exercises demonstrate a general advantage over the paper-based. This is most evident when sound or random presentation is also incorporated since these online exercises can provide forms of practice not practicable by other means.

### **Note to readers**

This article contains numerous hyperlinks to exercises on the website “Sakura”. For the exercises to work effectively you need to have a compatible combination of browser, OS, and plug-ins. Please refer to the introduction page <<http://www.arts.monash.edu.au/subjects/japanese/sakura/introduction.html>> for details of the system requirements before attempting to use the site.

### **Introduction**

Students of beginning level Japanese at Monash University currently use a series of online materials as a component of their on-campus course. These materials aim to complement and extend the learning provided by the conventional means of lectures, tutorials, and textbooks. The Web-based component is directly integrated into the course lesson by lesson. For each lesson in the main textbook, *Interactive Japanese*, the website, “Sakura”, provides a series of exercises. In one sense, the website fulfils the role of a traditional exercise book intended for individual use, but the online environment also provides opportunities for exercises to be presented in novel formats. This article aims to outline the various types of exercises developed for the Web; compare them to their traditional paper-based analogues; and discuss the advantages, limitations, and the challenges involved in the on-line implementation of each type.

### **The rationale for the development of an online course component**

Developing an online component for a university course is an undertaking that requires considerable time, motivation, skill, and money. At the institutional level, providing web-based delivery for all or part of a subject was viewed as an innovation worthy of support. From my point of view, there were clear pedagogical and practical imperatives for embracing this technology. The advent of the World Wide Web presented a new text-based domain of language that language teachers could not ignore. Just as communicative style activities had brought more interaction into the classroom, I thought the interactivity of the Web had the potential to add dimension to text. Besides this, I was convinced that educators in the field of languages should explore as many language domains as possible and incorporate these into their teaching to make the learning experience as real as possible. In the past I had incorporated film, TV, advertising, pop-songs, magazines, and other aspects of popular culture into my teaching, so the Web seemed a natural and necessary addition, particularly since it was such a popular medium amongst young people. In terms of course delivery, I was particularly conscious that learning a foreign language in an L2 environment required a considerable commitment on the part of the learner. While face-to-face teaching that included pair-work and other activities was an effective method of providing students with graded yet realistic language interaction, classroom time was limited and students required additional exposure to the language to extend their vocabulary, expose them to the language in an increased range of contexts, and counter their tendency to forget material practiced in class. The traditional methods of encouraging this out-of-class learning are setting homework, providing activities such as language clubs, and encouraging utilization of available foreign language materials such as language tapes, radio and TV programs, films, etc. In the case of beginning-level students of Japanese, however, the utility of some of these avenues for out-of-class learning is limited due to the comprehension level of the students. The NHK TV news programs, Japanese radio programs, and Japanese newspapers available in Australia are generally too difficult for students, as are the most authentic Japanese web-sites. I had looked for CALL materials on the web and had found some sites relevant to beginning level students but as Ikeda (2003) has noted the amount of such material available on the Web was limited. What were needed were graded materials of direct relevance to the course that students could access in their own time.

In addition to the educational needs of students, there was a need to mitigate the effects of ongoing budget cuts on the quality of education offered. In recent years, student numbers have been increasing while staff numbers have been drastically cut, face-to-face teaching hours have been reduced, and the overall support for languages has declined. These problems are not peculiar to Monash University but are to be found throughout the Australian university sector (see Pauwels 2002). While they stem from remote policy decisions the effects are directly felt by staff who struggle to maintain standards as workloads climb and resources shrink, and by students who have to cope with large classes and limited access to the remaining staff. Within this environment, any method that can provide a means for students to practice the language they have been exposed to in class without requiring staff involvement is a definite plus.

## **The development process**

The project team consisted of two designers, myself and Brian May, plus one programmer. Three different programmers worked on the project over the years 1999-2002 but the bulk of the programming was done by Peter Stagg. For each exercise, the developmental process was as follows: 1. The designers worked on the concept and produced a model exercise. 2. This was discussed with the programmer to determine whether it was feasible. 3. Any required modifications to the model were made and then the designers produced the necessary materials. 4. A prototype program was developed for the exercise. 5. This was tested and evaluated in terms of its effectiveness as a meaningful linguistic activity. 6. When the model proved successful, new variants were generally developed. In other cases, the model might be retained as a one-off item or abandoned. Both the developers and programmer worked closely together but there was little overlap in tasks. As Ikeda (2003) has observed, this division of roles allows the designer of the language materials to concentrate on the educational content while the programmer can focus on the implementation. By mid-1999 the first exercises were available for use by students. Development continued through 2000 and 2001 and in January 2002 there were 162 exercises on-line. Each of these incorporated numerous items so they provided over 2,000 separate interactions for use by students. Development remains ongoing.

## **Overview of the course and website**

Beginning level Japanese at Monash comprises the first two of a series of twelve units in Japanese language offered internally. It has long been a large course. In the first semester 2004, enrolments exceeded 320 students with the unit being managed and taught by one permanent staff member, myself, a number of post-graduate students, and several part-time casual staff. Each unit is thirteen teaching weeks of four contact hours per student per week. Two additional computer laboratory classes per student are held in the first semester to familiarise students with the use of the online materials including how to set up their home computers, access audio, and input Japanese script. The textbooks used are *Interactive Japanese 1* and *Interactive Japanese 2* which come with audio CDs, as well as the workbook *From Hiragana to Katakana for learning katakana script* (Tomoda & May 1996, 1999, 2003). The style of face-to-face teaching that I use is based on communicative methodology with a large proportion of class time involving pair-work, role play, and other information gap activities. The website *Sakura* comprises a number of sections but this article only deals with the *Renshuu* 練習 (exercises) section which comprises a series of purpose-built exercises that employ Java Script to enable real-time interactivity via the Web.

Although *Sakura* aimed to accommodate a range of platforms, it is optimised for Internet Explorer on a PC. To use the site effectively, computers need to be able to display double-byte characters and an input method editor (IME) for Japanese is required. Implementing interactivity using Japanese script presented a considerable challenge during the developmental phase. Students also encountered difficulties using Japanese script on their home computers unless they first installed the required fonts and IME, browser and plug-ins. To avoid the de-motivating effects of technical difficulties such as these on novice users, the site was constructed using parallel versions of most exercises, with one version using roman script only and the other version using Japanese kana script (indicated by a “k”). This meant that students could access the site and begin using the

exercises in the first week of their course, prior to learning Japanese script and how to input it on their computer. Sakura is currently available for open access at: <http://www.arts.monash.edu.au/subjects/japanese/sakura/>

## **Types of on-line exercises presented in Sakura**

Key imperatives in the development of Sakura were that the online exercises be easy to use, fast to download, self-marking with immediate feedback, suitable for individual use at home, not require input from an instructor, and be directly relevant to the course material. It was also important that there be a sufficiently large number of exercises available for it to be worth students while taking the trouble to access them. Consequently, we aimed to produce a large number of short exercises that were familiar in the form to exercises students had encountered on paper and in the textbooks, whilst taking advantage of the interactivity that the online environment offers. Graphics were kept to a minimum to reduce download time and only used when they added to the content of the exercise. The exercises were numbered according to the lessons they related to in the textbooks to enable students to readily access the exercises that were relevant to their current learning. The correct answers were intentionally not provided on the site so that students would be able to identify the areas in which they had difficulty and not gain a false sense of their level of familiarity with the course material. In the laboratory sessions, students were encouraged to use their class notes and textbooks to assist them when they encountered difficulties with the online exercises.

Based on the kind of response required, the exercises fall into the following main formats:

1. Multiple-choice using click-on buttons
2. Multiple-choice using pull-down menus
3. Short-answer exercises requiring typing into text-fields
4. Cloze-type exercises requiring typing into text-fields
5. Exercises that combine aspects of the above categories

Each kind of exercise has advantages and disadvantages from the viewpoints of developers, teachers, and students. When determining which to select, the developers and programmer attempted to weigh up the time and expertise required to develop and successfully implement the exercise on the web against the success of the exercise as a useful and interesting language learning experience.

The exercises can also be grouped according to the kind of practice they aim to provide. These include:

1. Keyboard skills development
2. Script and word recognition
3. Vocabulary building exercises
4. Sentence pattern drills
5. Listening comprehension
6. Dialogue completion
7. Reading comprehension and translation

These kinds of exercises employ a range of multiple-choice and text-input formats. Some only employ text, while others integrate sound and graphics or combine several kinds of practice such as listening and reading, listening, and dialogue completion.

The following sections discuss the kinds of exercises developed for Sakura with links to the actual exercises being provided. To use the exercises effectively, it is preferable to use Internet Explorer and ensure your computer will display Japanese characters or Unicode. Further details on system requirements are provided in the introduction to the website [Sakura](#).

## 1. Multiple-choice using click-on buttons

The format of this type of exercise is the same as that for a paper-based multiple-choice quiz. The differences are that the student clicks with the mouse on an option and feedback is provided automatically. In the simplest version, this feedback is immediate in the form of a green pop-up window in which is written *ただししい* *tadashii* (correct) or a red window with *ただししくない* *tadashikunai* (incorrect). To soften the effect of this feedback, the messages in these boxes alternate to *よくできました* *yokudekimashita* (well done!) and *もういちど* *mooichido* (once more) respectively. To the novice user, the meaning of the red and green boxes requires no explanation, but the actual Japanese phrases need to be explained in class.

The basic model for this kind of exercise is as follows (text is shown as XX; buttons are shown as dots):

Model 1: Click-on multiple-choice

Q: XXXXX XXX?

- option 1
- option 2
- option 3

(feedback)

Exercises of this type (for example [Ex 4.4.](#)) are relatively easy to develop and implement on the Web. The advantages are the same as for paper-based multiple-choice in that this format can be adapted to many types of situations and the answer can be controlled. On the Web, it has the added advantage of being familiar to first-time users and so requires little explanation. When the use of Japanese text presents a technical problem this kind of exercise is the best option since it is possible to use the Japanese script as a graphic rather than as text.

Since immediate feedback can be provided on the Web, it can be argued that this kind of exercise is better delivered online than on paper. Moreover, whereas a worksheet is generally used only once, an electronic multiple-choice exercise resets itself and can be used by the student again at a later date. Even so, the advantages over a booklet version that includes the answers in the back are few. As a Web exercise, it suffers from being unoriginal and doing a lot of this kind of exercise tends to become boring. Adding graphics can mitigate this effect somewhat but unless the part of the graphic form of the exercise, it adds little to the educational value while consuming computing capacity.

Multiple-choice with a button click is, however, the best choice for exercises that require rapid responses. Since a mouse click is all that is required, the element of speed can be incorporated to make the exercise more challenging. This kind of exercise is discussed at length below (for example, see [Ex 3.1](#)).

## 2. Multiple choice using pull-down menus

Although pull-down menus are in essence another version of paper-based multiple-choice questions, the online version does have some advantages when constructing exercises of the fill-in-the-blank type. The pull-down menu forms the blank, from which the user selects one of a limited range of options. Once students make their selection they click on a 'Submit' button to receive feedback (correct/incorrect) (see [Ex 8.2](#)).

The basic model for this kind of exercise is as follows (pull-down menu shown as [ ]):

Model 2: Pull-down multiple-choice

Q: XXXXX XXX?

A: XXXXX [option 1; option 2; option 3] XXX.

Submit

(feedback)

Since the range of possible options can be limited to four or five, this format lends itself to the practice of structural points and we have often used it for this purpose (see [Ex 2.1](#)). It is also effective in longer model conversations where more complex comprehension is the focus. In such cases, feedback can be provided at the end of the passage and combined with blanking out the incorrect selections (see [Ex 16.3](#)). Since the format is straight forward and no text input is required, this kind of exercise is particularly suited to novice users, but when using Japanese script a Japanese character set is required. Although we have usually used simple feedback, it is possible to construct a more complex set of feedback options with this and other types of multiple-choice exercises. For example, in [Ex 4.2](#) feedback is provided in a text-field that includes hints relating to the incorrect options.

A disadvantage of exercises of the above two kinds is they tend to be mechanical since the correct responses can be obtained by trial and error. Consequently, students have less motivation to repeat an exercise once they have completed it. Furthermore, the presence of pull-down menus in the middle of sentences looks unnatural especially in longer passages that include a number of them. Nevertheless, this format is easily adapted to many situations. It is generally superior to the first type of multiple-choice since it showcases some of the advantages of the online format over the paper-based format while remaining suitable for novice users.

## 3. Short-answer exercises requiring typing into text-fields

In many cases, we have opted for the use of text-fields over multiple-choice formats. Although point-and-click exercises have an implementation advantage, they involve an overtly closed set of responses whereas the use of a text-field allows for a less controlled response. When confronted with a blank text-field, students cannot simply adopt a trial-

and-error strategy and are forced to work out the answer. This educational advantage of the text-field does, however, need to be weighed against the additional complexities that this format brings. These include text input capability on the part of the user and the program, the technical aspects of marking the input, and a means for the user to access the correct responses.

When the alphabet is used, the main issues with inputting text relate to how to treat spaces and capitals. To address these, the options are to instruct users to avoid capitals and spaces or program the exercise to accept all options. Our initial strategy was to give instructions but users often ignored these so we had to add typical options to minimize frustration. For example, when the required input is 'konnichi wa' (Good day) the program needs to accept: 'konnichi wa'; 'konnichiwa'; 'Konnichi wa'; 'Konnichiwa'.

When Japanese script is being used for input, there are a number of additional problems. On the instructional side, students require Japanese word-processing skills, so a set of exercises that aimed to teach students the methods of entering Japanese script using a standard romanised keyboard needed to be developed (see below for a discussion of these exercises). However, it takes a few weeks before students can become familiar with Japanese script in class and since the word processing exercises depend on the ability to read at least hiragana, students cannot realistically be expected to input Japanese script within the first month. To encourage text input prior to familiarity with Japanese script, exercises were constructed with romanised versions that can be used by novice users. These are linked to Japanese script versions that can be used once students have acquired the necessary skills and confidence.

On the implementation side, the Japanese versions of text-input exercises needed to be programmed to accept a greater range of textual variants than for the romanised versions. We use the modified Hepburn system of romanisation as the standard when teaching beginning level students, but for typing, we also teach a range of two-key input options e.g. 'tu' for 'tsu', so a text-field requiring the Japanese for 'two' is programmed to accept: 'futatsu', 'hutatsu', 'futatu', or 'hutatu'. With later exercises that employ both kana and kanji additional options are required. If an insufficient range of acceptable answers is used, users will receive feedback indicating that they are wrong when they enter a less usual variant input even though their response is correct.

The basic model for this kind of exercise is as follows (text-field is shown as { }):

Model 3: Fill in the blank

Q: XXXXX XXX?

A: {blank field}.Submit (accept: futatsu, hutatsu, futatu, or hutatu)  
(feedback)

One way we have employed the short-answer format is in a series of listening comprehension exercises. For example, students see a graphic of a clock and hear a person ask them 'nanji desuka' (What time is it?). Then they have to write the time shown on the clock into a text-field using words, submit their answer, and then progress to the next question. When they have finished a set they receive an accumulated score (see [Ex 7.1](#)). The concept of this exercise is simple, and the sound is superfluous since the exercise can be completed without it, but it induces a more realistic effect and this, coupled with the score, compels the user to continue.

#### 4. Cloze-type exercises requiring typing in text-fields

As with the pull-down menu type of exercise, text input lends itself to the cloze exercise. We have used this format for simple sentence completion (see [Ex 6.2](#)) as well as for short (see [Ex 15.2](#)) and longer dialogues (see [Ex 6.3](#)).

The basic model for this kind of exercise is a variant of Model 3:

Model 4: Text input

Description of a situation (in English)

A: XXXXX XXX?

B: XXXXX {blank field 1} XXX.

A: XXX {blank field 2} XXX?

B: XXXXX {blank field 3} XXX.

Submit (accept options for fields 1, 2 & 3)

(feedback plus blank out incorrect fields)

An advantage of this format is it cannot easily be solved by trial and error and so requires more thought and a clear understanding of the Japanese. However, longer dialogues that include a number of text-fields can prove difficult for students since the options are open and not constrained as in pull-down menus. More care is also required in designing such text-field cloze exercises to ensure that there is no ambiguity. Consequently, we have tended to use the text-input type of cloze for shorter dialogues and the pull-down type for longer dialogues (see [Ex 16.3](#)).

#### 5. Exercises that combine aspects of the above categories

One aim of the project was to experiment with exercise designs for Web implementation. While straight-forward formats such as those discussed above tend to dominate the site, a number of more innovative formats have also been developed. One approach taken was to have students respond to a graphic. In [Ex 1.5](#) this simply involves matching a face to a name using a pull-down. Another approach was to use a map of Japan with cities marked on it as flashing dots, coupled with a dialogue about travel containing blanks as pull-downs, with the map providing the information needed to complete the dialogue (see [Ex 6.4](#)).

Exercise [17.2](#) is a read, listen, and select exercise that employs a variety of multiple-choice (i.e. true/false). It involves first reading the entries in a Japanese schedule book, then listening to recorded statements about the schedule which may be true or false, and finally clicking on the corresponding T/F button.

Model 5: Schedule Book (audio shown as “.”)

Step 1. Read and comprehend entries in schedule book (graphic)

Step 2. Press audio icon & hear “recorded statement 1”

Step 3. Decide whether recorded statement 1 is accurate according to the schedule book.

Step 4: Press the button for True or False

(feedback is automatic progression to next item, i.e. “recorded statement 2” )

Whereas exercises like 1.5 and 6.5 above are versions of a kind of exercise found in language textbooks which have been adapted to an electronic format, 17.2 is further removed from any paper-based analogue and, as such, is a better example of what can be done in the online environment. On the downside, however, the more complex the structure of the exercise the longer it takes to implement on the Web, and the more likely that problems with functionality will occur. For every such exercise that worked, a number of other designs had to be abandoned.

## 6. Keyboard skills development

To introduce students to the rudiments of word processing using Japanese script, we developed a series of eleven exercises that cover all the main features of inputting hiragana, katakana, and kanji. These exercises have a dual role in that they also provide students with practice entering Japanese into text fields, a skill they require to complete other exercises presented in *Sakura*. Once students have mastered the basics of text input they can learn other operations such as changing from hiragana to katakana and from hiragana to kanji. Each online keyboard exercise begins with a short explanation of one aspect of inputting Japanese text, followed by a practice session that involves entering text into a text field, pressing the submit button, and receiving accuracy feedback.

In the earlier exercises, students learn to input using hiragana (exercises 1 - 4). Beginning level students learn a romanised form of Japanese (called *roomaji*) to provide them with a means of writing Japanese while they learn the Japanese scripts. However, there are some differences between the romanised Japanese used in textbooks and the method of entering Japanese script using a standard romanised keyboard. Therefore explicit instruction in text input is essential. To take one example, long vowels are problematic since a word that students are used to spelling as 'kyooshi' (instructor) will produce inaccurate hiragana if entered in this manner i.e. きょおし. Instead, it has to be entered as 'kyoushi' to produce the correct hiragana rendition i.e. きょうし (see [Exercise 1](#)). Also, a particle that students have been used to writing as 'wa' has to be typed in as 'ha'. In addition, there are a range of shortened alternative ways of inputting individual hiragana or katakana (for example, 'tsu' = 'tu', 'shi' = 'si', and 'chi' = 'ti') (see [Exercise 2](#)). Consequently, the Japanese version of 'Good Day' that students learned in lesson 1 as 'konnichi wa' could be entered as 'konnnitiha'. Although these differences are not overly complex, without explicit instruction it is difficult for students to adapt to the online environment the *roomaji* they learn in class and read in the textbook. In the later exercises students learn to input romanised text to produce katakana ([Exercise 5](#) to Ex 7), then kanji ([Exercise 9.1](#) to Ex 9.2) and finally short sentences that combine all three scripts ([Exercise 9.3](#)). By the end of the series, the user has covered all the basics of Japanese text input.

The aim is not to have beginning level students complete all the exercises in one sitting. Rather, the appropriate exercises are used as familiarity with Japanese text grows. Generally, students first use these exercises in a supervised computer lab session. I have found that each year students are excited when they see Japanese script appear on the screen and even more excited when shown how to send e-mail in Japanese. My observation is this stimulates interest in Japanese script and encourages students to move away from *roomaji* and use the Japanese script only.

## 7. Script and word recognition

Learning the Japanese scripts of hiragana, katakana, and kanji are major hurdles for learners. Students need to be able to recognize and identify the Japanese characters instantaneously before they can read with confidence. A conventional means of practicing script recognition is the use of flashcards. This approach is effective but it tends to produce boredom. In an attempt to overcome this, I designed an exercise model that utilizes the rapid repetition that flashcards offer with the addition of time and accuracy feedback.

These exercises referred to as ‘Quick Hit’, comprise a pool of items from which the computer draws random sets of ten items. These are presented one at a time. The learner responds to each item by clicking on one of three options presented on buttons. The button-click brings up the next item and so on until all ten items have been displayed. After the final item, the score out of ten is displayed together with the time taken to complete the set. The numbers corresponding to any incorrect items are also displayed enabling students to scroll backward through the exercise and check their mistakes. Students can then repeat the exercise with another set of ten items.

Having found that a prototype of the first Quick Hit exercise (later to become [Ex 1.1](#)) was well received by students, we developed further exercises using this model. These involved reading individual hiragana ([Ex 5.1](#)), recognising vocabulary items written in hiragana ([Ex 6.1](#)), recognising individual katakana ([Ex 15.1](#) and [Ex 16.1](#)), and a number of vocabulary exercises that employ katakana and kanji (for example [Ex 18.1](#) and [Ex 21.1](#)).

### Model 6: Quick Hit

Step 1: press ‘start exercise button’. This starts the timer.

Step 2: Item 1 appears

Step 3: Select options 1, 2, or 3 (on buttons)

Step 4: Item 2 appears

Step 5: Repeat steps 1-3 (and so on until Item 10) (selecting the final option stops the timer)

Step 6: Feedback: score; time taken (seconds); items incorrect.

Step 7 (optional): scroll back to check which items were answered incorrectly, then review textbook or notes

Step 8: repeat the exercise (this generates a new set of items)

Although Quick Hit exercises are conceptually simple, being simply flashcards combined with multiple-choice, the addition of randomly generated sets with time and accuracy feedback creates a format that encourages ongoing use. On the technical side, this format required the development of a series of prototype programs, each of which was trialed before the current format was arrived at. Students have informed us that these exercises produce the feeling of a computer game and that makes repeating them more enjoyable.

## 8. Vocabulary building exercises

Vocabulary building is a major challenge for beginning level students so we developed a series of exercises that aim to revise the main new vocabulary items for each lesson. In their earliest form these exercises comprised simply a list of words written in hiragana accompanied by a text-field into which the corresponding romaji is typed, followed by a ‘Submit’ button for each item (see [Ex 1.2](#)). A parallel exercise comprised the same vocabulary list but required typing the meaning in English into the text-field (see [Ex 1.3](#)). In later exercises, these aspects were combined so there are two text-fields per vocabulary item (see [Ex 2.4](#)). As kanji were introduced the vocabulary items were presented in two formats, one using hiragana only and one employing the usual kanji. Once students have learned the kanji, the hiragana field is dropped (see for example [Ex 16.6](#)). From lesson 18 onwards the romanised input is replaced by hiragana (see [Ex 18.6](#)).

#### Model 7: Vocabulary Building

Presented as a list with four columns as follows: 1. Japanese word (in kana); 2. Same Japanese word (in kanji + kana); 3. Romanised version; 4. English meaning. (Kana script represented as K; Kanji script represented as Kj)

Japanese word (in kana)	Japanese word (in kanji + kana)	Romanised version	English meaning	
KKKKK	KjKjKK	{            }	{            }	Submit (feedback)
KKKKK	KjKjKK	{            }	{            }	Submit (feedback)
KKKKK	KjKjKK	{            }	{            }	Submit (feedback)

Conceptually simple and relatively easy to design and implement, since they all follow the same format, these exercises are a series of short answer questions set up as a single table. One advantage is they provide a simple way for students to revise new vocabulary items covered in class in a form that requires knowledge of both pronunciation and meaning.

When compared with Quick Hit vocabulary exercises the Vocabulary Building exercises seem rather pedestrian. Nevertheless, they do illustrate some of the advantages of the online format. Although modeled on the paper-based vocabulary quiz, these exercises differ in that they lend themselves more to individual use. Whereas few students would use a vocabulary quiz in their own time for their study, they are more inclined to use an on-line self-marking exercise. To reinforce the importance of these exercises, they are designed to complement the Quick Hit vocabulary exercises. Vocabulary items are first presented lesson by lesson in the lists before being incorporated into a Quick Hit set. A downside of these vocabulary exercises is that they involve no meaningful interaction and are simply a list of words without any semantic grouping. This means that they can become tedious and need to be kept short. The main difficulty in constructing this kind of exercise lies in the need to accept numerous options in both the romanised text-field and even more in the English meaning field.

### 9. Sentence pattern drills

The pattern drill has long been a major component of exercise books for language learning and remains a useful exercise type. In the simplest form, these exercises present sentences

that are based on material covered in the same lesson in the textbook and require a blank to be completed by entering a particle or word. This can be implemented online using pull-downs (see for example [Ex 8.2](#)) or typing into text fields. In [Ex 24.2k](#) a verb-form transformation is practiced by contrasting what a person thinks they want with what they would say when making a request. The thought provides one form of the verb and acts as the hint for the text-field in the request.

Since the focus of the course is upon conversational Japanese, where possible the pattern drills are structured as short dialogues (see [Ex 11.1](#) and [Ex 22.1k](#)). This provides greater contextualisation and reduces the mechanical feeling of this kind of drill.

## 10. Listening comprehension

Incorporating sound files offers the opportunity to create exercises that combine skills and make good use of Web interactivity. Such exercises are, however, fairly complex and time-consuming to construct so they remain in the minority.

Lesson 7 includes several audio exercises. In one exercise, the sound is combined with multiple-choice after the fashion of a listening comprehension workbook plus tape. Students see a digital clock face displaying time and hear a sound-file of a time that may or may not correspond to the clock. The response is to click on buttons for correct or incorrect. The items are presented as in the basic Quick Hit model (see [Ex 7.3](#)).

Model 8: Audio multiple-choice

Step 1: Graphic plus “audio”

Step 2: Look at the graphic, press audio icon to listen, then match

Step 3: Click button: T or F

(Feedback: exercise progresses, see Quick Hit model above)

In lesson 20 a conventional listening comprehension format is adopted. Students listen to short dialogues about the positions of things and respond by using pull-downs to complete a statement in English (see [Ex 20.2](#)). While this exercise does not display the kind of interactivity evident in Exercises 11.2k and 17.1k (see below), it is a straight forward format that could be adapted to numerous situations.

A more complex format employs an interactive calendar that includes graphics and a series of sound-files in the form of short dialogues that mention a month and a day of the month. Students listen to the recording, select the correct month from a pull-down menu next to the calendar, click on the day on the calendar, and exercise progresses to the next item (see [Ex 17.1k](#)). Relative time expressions are also practiced similarly (see [Ex 11.2k](#)). These exercises are forms of listening for gist but they use very short passages. The aim is to make rather boring activities such as learning the days of the month more palatable as well as to contextualize them. To complete the exercise the learner only has to pick out the day, but since the day is embedded in a longer audio passage the exercise does not seem like a mechanical drill.

Model 9: Calendar (with audio)

Step 1: press ‘start exercise button’ to start timer.

Step 2: press audio icon to hear “XXXXXmonthXXXdateXXX”

Step 3: select month from pull-down

- Step 4: press day of the month on the calendar
  - Step 5: selected date appears on the button
  - Step 6: if correct, press button to submit
- (Feedback: automatic progression to next item, see Quick Hit model above)

In the above instances, the online format displays distinct advantages over the conventional in that it is easier for the user to set up, gives immediate feedback, offers a large number of interactions since the exercises are in random blocks, provides time and accuracy feedback, and can be used at the learner's convenience. The downside is that combining sound and graphics consumes computing space so the size of the sound-files and the graphics need to be minimized. Otherwise loading time becomes excessive and the purpose can be defeated as student frustration sets in.

## 11. Dialogue completion

Both short and longer dialogues comprise the most common type of exercise used in Sakura. As mentioned above, most of these are presented as short dialogues requiring pull-downs or text-input and are variations on the traditional cloze exercise. Others, however, use more novel formats. In [Ex 2.3](#) learners see a graphic of a bus door and a series of faces. They have to find a person who is getting off a bus by typing questions and responses into a text field. The conversation is structured in four stages so a number of unsuccessful attempts are required before the correct person is found. The aim is to practice phrases learned in the lesson, so the stages are used to encourage repetition. This exercise is a series of Model 4 type exercises (see above).

In [Exercise 19.2](#) there is a conversation with cloze items that is structured in stages as in Exercise 2.3 plus the addition of audio. The model for this format is as follows:

Model 10: Staged Dialogue (with audio)

- Step 1. The situation is set using an English description and a graphic.
- Step 2. A short dialogue using text with blanks is presented. This is part 1.
- Step 3. Press the audio icon to hear the dialogue. This can be done any number of times.
- Step 4. Type the missing words into the text-fields. Then press the submit button.
- Step 5. Feedback appears as pop-ups and blanking out any incorrect cloze items.
- Step 6. If the input is correct an additional short part of the dialogue is displayed (i.e. part 2).
- Step 7. Again, there is cloze plus another audio icon that provides the dialogue.
- Step 8. Steps 3-5 are repeated.
- Step 9. When part 2 is correct, part 3 of the dialogue appears, steps 3-5 are repeated until all the blanks in the cloze are correct.
- Step 10. Finally the learner completes a sentence that describes the outcome of the dialogue by selecting from several pull-downs. This is intended as an overall comprehension check.

This kind of exercise is a single listening comprehension passage that has been divided into sections to keep the audio files small and keep the number of text fields that require auto-marking at one time to a minimum. The staging also provides a greater sense of progression through the task than would be the case if the whole dialogue were presented in one sequence.

Another variation on the dialogue format is seen in Exercises [7.4](#) and [7.5](#). These combine a conversation with an audio component but the text is only provided for the learner's role. The role of the partner is replaced with a photo of the person and the text is replaced by sound. However, an additional element is introduced since students have to answer a question to check that they have understood what has been said before they complete the final line of the cloze. This kind of exercise is modeled on classroom pair-work involving information-gap. Firstly the situation is set up, then the roles are played, the information obtained is recorded on a worksheet, and finally, comprehension is determined by checking the accuracy of the information recorded. Each of these aspects is implemented in the computer version. The general structure of this online format is as follows:

Model 11: Role-play dialogue (with audio)

Step 1. The situation is described in English and the instructions provided.

Step 2. The user plays the role of Person A and speaks via text. The partner is represented as a graphic and responds as audio.

Step 3. Complete the cloze components in a question from Person A using a text-field or pull-down.

Step 4. Press the Submit button to enter the selection.

Step 5. Computer responds as audio. If the input was correct, the user hears the answer to the question. If incorrect the user hears questioning audio feedback (see below), the text-field blanks out, and the user must try again.

Step 6. User is required to use the information that was heard to answer a question by typing into a text-field or selecting from a pull-down. This acts as a comprehension check.

Step 7. Press the Submit button to enter the text/selection.

Step 8. Computer provides accuracy feedback. This is generally the end of the interaction but it can be used as a command to progress the dialogue when the conversation is presented in stages.

Of the conversation formats, the above involves the most human-computer interaction since the computer takes the role of the role-play partner with text, graphics, and sound all being necessary to the interaction.

## **12. Reading comprehension and translation**

We considered developing an exercise in the form of an extended passage for reading followed by comprehension questions but did not progress down this path since we wished to avoid having students read longish passages on-screen that require scrolling. For beginning level learners there tends to be considerable overlap between reading comprehension and translation activities, so these were combined in a simple multiple-choice format (i.e. Model 1). Students read a sentence in Japanese and select which of a number of English translations is the best. We have found this format to be a good option because whole sentences do not lend themselves well to the use of pull-down menus or text input (see [Ex 16.2](#)). In earlier lessons these exercises are presented in parallel romaji and kana versions but in later lessons, the romaji version is replaced by a mixed Japanese script version (see [Ex 19.3kj](#)).

## **Student responses and observations**

In my frequent contact with students, I have found that most students use the website but some have poor computer skills or are resistant to the online format. Conducting supervised computer lab sessions helps overcome these attitudes since students generally find the sessions entertaining. Students are frequently forced to share a computer during the sessions due to the lack of resources but this can be turned into an advantage by encouraging students to work on the exercises together. For example, one could look up the textbook to answer difficult items, they can take turns on Quick Hit exercises, send each other e-mails, and so on. In this manner, the computer lab session can become another form of pair-work in which students learn the skills required to use Sakura independently. For some students, particularly those from overseas, the communicative style of teaching used in class is unfamiliar. This, coupled with shyness and lack of contact with other students, can make some students resistant to participation in spoken pair-work activities. For such students, supervised lab-sessions and individual use of the online exercises can provide a form of interaction in Japanese that is less confronting thereby making them more willing to take an active role in class. I have also found that the online exercises provide a valuable resource for students who begin the course late and need to catch up or revise work. Such students are not uncommon and those who have made good use of the textbooks and Sakura are usually able to catch up many weeks of missed work and complete the course together with the main group.

A number of evaluations of the website were carried out during the developmental phase and over the subsequent years but space does not permit a full discussion of these in this article. Some results have been reported in Felix (2001), others in Tomoda (2001). These results were encouraging but since that time the number of exercises has increased and both access and interactivity have improved. Further analyses are planned.

## **Conclusion**

As contact hours in language, subjects are reduced, the value of the remaining in-class sessions increases, so it becomes more and more important to use this time effectively. From my experience, class time is best used for explaining difficult points, correcting pronunciation, and conducting activities that require students to speak and solve problems using the language. Nevertheless, students need additional practice to consolidate and extend what they have learned in class and facilitate memorisation. As Yamamoto (2004) has noted, the adoption of a Communicative approach does not necessarily mean the abandonment of drills. Repetition is an essential component of language learning that should not be dispensed with. Accuracy is also an important issue in language learning and it is one that is difficult to deal with on an individual basis while teaching a large class.

CALL offers an effective means of replacing the drill book by taking the language drill to a new level. When implemented on the Web the old exercise book that required filling in blanks and then looking up the answers is transformed. At the minimum, it can become an electronic version that provides immediate feedback but the CALL version can also add graphics, sound and offer new forms of exercises. I do not see CALL as replacing face-to-face teaching. Most students like human interaction and it is very

difficult to design an effective substitute for one-on-one speaking practice. Nevertheless, CALL would seem to have considerable potential as a means of providing paperless supplementary materials and opportunities for out-of-class learning.

In the L2 environment, students require motivation to enable them to persist with their learning. Motivating students is a challenge that all teachers face and there are many possible ways to respond. Using the Web in the manner described above is one response that has proven popular with the majority of our students. Compared with 1998, the online environment has lost some of its novelty but students still seem to find their first use of Japanese script on the web a stimulating experience. By adding this extra dimension to the course we can make language learning more interesting and effective in a way that is overtly relevant to the modern world.

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