

Single-page, multiple-view web pages for reading ease

Scott Petersen

Seijoh University

petersen@ma.medias.ne.jp

Japanese universities often assign students who fail a course to separate, repeaters' classes. At times, enrollment in such classes can balloon out of control, making the creation of a suitable syllabus quite difficult. Sheer numbers provide one difficulty, but the ranges of abilities as well as the lack of motivation compound this difficulty. One solution is to make the class a workshop, with the teacher creating assignments that the students complete at their own pace. If the university has a wireless LAN (local area network), the teacher can offer the assignments in the form of Web pages. Students can then log on, complete the assignments, and submit them by e-mail. This was the reasoning behind the writer's repeaters' classes. This paper reports on one problem that immediately arose from this plan and three solutions. Readers are offered the opportunity to download and try the solution for their own classes. The experience I relate also illustrates the utility of knowing basic Web page construction.

The university

The university is located near Nagoya, Japan, and was established in 2001. It houses two faculties: the Faculty of Business Administration and the Faculty of Rehabilitation and Care. The classes under discussion are for students of the former faculty.

The required English curriculum for business students is composed of six classes. In the first year, they take one conversation and one listening class each semester. In the second year, they take only one conversation class each semester. Students take a standardized test (the G-Telp: <http://www.g-telp.jp/>) before the academic year as well as after both the first and second semesters. They are assigned (and then reassigned) to classes of about 20 people according to their scores on this test. In this paper, I am reporting about the first-semester, first-year conversation class and the second-year, second-semester repeaters' classes.

The university sports a wireless LAN, which it has made one of its sales points. Each student must buy a laptop computer, which they must bring to school everyday. Students download lecture notes and perform other lecture-enhancing assignment using materials that their professors upload onto the school's server. Teachers can use the

resources of the Internet and e-mail without having to take the trouble to reserve space in a computer lab. They can also expect that all students will have a set of basic computer skills.

Repeaters

When students fail a class, instead of taking the same class with the next year's students, most Japanese universities assign the students to a special "repeaters" version of the class. Repeaters' classes of English subjects present difficulties not seen in regular classes: large numbers, mixed, low and relatively high English ability and low motivation. It seemed clear that a simple repeat of the regular conversation class would be inappropriate. One solution to these problems was to treat the class as a workshop. Each lesson was comprised of a set of Web pages composed in *Hot Potatoes* (<http://web.uvic.ca/hrd/hotpot/>), sandwiched between an introductory and final page. The former would set out the plans for the set of Hot Potato exercises and the final page would instruct the students what to write in an e-mail they had to write to complete the lesson's work. Figure 1 shows the first introductory page of the first unit.

[Back to classes page](#)

Unit 1-Who are you?

Questions

1. Where do you live? どこに住んでいますか?
2. Where are you from? 生まれたところは?
3. When is your birthday? お誕生日はいつですか?
4. What is your sign? 何座ですか?
5. What is your major? 何学科ですか?

You should learn these words

- Months (January, February, March, April, May, June, July, August, September, October, November, December)
- Answers to the questions

You will use these words (試験に出ないことば)

• Aries--牡羊座	• Libra--天秤座
• Taurus--牡牛座	• Scorpio--蠍座
• Gemini--双子座	• Sagittarius--射手座
• Cancer--蟹座	• Capricorn--山羊座
• Leo--獅子座	• Aquarius--水瓶座
• Virgo--乙女座	• Pisces--魚座

Write

When you work on the exercises, you should write down the name of the exercise and your score. You need the information when you finish.

[Let's begin](#)

Figure 1. Introductory page of first unit.

I monitored students as they completed the work. In composing the lessons, I followed what I thought would be good lesson construction: tell them what they are going to do, have them do it, and finally have them reflect on what they did. However, the first stage of the lesson proved problematic. The students did not stop to read the introductory material. Since the material did not require an overt response of some kind, but merely required them to read the information, they decided it was not worth their time. Since this first page presented important and necessary information, students had difficulty completing the rest of the exercises. One possible problem was that the quantity and format of information on the page overwhelmed many of the students. Given the background of these students, one might have predicted such a problem. Many of the students seem to have trouble merely decoding the alphabet. Consequently, they put little effort into reading. To them, a full page of English was overwhelming. What to do?

Solutions

Solution 1: The slide show

One solution would be to spread the information contained in one Web page over several pages. However, having to load a new Web page several times would take a lot of time and further burden the network. I hit upon the solution of putting the information onto one page, but hiding much of that information. *JavaScript*, a scripting language enabling Web page/user interactivity, offers ways to accomplish this goal. Figure 2 shows an example of such a page, which was adapted from *JavaScript & DHTML Cookbook* (Goodman, 2003).

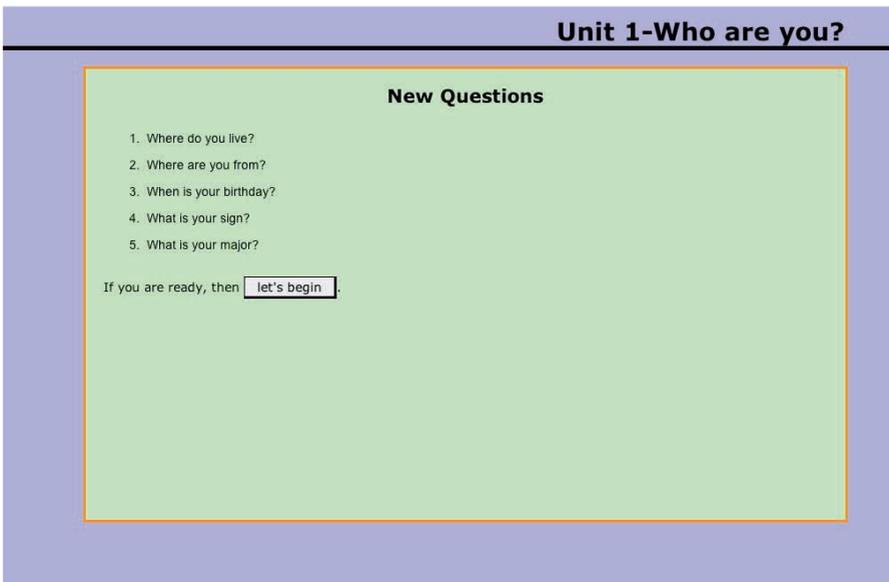


Figure 2. A JavaScript page displaying selected information

The page shows only the five questions that will form the lesson and a question asking users if they are ready to proceed. When they click on the link, "Let's begin," they see a new screen. However, note that this screen is still a part of the same Web page; the browser has not had to request a new page from the server. Figure 3 shows the second "page" or slide. The only way for the student to proceed after this slide is to read the short conversation and answer the question correctly. Each succeeding screen presents a short conversation illustrating one of the questions presented at the beginning. After reading the conversation, students must choose the correction answer to a short question about the conversation. Choosing the correct answer advances to the next slide. A wrong answer presents the students with information that (it is hoped) leads them to the correct answer. Students therefore have to process the information on the page. The answers also serve as examples when the students themselves have to answer the questions. When the students get to the final page, they find a link that will take them to the first of the *Hot Potatoes* exercises. In this manner, the students must make a first-pass at the vocabulary and structures of the entire lesson. The *Hot Potatoes* exercises are composed to reinforce this first pass.



Figure 3. The same page with different information displayed

After using this setup for a semester, I felt the format was too restricting. Students, being adults, should have more control over the page. The format made it more difficult to get to the last page. If the students wanted to review only the third page, they had to cycle through slides one and two. Therefore, I set out to find a second solution.

Solution 2: PowerPoint substitutes

A second solution comes in the form of a Web page that was created to simulate a PowerPoint presentation. It can be found at <http://icant.co.uk/domslides/>. A similar page resides at <http://www.meyerweb.com/eric/tools/s5/>. Figure 4 shows how it was adapted to the repeaters' class. Both of these slide show systems have tables of contents that will allow people to jump to any slide. These systems serve as excellent substitutes for PowerPoint, but lack flexibility for delivery of educational content, and I continued to look for a solution.

The screenshot shows a dark blue header with the text "Before reading" on the left and "(1 of 4) -->" on the right. Below the header is a list of instructions and questions:

- First, you should begin a new e-mail for . E-mail の件名のYour Nameの代わりに自分の名前を書いてください。
- Answer these questions in the e-mail. Copy and Paste if you want.
 1. Do you have a driver's license?
 2. How do you commute to school? [commute=通学]
 3. Can you live without a car? [車なしに生きます?]
 4. Do you prefer a car or the train? [prefer A to B : BよりAが好きである]
 5. Is global warming a problem? [global warming=地球温暖化]
- Go to page two. You can use the down arrow key.

At the bottom of the page, there is a grey bar with the text "English IV (Repeaters), October 5 - International Car Free Day" on the left and a "TOC" link on the right.

Figure 4. Page from the repeaters' class including table of contents link

Solution 3: Tabbed pages

In tabbed browsing, users see a tab indicating the content of a slide. They can easily navigate the Web page, knowing at all times where they are. Figure 5 shows an example. This was adapted from the tutorial on tabbed navigation at <http://www.brainjar.com/css/tabs/>. Note that each slide, or screen of information, is accessible by clicking on the tab at the top. Selecting a new tab causes the background and font color of the tabs to change thereby giving the user feedback on which slide is being viewed. This format has worked well. Improvements involve refining the content of the page, but not the design.

Using the solutions

The two formats that I have adapted can be downloaded from my Web site at http://www.medias.ne.jp/~petersen/lab/l_index.html. In adapting them, I aimed to ease the workflow of creating Web pages every week. Whereas the original designs of both Solution 1 and 3 necessitate the use of a text editor, my adaptation allows the partial use of WYSIWYG editors such as *FrontPage* or *Composer*. Using the systems is not difficult, though it can require

Emily goes to France

Before reading | Vocabulary | The Reading | Ready?

Before you read

- First, you should begin a new e-mail for . E-mail の件名のYour Nameの代わりに自分の名前を書いてください。
- Answer these questions in the e-mail. Copy and Paste if you want.
 1. Are you **curious** about anything? What? ••I'm curious about computers.
 2. Have you ever travelled? Where?
 3. Do you travel economy-class or first-class?
 4. Have you ever had an **adventure**?
 5. Would you like to travel to France?
- Go to Vocabulary.

curious=好奇心がある; adventure=冒険; first-class=一等、ファーストクラス

Figure 5. Page with tabs

the user to open the files and manipulate the code. If one does not wish to increase or decrease the number of slides, the Web page can be formatted using a WYSIWYG (What you see is what you get) editor such as *FrontPage* or the *Composer* component of *Netscape*, *Mozilla* or *Sea Monkey*. However, changing the number of tabs or slides requires adding or subtracting a <div>. Both *Composer* and *FrontPage* have an HTML mode, in which users can manipulate the code directly. One can also use simple text editors such as *WordPad* on Windows or *TextEdit* on Macs. However, these editors do not color the code. A good text editor for making Web pages should give the various types of mark up (HTML, CSS, and *JavaScript*) in one color and text that will appear on the finished Web page in another. It makes reading the page much easier. Editors that offer color-coding are *BBEdit* (<http://www.barebones.com/products/bbedit/>) on the Mac or *Notetab* on Windows (<http://www.notetab.com/>). Bare Bones Software also provides a free, lite version called *TextWrangler* (<http://www.barebones.com/products/textwrangler/index.shtml>). *NoteTab* comes in three versions, one of which is free. Other similar programs exist for both platforms, although not all programs handle Japanese equally well. Check before buying.

Using the slide show system

Solution 1 introduced the slide show Web page. Editing the file is easy. First, go to my Web page and download one of the two versions. One version comes in three files: the html file (slides.htm), the *JavaScript* file (slides.js) and the cascading styles sheets file (slides.css); the other stores all three components in one file. *JavaScript* controls the action on the page, and cascading style sheets control the formatting of the page. The version with separate files is good for multiple html files. For example, I have one folder containing all repeaters' Web lessons. Inside that folder are the *JavaScript* file and the cascading style sheet file and folders containing all the exercises. Inside each exercise folder are the html files with the exercises. The second version contains all the code needed in one convenient file. It is more convenient, but duplicates a lot of code. All-in-One is the default style for *Hot Potatoes*. Each *Hot Potatoes* exercise contains all the *JavaScript*, cascading styles sheets and html-tagged content.

Regardless of the version, the key to adapting the Web page is the html markup. However, in the separate-file version, one has to include a reference to the .js and .css files like this:

```
<link rel="stylesheet" href="slides.css">
<script src="slides.js" type="text/javascript"></script>
```

Anyone who has trouble understanding this sort of notation can use the all-in-one version. Open the html file and scroll down to the code listed in Listing 1.

Listing 1. The beginning of the slide show

```
<h1>Unit 1-Who are you?</h1>
<!-- Do not change the next line. -->
<div id="slides">
<!--One page is from here ...>
<div class="slide">
<h2>New Questions</h2>
<div class="content">
<ol>
  <li>What is your best friend's name?</li>
  <li>Where are you from?</li>
  <li>When is your birthday?</li>
  <li>What is your sign?</li>
  <li>What is your major?</li>
</ol>
</div>
<div class="answers">
  <p>If you are ready, then <a href="#" class="right">let's begin</a>.</p>
</div>
</div>
<!--to here defines one page. You can change the code within here.-->
```

This code defines the first slide in Figure 2. Specifically, it defines the area inside the thick border. The area outside this box will not change. The part tagged with `<h1></h1>` will also not change. If users are happy with the number of these slides, then they can edit the Web page in a WYSIWYG editor. To change the number of slides, users must change to HTML mode in *FrontPage* or *Composer*.¹ One creates a new slide by adding `<div class="slide"> SOMETHING </div>`, with SOMETHING being whatever the user wants to put on the slide. One must take care in order to make sure that each `<div class="slide">` is balanced by a `</div>`. Users add content just as in any Web page, using all the usual HTML markup. One must also include a link to go to the next slide and/or a link to the previous slide. In the above Listing 1, the following code does that: ``. One should include a class of "right" for links that will advance the slide. Links without this class will not advance the slide. I use classless links as wrong answers. Finally, if one is linking to outside content such as *Hot Potatoes* exercises, one needs to have a link like this: `Correct answer:`. Replace exercise.html with the address of the exercise.

Using the tabbed browser

Editing the tabbed browser Web page is similar to the slide show page. An example is given in Listing 2.

Listing 2: The beginning of the tabbed Web page

```
<h1>PUT TOPIC HERE</h1>
<!--Don't touch this tabArea. You will break the Web page.-->
<div id="tabArea">
</div>
<div id="tabMain">
<!--•••to make a new slide, copy from "<div class="panel"> to </div> You must have
the <h2>tab. ....-->
<div class="panel"><h2>Tab 1</h2>
ADD CONTENTS
</div>
```

Whatever is enclosed by the `<h1></h1>` tags will become the title for the Web page. I have indicated this by the words, "PUT TOPIC HERE." The area tagged as `<div id="tabArea"></div>` is merely a placeholder for the tabs. Do not change it. The area tagged `<div class="panel">...</div>` contains the content on one slide. The words tagged `<h2></h2>` will become the tag label when the page loads. It should be short. Again, users can open this page in a WYSIWYG editor. However, there will be no tabs. The tabs are created only when the page is loaded into a Web browser. Again, users who feel no need

¹ I recommend against using Nvu because it will foul up the formatting of the html markup. Composer will delete empty lines, but not otherwise change anything.