» JavaScript Freeware Programs

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We first started using JavaScript programs in our CD-ROM-based text, *Click for better English* (Kawana et al. 2004). Now we are using them in the e-learning program we have established at our university (http://blog.hellosiu.com/). In both cases, we used JavaScript programs to create different types of exercises in our study materials. The reasons we used them are threefold: they are useful, effective and free of charge.

Making materials

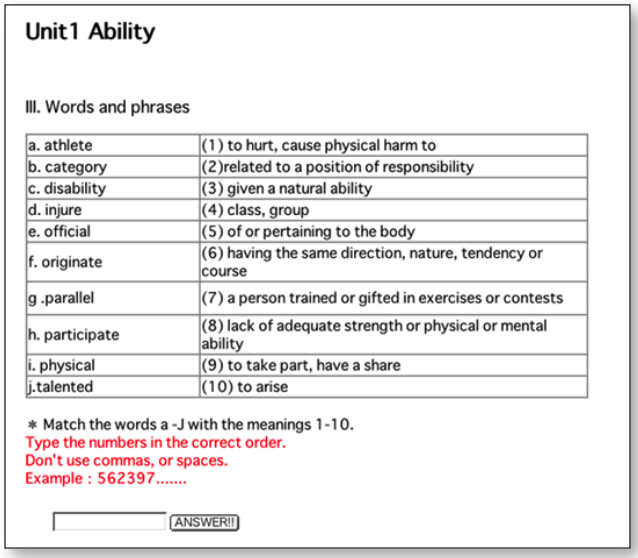
Obtaining materials for a CD-ROM-based text or for an online study program can be costly. A comprehensive commercially available online syllabus, offered by certain publishing companies, can cost 2-3 million yen, depending on the number of student subscribers. Making your own syllabus can also be costly, although much less so, because of the need to purchase software for creating a homepage and exercises. Once you buy the software, you have to invest many hours to learn how to use it properly and effectively. Sometimes it is not easy to understand the mechanics of using the software.

Figure 1

Advantages of JavaScript

As stated above, we chose to use JavaScript partly because it is

free. In addition, there are many applications of JavaScript for making exercises in study materials. There are also no special skills required of the user. It is basically a cut-and-paste operation. A variety of JavaScript formats can be found on the Web (Figure 1). They include calendars, pop-up buttons, quizzes, and many others. We will describe the three programs which have proven in our experience to be the most useful and versatile.



Unit1 Ability

III. Words and phrases

a. athlete	(1) to hurt, cause physical harm to
b. category	(2)related to a position of responsibility
c. disability	(3) given a natural ability
d. injure	(4) class, group
e. official	(5) of or pertaining to the body
f. originate	(6) having the same direction, nature, tendency or course
g .parallel	(7) a person trained or gifted in exercises or contests
h. participate	(8) lack of adequate strength or physical or mental ability
i. physical	(9) to take part, have a share
j.talented	(10) to arise

* Match the words a -J with the meanings 1-10.
Type the numbers in the correct order.
Don't use commas, or spaces.
Example : 562397.....

ANSWER!!

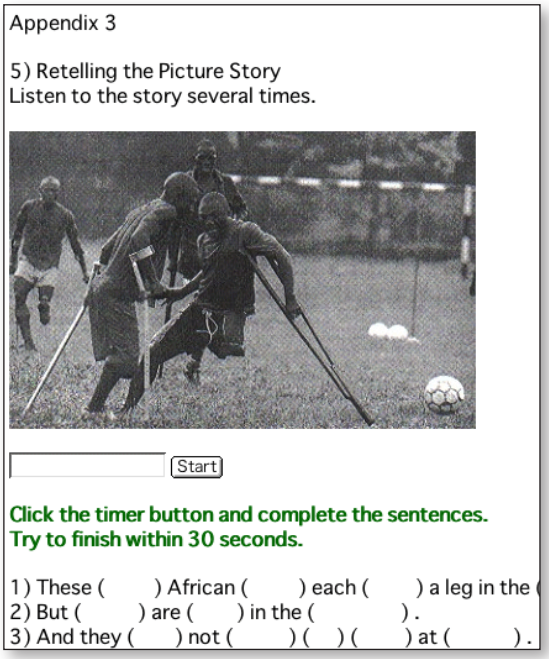
Figure 2

1. Password program

Every computer user is familiar with passwords. This is a JavaScript program. We use it for typing answers to questions and for typing a recorded word, phrase or sentence in a listening exercise (Figure 2). You simply access a JavaScript sample of a password form on the Internet and define the "password" as the word, phrase or sentence being tested.

2. Time program

The JavaScript time program is a clock which starts when the button is clicked and stops when the button is clicked again. It is useful for encouraging students to give a quick response. One example of this format which we use is to ask students to read sentences with blanks. The sentences are identical



Appendix 3

5) Retelling the Picture Story
Listen to the story several times.

Start

Click the timer button and complete the sentences.
Try to finish within 30 seconds.

1) These ( ) African ( ) each ( ) a leg in the (
2) But ( ) are ( ) in the ( ) .
3) And they ( ) not ( ) ( ) ( ) at ( ) .

Figure 3

to ones in a story they have previously listened to. While reading aloud the partial sentences on the monitor, the student fills in the blanks from memory as the clock ticks (Figure 3). We suggest they do this exercise several times to try to beat their previous times. The timer program is effective for motivating students, and the repetition aids retention of vocabulary and sentence structure.

3. Pop-up program

The pop-up program provides information. It has several uses. When we use this program, it appears in an exercise either as an icon next to a word, or as a response to a student's answer. In a story we put an icon next to a difficult word. The student clicks the icon, and a Japanese translation and/or a simple English sentence using the word appears on the screen (Figure 4a). When we use the pop-up program for a message, it is in response to a student's answer to an exercise question. The student types an answer or chooses among alternative answers with his mouse. The JavaScript devise then provides a message for an incorrect answer such as "BOO!" (Figure 4b). Alternatively, it might state an explanation for why the answer is wrong. A correct answer will produce something like "Great!" or "You did it!"

Figure 4a

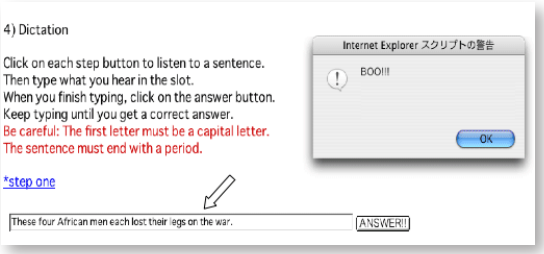


Figure 4b

How to create a program

The JavaScript password program is the most versatile program we have found. As we said before, it is easy to find a template on the Internet (Figure 1). Each site provides easy-to-follow instructions on how to adapt a JavaScript program to your particular needs. If you want to see more samples or expand your understanding of JavaScript, there are many books and magazines on the market for beginners (Horiuchi, 2004; Furuhata, 2004).

Figure 5 shows an example of the template for the JavaScript password program. If you are looking at an exercise on a CD-ROM, the first two boxes in Figure 5 are what you will see if you click on the *View* toolbar and then *Source*. These two boxes represent the source code for JavaScript for a grammar exercise on the CD-ROM of our text. In Figure 1, the source code identifies this exercise as an exercise using JavaScript language. We cut and

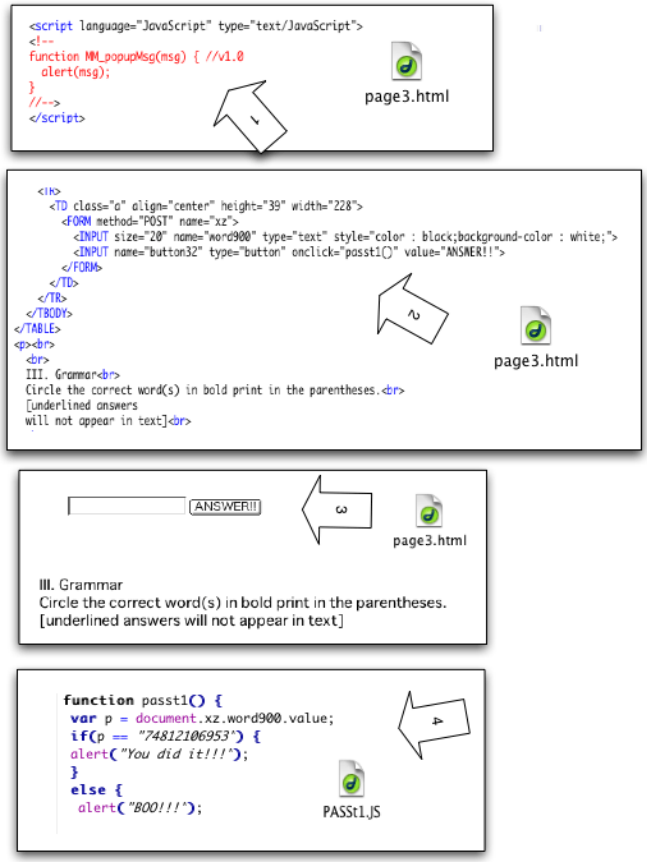


Figure 5

pasted this segment without alteration or addition. In Figure 2, we followed the instructions on the JavaScript website and cut and pasted the form; then typed in the title of our exercise, "III. Grammar;" and finally typed the instructions for our exercise. In the JavaScript instructions, we were told to put this information between the source code notation, "
," which is simply a notation for the Return Key (Isono 2004). The part surrounded by
 is called the "Form." Color, font size and other variables can be modified in this segment.

Figure 3 shows how the source code contained in Figure 1 and Figure 2 generates the actual grammar exercise as it appears on the CD-ROM.

Figure 4 is the JavaScript program. The notation "Passt1" stands for a JavaScript program. We cut and pasted this program and then added our own information. Figure 4 shows the answers we wanted to pop up on the screen after the student types his answer in the slot and clicks the "Answer" button. First, we typed in the title of our document, "Word900," which contains the correct answer to the exercise. Then, we inserted the actual answer (a series of numbers, in this case), and alternative messages for correct and incorrect answers. If the student types the correct answer, the message,"You did it !!!," appears on the screen. For an incorrect answer, the message "BOO!!!" will appear. The information we typed into Figure 4 is received by the source code in Figure 1 and Figure 2. This is how JavaScript works.

Conclusion

We said we used JavaScript programs in our CD-ROM-based textbook and in our e-learning program because they are free, useful and effective. We described three JavaScript programs which we have found particularly useful and effective—password, timer and pop-up. Finally, we explained how to access a JavaScript template from the Internet, cut and paste it into our study materials, and reformat it. JavaScript is easy, powerful and versatile.

We want to add one important word of advice. JavaScript programs are of no use without creative input from the teacher. Once familiar with the range of JavaScript options, the teacher must think deeply about how most effectively he can adapt these programs to his materials. He must decide how a program can best increase student motivation and learning. This decision-making step takes time and judgment based on experience. Once the teacher has made these important decisions, JavaScript makes the mechanics of applying these ideas very easy.

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Biography

Stuart Walker and Norihito Kawana, CALL SIG members, teach computer-based courses at Sapporo International University. They are co-authors of two CD-ROM-based texts, *This is Media.com* (Seibido 2002) and *Click for better English* (NanUn-Do 2004).