# ON THE NET
# |Interactive and Multimedia Techniques in Online Language Lessons: A Sampler

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While one might think the definition of distance education would be simple enough, the concept and justification of learning over distances are actually under continual debate (Distance Education Clearinghouse, 2003). There are probably as many explanations and rationales of distance learning as there are sites and modes of offering it in its various forms: eg., self-directed study or teacher-guided coursework available only online, surmounting geographical barriers. In many ways, foreign language (FL) study seems a natural candidate for distance learning, one major goal being the connection of language learners with target language input and native speakers, which are often a great distance away. Digital technologies have advanced to such a point that this distance no longer presents much difficulty, even though it physically still exists. A myriad of distance language learning sites can be found online, and some are quite good from both a pedagogical and a technological perspective.

The fundamental skills that students need to learn to use a language come through communicative interactions, through the example of a teacher/model who can speak the language proficiently, and through lots of reflective practice that depends on meaningful feedback. The success of self-study materials claiming to teach foreign languages suggests that the desire to learn new languages outside the classroom setting is widespread. That publishers tend to sell many more of these materials for the very early stages of language learning suggests that motivation often drops off as the difficulty of the task, especially without the support of a teacher, becomes apparent to the naive learner. More and more online materials for learning new languages implement interactive activities that attempt to compensate to some extent for the lack of a teacher's physical presence and support. Authors of such materials do not claim to do the job better than a teacher in a face to face learning environment, but they do fill an important niche for those who cannot get to a class but who are trying to get a start on a new language or review one that has been studied in the past. In this column we will examine some of the techniques used in a variety of these sites for learning several languages. The lessons featured were chosen for their quality, the variety of technical features, range of pedagogical techniques, and selection of languages taught.

*(n.b. This article shows how a number of teachers are using Web technologies to teach language, but it does not seek explain how to produce these techniques in one's own Web page. Because of this, the interactive samples that the authors have included in this article are designed to perform only the specific functions presented. They were programmed by the authors only for illustrative purposes, not for tutorial purposes, and do not necessarily work in the same way as those found on the pages being discussed. If you wish to analyze the technical methods used in order to learn how to design similar activities, be sure to study the original code, JavaScript, objects, ASP, and so forth, from those pages rather than the code used in this article.)*

One of the most interesting collections of interactive language activities is the Spanish Grammar Exercises site by Barbara Kuczun Nelson at Colby College

# Spanish Grammar Exercises   © Barbara Kuczun Nelson

http://www.colby.edu/~bknelson/exercises/

The "¡Qué miedo pasé!" module on this site is an excellent example of the integration of a number of different techniques guided by sound pedagogical principles directed towards clear communicative and grammatical goals. The student watches a short video in Quicktime format in which a woman tells a story about something that happened to her at her job. The pre-listening introduction sets the scene and presents enough context so the student is prepared to listen (Omaggio Hadley, 2001; Shrum & Glisan, 2000).

## ¡Qué miedo pasé!

### Instructions

In this unit you will work on comprehension as you listen to Yolanda tell a story and you will practice the preterite and imperfect tenses.

**You need to have QuickTime to view the movie.**
**Download free from left menu.**

First start the video and listen to Yolanda as she describes a terrible day that she had working as a receptionist at a hotel in Galicia.
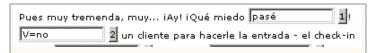
instrucciones
El preterito y el imperfecto
ejercicio (sin los verbos)
ejercicio (con los verbos)
tarea para mandar
accents on a Mac or PC
Download QuickTime free
¡Qué miedo pasé! home
Spanish Grammar Exercises

The main page in which the video and instructions are presented uses frames to allow the menu and the video to remain in the same place in the left hand pane of the screen at all times while the various stages of the activity appear in the right hand pane when selected by the student.

The fill-in exercises reproduce the text of the video with the verbs cut out. The student can view the video using audio as a cue for completing the verbs in the exercise. The activities, presented with and without infinitive cues, serve quite different pedagogical functions. In the version without written cues, the student uses listening comprehension skills to identify the missing vocabulary and verb tense.

Pues muy tremenda, muy... ¡Ay! ¡Qué miedo [pasé          ] 1!
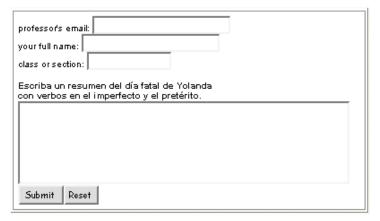[V=no          ] 2 un cliente para hacerle la entrada - el check-in

In the version with cues, the student may tend to focus more on the grammatical structure, preterit vs. imperfect, and less on comprehension of the meaning to identify the correct answer.

Bueno, y para terminar...una anécdota. Pues muy tremenda,
muy... ¡Ay! ¡Qué miedo (pasar-yo) [pas=          ] 1 ! (Venir)
[                    ] 2 un cliente para hacerle la entrada - el check-in

In both fill-in exercises, when each answer has been attempted, clicking anywhere outside the textbox for the answer compares the student's response with the correct answer for that item. Any letters in the student response that differ from the correct answer are replaced by a "=" to mark not only that there is a problem, but to indicate exactly where the problem lies. Clicking on the button following each textbox fills in the box with the preferred answer.

(pasar-yo) [    1 ]!

Finally, a "tarea para mandar" activity allows students to respond to an open-ended homework question and send the answer to the teacher. To answer this question, students must interpret the text to identify important elements, reorganize the text, and phrase a multi-sentence answer in their own words.

professor's email: [        ]

your full name: [        ]

class or section: [        ]

Escriba un resumen del día fatal de Yolanda
con verbos en el imperfecto y el pretérito.

[Submit] [Reset]

This summary activity takes the student a step beyond the comprehension and grammar practice of the fill-in activities while providing an opportunity to use the skills learned through those previous tasks. A potential technical problem lies in the need for the student to accurately type in the teacher's email address for the cgi script on the server to send the homework to the right place. This can easily lead to the excuse: "The computer, rather than the dog, ate my homework."

There are many ways of using the ability to have students post open-ended replies though a web page. Whereas in this case the reply is sent to the teacher, it is also possible to collect those replies to be shared with other students who could, in turn, comment on them. It is possible to use similar techniques to collect the answers to several questions from a student and then reorganize them for the student as the basis of a longer composition assignment.

Professor Nelson's site includes activities using a number of different, well constructed technical tools. Another interesting activity makes use of images and Quicktime audio to demonstrate pronunciation in much the same way that a teacher might in a classroom environment: http://www.colby.edu/~bknelson/exercises/pronunciacion.html.

There are a number of pages on the Internet that use audio to illustrate pronunciation for language students, but the technical implementation often results in slow turnaround time for the audio portion (i.e., there tends to be too long a lag between pressing the button and hearing the sound) making the interaction awkward. Good reaction times will tend to mimic those of ordinary conversation (Martin, 1973).

In the pronunciation exercise for the letter "g" we find embedded audio, that is to say that the audio plays in a plug-in that appears as an object on the Web page, not in a separate window. This method makes for an easy to use interface because the student is not confused by new windows opening on the screen when a sound is played. Thus the relationship among the visual cues, the hyperlink button, and the audio player remains constant.

Escucha y practica la G antes de la A, O, U

papagayo    langosta    guerra    gallo    guantes    pulga

gemelos    Egipto    gelatina    energía    geranio

Because the audio files use a high quality, high compression codec (compression/decompression algorithm), they can be downloaded to the local browser along with the images in the Web page so that they can play instantly when their button is pressed as they do in the selected samples below. (The reader may need to download the free Quicktime player for these audio samples to work.)

gallo

gelatina

When designing a page using this technique, it is essential to carefully allow for the download time of all of the components that must be loaded when the page opens. In these pronunciation lessons, the balance of file size, audio quality, number of sounds, and ease of use combine to create a very effective lesson.

Any of the various multimedia formats currently in use may require users to install or upgrade software plug-ins such as RealPlayer, Quicktime, or Windows Media Player, to play them. This is even more true when the media is embedded, as it is here, because the page will not appear as it was intended to until and unless the software is downloaded and installed. This can be problematic when users have very limited technological acumen or if they are in a lab where security prevents them from installing software. It behooves language teachers to learn about which multimedia programs and plug-ins are used in Web lessons and ask that these be installed and kept up-to-date on machines that students may be using. The designers of these lessons routinely provide this information on their Web sites.

**French Online Grammar Quiz**

http://fog.ccsf.edu/~creitan/grammar.htm

http://fog.ccsf.cc.ca.us/~creitan/grammar.htm

In her French Online Grammar Quiz, Carol H. Reitan uses a few different exercise formats, some of which were designed by other colleagues. For instance, the Javascript for a multiple choice activity that has the student fill in blanks in a sentence was scripted by Doug Popeney and shared via online tutorials. Sharing software modules in this way allows teachers with creative pedagogical skills to implement quality online activities without learning arcane programming techniques or reinventing the wheel. Here the student selects the correct word or expression to fill in the blank from choices listed in the drop down box.

*Choisissez de la, du, de l', ou des, selon le cas.*

☐ 1) Mon appartement se trouve en face   jardin publique.  [-- ???? --  ▼] jardin publique.
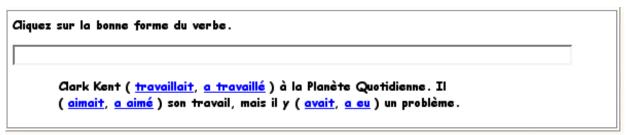
http://fog.ccsf.cc.ca.us/~creitan/q3de.htm

When all questions have been answered, the student clicks on a button to find out which responses were right or wrong and to learn the percentage of answers that were correct. In this activity, the student must attempt to answer all questions before checking any answers.

In a different lesson by professor Reitan, a listening activity asks students to distinguish which of two sounds they are hearing. Here the student receives immediate feedback for each answer in the form of a smiley or frowning face.



3 - Ecoutez, puis choisissez la réponse correcte:

○ coussin
○ cousin

http://fog.ccsf.cc.ca.us/~creitan/poisson/

Another activity has students select between the imperfect and passé composé forms of verbs in the context of a paragraph. The javascript for this exercise was originally written by Barbara K. Nelson using a lookup array to select meaningful feedback written for each possible answer. When the student selects a verb, the feedback explaining why the choice was correct or wrong appears in the textbox.



Cliquez sur la bonne forme du verbe.

Clark Kent ( travaillait, a travaillé ) à la Planète Quotidienne. Il
( aimait, a aimé ) son travail, mais il y ( avait, a eu ) un problème.

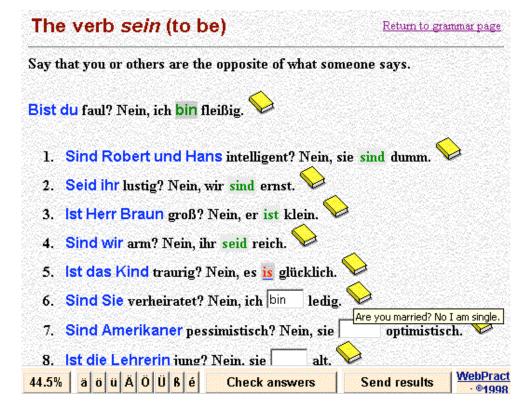http://fog.ccsf.edu/~creitan/clark.htm

Creating feedback determined by digital error analysis can be a daunting task for open ended activities because there are so many possible student errors that need to be anticipated. By limiting the student's choices, the analysis of errors is vastly simplified allowing the software to provide far more detailed explanations than the common *yes/no* feedback that one finds in most online activities.

The German Electronic Textbook uses WebPractest© by Gary Smith, an online utility for creating cloze passages with some interesting features. It may be used for free by teachers to create their own activities by following online instructions. We will examine an example from the grammar lessons at the site.

http://www.wm.edu/CAS/modlang/gasmit/grammar/grammnu.htm

The following cloze activity for the verb *sein* uses a question/answer format to provide some context, though context in a drill of this sort, where individual replies appear as separate items, tends to be limited no matter what the medium used to present it. Verbs have been cut out, replaced by textboxes into which student may type a response. To obtain an additional cue, the student can place the cursor over a yellow book icon to see a pop-up translation. The responses that have been typed in may be checked for accuracy at any time during the activity. At that point, whatever textboxes contain replies will be examined by the software and the student's response converted to plain text in green for correct answers and in red for errors.

When the activity is completed, the student can submit the results to the teacher by e-mail. For identification purposes, the e-mail report asks for the student's name, e-mail address, exercise identification information, and the teacher's e-mail address. The techniques used in these activities are quite interesting. Students may obtain feedback as soon as they wish, they may request an additional cue as determined by the teacher, and the teacher may receive a copy of the student's results. Submitting the report to the teacher is worthwhile because the ability for the teacher to track student progress is an essential feature of an assignment that is a required component of a class rather than a self-assigned activity by an independent student motivated only by the desire to learn the language.

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In the Italian lessons at the University of British Columbia, Jessica Barbagallo uses another fill in the blank format for review exercises.



http://www.arts.ubc.ca/italian/

In the sample activity shown below, textboxes allow students to write the appropriate verb forms. The submit button labeled *Controlla le tue riposte* counts the number of responses that match the correct answers programmed in the page, but it does not give automatic feedback indicating which replies contain errors or what the errors are. However, the student can examine the answer key to figure out which are wrong.
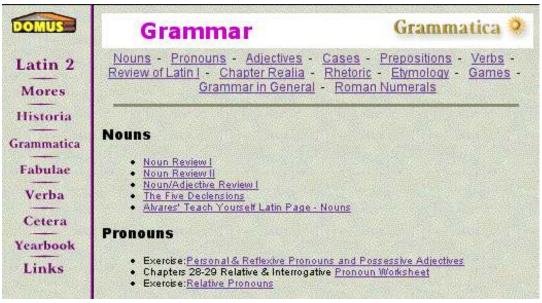
# Ripasso per l'esame di Natale

Printable version.............. Answer key

**1. Passato prossimo con Essere o Avere. Put the verb in the past and choose the right auxiliary. Write only the verb.**

Faccio la doccia tutte le mattine `ho fatto`

Bevo una birra `ho bevuto`

Leggete il giornale `avete letto`

Vengono a pranzo da me `[            ]`

Hanno un grande successo `[            ]`

Secondo me, dici troppe bugie `[            ]`

In inverno muoio di freddo `[            ]`

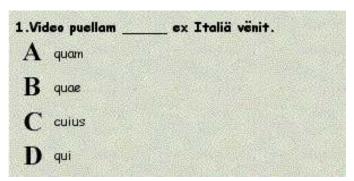Numero di risposte giuste: `3` su 7

`Controlla le tue risposte`

The format allows the student to practice composing the words in the answers, but it might be more effective, especially in a review rather than a testing situation, if the program were to show the student where the problems were located. This would help focus the student's attention and also avoid the problem of casting doubt in the student's mind on the accuracy of correct answers. This might also encourage the student to figure out the answer rather than look it up in the answer key. On the other hand, an answer key gives the student practice checking her own answers and may lead to improved skills in self-correction. There is no one right way to construct feedback.

The KET Distance Learning site includes a selection of online courses. Most of the site is open to the general public, including the grammar lessons for Latin that we examined for this column. These lessons make extensive use of multiple choice and concentration-style matching activities for interaction with students. The feedback on the multiple choice sections at this site has the particularity of being instantaneous.



http://www.dl.ket.org/latin2/grammar/

In the sample relative pronoun exercise shown below, selecting an incorrect response immediately crosses out the wrongly selected letter choice whereas clicking on the correct answer produces a checkmark. The feedback remains on the screen for a short time, then disappears. Thus the markup avoids becoming a distraction.

The promptness of the feedback works to better reinforce accurate grammatical choices. The multiple choice format lends itself readily to the computer medium because of the ease with which such simple responses can be evaluated. The drawback, of course, is that the student is not practicing production of actual language but recognition of the forms presented.

A very different use of the computer is apparent in the Viva Voce Roman Poetry site by Vojin Nedeljkovic.



http://dekart.f.bg.ac.yu/~vnedeljk/VV/

Multimedia features allow students to learn pronunciation by listening to recited poetry in mp3 format while viewing the text and/or examining a representation of the poem's meter.



The audio files for this lesson are quite a bit longer than those mentioned in the Spanish Grammar Exercises above. They clearly appear to the user as links to files that are first downloaded, then played, and the size of the file is indicated so that the user knows how big it is before beginning the download. Because of this manner of presenting the links the rapid response discussed earlier for the grammar exercise is not an issue here. The download time is easily perceived as appropriate for the task.

Although there are no clearly defined learning goals and interactive evaluation of student learning, the site gives power to the student to control the interaction with and manipulation of the material presented and provides examples that the student needs to learn about how we think classical Latin poetry was pronounced. Thus rather than the teacher leading the student through the learning process by a predetermined route, it is the student who makes choices about how to best use the material to study in a manner fitting the student's individual learning style.



Vietnamese is an example of a less commonly taught language in the US with special considerations in terms of its writing system, which requires diacritics beyond those of the iso-8859-1 or LATIN-1

character set that is standard in browsers available in the US and western Europe. Vietnam Television provides Web-based lessons to accompany its televised Vietnamese lessons http://www.vtv.org.vn/ tiengviet/. This site includes a link to download Vietnamese fonts for viewing the pages for browsers and operating systems that do not have this ability built-in. In newer browsers and operating systems this should not be a problem. Fonts, however, can be quite confusing for most people who have little understanding of the complex interactions among operating system, installed fonts, browsers, and browser settings. For most people, troubleshooting font problems can be a daunting task, and even for experts, writing easy to follow and comprehensive instructions that take into account the range of possible environments in which a page may be viewed can be quite difficult. The font implementation on the Vietnam Television site seems to be more transparent than most on the systems where we have tested it.

Extensive use of video is an interesting feature of these lessons. Of course, a television station is particularly well placed to integrate video in its Web site. In this case the lessons use Real Player to play short streaming video segments that are supported by written text and questions on the corresponding web page, which can display Vietnamese language characters. For example, in lesson 41 [Học tiếng Việt] of this series we see two young women discussing vacation spots around Vietnam including, of course, Ha Long Bay (see photo).



Although when examined by the authors the video download on this site was slow, connections have been getting better and will continue to improve, especially as broadband Internet access becomes the standard throughout the world. For example, the following embedded excerpt, extracted from this high quality RealPlayer video, will work well only for readers with a fast connection. It is possible with today's technology to produce videos of similar quality using a much higher level of compression for faster downloads. (The reader may need to download the free RealOne Player for this video sample to work.)



(Click on the image to download RealOne Player.)

Such videos of conversations between native speakers can help the language come alive and provide a model of authentic speech, if not the valuable oral interaction of the face-to-fece learning environment, that makes the language real for the learner. Development of such Web-based technologies is essential for providing the tools that allow the Web to transcend the limitations of the printed page.

There are a number of different ways to display a character set for a language in a Web browser. On older browsers a special font for the language could be downloaded and installed, but more recent operating systems such as Windows 2000 or XP and the latest Web browsers using the Unicode font allow more transparent access to other languages' writing systems. The Vietnamese lessons at Northern Illinois University are built to function with either method depending on user preference, but the much easier new system is certain to eventually replace the old.
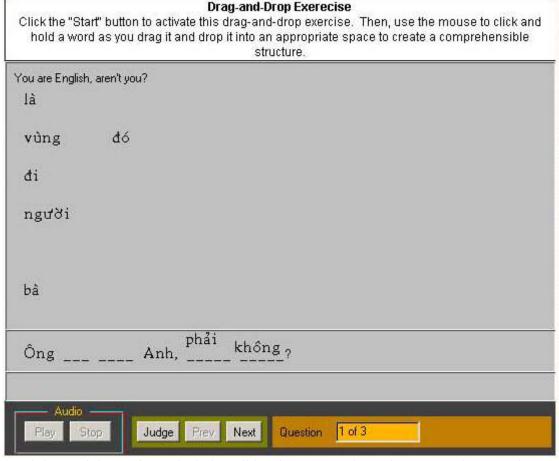


These lessons present dialogs and vocabulary lists for study, but also include fill-in exercises and interactive activities to help the student check progress. Audio is used throughout to model the language for the learner. As may be seen in Lesson 1 below, the audio dialog is first presented in its entirety but is then broken down into separate files for each reply, allowing the student to easily study and repeat individual sentences.



http://www.seasite.niu.edu/vietnamese/uniLesson1/Lesson1_main.htm

The site presents a variety of exercise types including, for example, a Java-based drag-and-drop sentence creation activity in which the student selects words and uses the cursor to drag them to their proper place in the sentence. The interactive activity shown below may be run at the Lesson 1 page at SEAsite by selecting Interactive exercise 3.

**Drag-and-Drop Exerecise**
Click the "Start" button to activate this drag-and-drop exercise. Then, use the mouse to click and hold a word as you drag it and drop it into an appropriate space to create a comprehensible structure.

You are English, aren't you?

là

vùng          đó

đi

người

bà

Ông ___ ____ Anh, phải _____ không ?

Audio
Play   Stop      Judge   Prev   Next     Question   1 of 3

A drag-and-drop activity works particularly well in a language such as Vietnamese where one does not need to learn inflections that are everywhere in languages such as Spanish or German requiring students to study special word forms for verb number and tense or noun number or declension.

ocrat.com
# Animated Chinese Characters
Click on any Chinese character to see how to draw it.

東  In Chinese, stroke order is important when learning to write characters. The image shown here is an animated gif file that will display the character, stroke by stroke. The animation, made possible by the computer, is a major advantage over the printed page for teaching skills that need to be learned step by step.

For instance, on the page for learning numbers, the student can click on any number to see its stroke order. After clicking on the complete character in the table, a representation of the character appears to the right but is drawn one stroke at a time and slowly enough to allow the student to follow the order.

ocrat.com → Animated Chinese Characters

# Numbers

Click on any Chinese character to see how to draw it.

Introduction     1   2   3   4   5    6   7   8   9   10
Any Char         hundred    thousand    10-thousand   100-million
Cities              zero (complicated)        zero (round)
Compass
Countries         100 000=    10万        100 000 000=    1亿
HK Movies       1 000 000=   100万      1 000 000 000=   10亿
**Numbers**     10 000 000=  1000万    10 000 000 000=  100亿
Politics
Pronouns
Provinces
Surnames
Zodiac

一　二　三　四　五
ONE　TWO　THREE　FOUR　FIVE

六　七　八　九　十
SIX　SEVEN　EIGHT　NINE　TEN

百　千　万　亿
HUNDRED　THOUSAND　10-thousand　100-million

零　　　　○
ZERO　　　　ZERO

http://www.ocrat.com/ocrat/chargif/numbers.html

A potential though unlikely technical problem with animated gif files as a learning tool is that it is now possible to turn off animations in Web pages to speed up display. A student whose settings will not display the animation may not know this and be confused by the lack of animation, not understanding why the page is not doing what it is supposed to do or how to troubleshoot the problem.

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Sometimes, in language learning, two chairs and face-to-face communication between a target language speaker and learner comprise the best method and technology (Ponterio, 1998, personal communication). However, even that simple methodology is not always available. For those language learners without recourse to conventional classroom instruction experiences, distance education is a very viable option. The sites discussed above offer ample opportunities for comprehensible input, meaningful feedback, interactivity, and control over one's own learning pace and sequence. Distance learning erases the distance.

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