Benefits of Going Multimedia

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Language Learning for Life

This presentation described how to set up a self-access intranet computer lab, how to digitize language learning materials, and how to place the materials on an intranet web server. The focus of this paper is to explain the rationale behind an intranet computer lab and the benefits of digitizing materials for students to access.

本発表は自習のためのイントラネット・コンピューターラボの設定方法、言語学習資料をデジタル化する方法、およびどのようにイントラネット・ウェブサーバーに学習資料を載せるかについて述べた。ここではイントラネット・コンピューターラボの理論的解釈と学生が使用する学習資料をデジタル化する長所に焦点をあてて説明する。

Having had the opportunity to coordinate technology projects at universities in Japan and the United States, I have witnessed the difficulties involved with persuading computer lab administrators to make computer labs user friendly. Oftentimes the administrative policies governing computer lab use involves issuing special user names and passwords that students and instructors need to apply for weeks before using the computers. While many school computer labs have modern equipment and software, very few seem to have any applications or materials that are designed for language learners. Additionally, even if a special application designed for language instruction were approved for installation, the approval process can take months. While some of these policies are quite reasonable from a security standpoint, they are just restrictive enough that they discourage students and instructors from fully utilizing the computer labs. Lee (2000) noted a lack of hardware as a significant barrier to utilizing CALL, but with declining hardware prices and a number of instructors replacing their computers every few years, there might be enough computers available to start your own intranet computer lab designed for language learning.

Setting up a Computer Lab

Ideally, the computers could be put in an unused room with one computer designated as a server. The client computers need an operating system and the applications that you want students to use. The server can use any operating system that has web server software available to be installed (see Appendix 1). The advantage in designating one computer as a server is to put all of your digitized materials on it so that there is no installation maintenance required for all of the client computers; they can all access

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the digitized materials from one central server. Running a web server on the Internet requires updating the software on a regular basis, but if you create an intranet so that the web server is only accessible to the computers in the room, your vulnerability to remote exploits is reduced to nearly zero. Making the web server accessible to only the client computers, while maintaining the client computers' access to the Internet, requires only one special piece of equipment: a router (see Appendix 1). A router basically directs traffic between computers and assigns computers IP addresses so that they can share files and connect to the Internet. The basic steps for setting up a web server are outlined in Appendix 1. If there are any steps that are not clear, or if you would like to read in more detail about a specific feature or setting of a web server, there are numerous resources on the Internet. I recommend using Google <www.google.com> to search for further readings.

Now that the computers are set up and there is a web server running locally behind a router, we need digitized materials to put on the server for the students to access using the client computers. Digitizing audio and video materials requires specialized programs. For audio, an audio editor, which allows you to record audio into the computer and then cut, trim, and paste the parts you want to keep, is essential for creating audio files to put on the web server. The same applies to digitizing video. By opening a video-editing program, you can then import video into the computer, edit it, save it as a digital file, and then put it on the web server for students to access. Appendix 2 lists resources that should be explored if you are new to editing audio and video on the computer. Most of the programs listed are available for download, thus allowing you to experiment with digitizing audio and video without making a significant investment in new software. If you are interested in combining audio and video into interactive web pages, Appendix 3 talks about adding multimedia to web pages made with Hot Potatoes software. If you are unfamiliar with Hot Potatoes, check out their web site <web.uvic.ca/hrd/halfbaked> for a product description, tutorials, and software downloads.

Benefits of Digitizing Materials

The benefits of using Internet resources and authentic materials for language learning have been discussed extensively (Singhal, 1997; Kelly & Kelly, 2001); however, in comparison, the benefits of offering language learning materials on a local intranet are rarely discussed. Digitizing materials and using them in an intranet setting offers at least five easily recognizable benefits.

First, it consolidates your audio-visual materials into digital archives, which can easily be backed up, as well as increasing the materials' longevity. If you have stacks of videotapes, CDs, newspaper clippings, and magazines, all of those can be digitized and saved electronically. This increases the security of your materials because if the original is damaged, it can be recreated from the digital copy. The digitized version can also be copied to removable media, such as a CD or DVD, and kept off-site for further safekeeping. While the quality of VHS tapes will degrade over time, a digitized version will not wear out.

Second, it makes developing new language learning materials easier since everything would be digitized, thus

allowing materials to be imported and exported to different applications and formats. If you have pictures and text scanned into a computer, one only has to drag and drop items into a document to create new materials for use in educational settings. If the materials were not digitized, one would have to photocopy, cut, and paste (using tape or glue) the materials onto a piece of paper, thus possibly taking more time than making a digital version of the same activity. Additionally, the digital version can be easily edited and updated in the future.

Third, it increases the amount and variety of materials available to students for self-access. The need for self-accessible materials has been well documented (Dickinson, 1987; Sheerin, 1989). While students can access materials using newspapers, magazines, TV, video, audio, and the Internet, it requires students to use six different sources, which might not always be possible or ideal. By providing digitized materials from a central server, everything is accessible in one location.

Fourth, using the materials in a local intranet lab gives teachers a place to explore developing multimedia activities without the worry of exposing themselves to unsolicited criticism. Designing and creating computer-based materials, while at the same time developing a streamlined delivery solution, takes a considerable amount of time. The first version of newly created activities and exercises might be decent, but not as good as one would like. By first experimenting in offering the materials locally on an intranet, instructors can receive feedback and ideas for how to improve the materials. After a few revisions, the materials could then be released for use on the Internet. If you are looking for ideas on how to make an intranet or Internet site focusing on listening, <www.esl-lab.com> is a highly recommend resource that offers pre- and post-listening activities along with comprehension exercises.

Fifth, it allows the teacher to tailor activities to meet the needs of their specific students. Every teacher I have worked with over the last 12 years has adapted materials to ensure an appropriate level and quality of instruction for their students. Across different institutions that teach the same age levels, the proficiency level and the future goals of the students are probably very different. Allowing a teacher to quickly manipulate digitized versions of the materials they want to use saves time in the never-ending process of tailoring the class materials to meet the needs of the current students.

Conclusion

There are many programs and possibilities for digitizing materials (see Appendix 2) and for combining everything into exercises for student self-access (see Appendix 3). Having multimedia materials tailor made and available in a computer lab is an indispensable resource that not only empowers students to take control of their learning, but also motivates them by adding a unique dimension to their studies not often found in the classroom.

References

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Appendix 1

Router

Buffalo makes many different types of networking products. They are easy to set up and maintain. There are two main types of routers: wired and wireless. Either type is fine for setting up an intranet computer lab, but the wireless option will probably be more expensive. <http://www.melcoinc.co.jp/>

Client Computers

The client computers will need to have a web browser and the plug-ins to support the type of media you have chosen. For example, if you have encoded video into QuickTime, the QuickTime plug-in needs to be installed on the computers that will access the video.

Server

A desktop computer will perform better as a server than a laptop computer. If you are putting a lot of multimedia files on it, you will want to invest in a large hard disk. If you are running Windows on the server, the following web page offers a download package for setting up a web server <http://www.appservnetwork.com/>. If the computer is a Macintosh running OS X, web server software is all ready installed.

Turning on the web server in OS X

1. From the Apple Menu, select **System Preferences**.
2. Click the **Sharing** icon.
3. Click **Personal Web Sharing.**

Web Server Files

Place the files you want students to access in the following folder: **Macintosh HD / Library / WebServer / Documents**

If there are any files in that folder, you can safely delete them before moving your files into the folder. Most web servers display a file named **index.htm** or **index.html** by default. Name the page you want people to see when they open their web browser **index.html** to be safe.

Setting the IP Address of the Server

You will have to read the documentation that came with your router. The instruction manual will tell you what IP address range is used with that router model. Choose one of the addresses in the range and set the server to use that address.

Setting the IP Address on Mac OS X

1. From the Apple Menu, select **System Preferences**.
2. Click the **Network** icon.

   Select Configure Ipv4 **Using DHCP with manual address**.
3. Input the IP address that you have chosen based on the range of address used by your router.

Note: A Google search < www.google.com> for any of the items or processes listed will bring up many sources for further reading.

Appendix 2

Audio Software

Audacity <http://audacity.sourceforge.net/>

iTunes <http://www.apple.com/itunes/>

Video Software

iMovie <http://www.apple.com/ilife/imovie/>

Windows Movie Maker <http://www.microsoft.com/windowsxp/using/moviemaker/default.mspx>

Adobe Premiere <http://www.adobe.com/products/premiere/main.html>

Final Cut Pro / Express <http://www.apple.com/finalcutpro/> http://www.apple.com/finalcutexpress/

QuickTime < http://www.apple.com/quicktime/>

RealPlayer <http://www.real.com>

Web Page Editors / Text Editors

Mozilla Composer <http://www.mozilla.org/products/mozilla1.x/>

Dreamweaver <http://www.macromedia.com/software/dreamweaver/>

FrontPage <http://www.microsoft.com/frontpage/>

BBEdit <http://www.barebones.com/products/bbedit/index.shtml>

Notepad (Comes preinstalled with Windows)

Appendix 3

Hot Potatoes <http://web.uvic.ca/hrd/halfbaked/>

Hot Potatoes is a program that can be used to create interactive web pages in which multimedia files can be embedded. This provides the opportunity to create interactive language exercises using authentic materials that have been digitized. After reading about Hot Potatoes on the web, try it out and use the following instructions to embed a multimedia file in a web page created with Hot Potatoes.

Using a text editor, open the Hot Potatoes web page you made. Search in the document for the following text and

paste the bolded text shown below. Be sure to change **your_filename.mp3** to the actual file that you what to embed, and also change the height and width values to match the visual size of your media clip. Save the document and then open it in a web browser. Be sure to have the web page and the media file that you are embedding saved in the save folder. While this might not work on all computer configurations, it should work on Windows and Macintosh computers that have QuickTime installed.

```
<!-- EndTopNavButtons -->
<div class="Titles">
        <h2 class="ExerciseTitle"></h2>
        <h3 class="ExerciseSubtitle"></h3>
</div>
<embed src="your_filename.mp3" autostart="false"
height="45" width="200">
<div id="InstructionsDiv" class="StdDiv">
        <p id="Instructions"></p>
</div>
```
