

LLTI Highlights

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Introduction

Welcome again to "LLTI Highlights," a column featuring summaries of selected discussions which have taken place on the LLTI--the Language Learning and Technology International listserv. This electronic forum is used by language lab professionals and others to discuss issues relevant to their everyday work. For information on how to subscribe to the LLTI, see the end of this column.

The discussions summarized here have been paraphrased; any omissions, errors or misinterpretations are mine. For each topic, the number in parentheses which follows was assigned by Otmar Foelsche, LLTI moderator. This number can be used to facilitate a search of that topic in the LLTI archive, which can be a valuable research tool.

There is yet another new Web-based method for conducting archival searches! It is described in the "LLTI Archive" section below.

Audio Effectiveness Question (#3725), September/ October 1997

Have you ever wondered how many students actually take advantage of the feature typically found on language lab audio decks which allows students to record their voices and compare them with the master track? More to the point of this discussion, have you ever wondered how effective this practice is for the (few?) students who take advantage of it? This topic examines the merits of the "record and compare" function. It also takes a very interesting turn to focus on the so-called "speech recognition" capability purported by popular new software products. Is this feature legitimate? Is it helpful?

Mary Ball began the discussion, and her question had two parts. First, she wanted to know if anybody had research on the effectiveness of using the "record and compare" function in terms of actually improving speaking ability and pronunciation. The second part of her question related to her hesitation in digitizing audio tape recordings because it might be difficult to reproduce the "record and compare" function digi-

tally. She asked if anyone knew of software that would provide this feature for digitized recordings. No specific product recommendations were made, but the dialogue that followed was nonetheless very informative and goes right to the heart of what has often been considered a pivotal feature of traditional language lab audio equipment.

Read Gilgen offered the first response: "We find that the huge majority of students never use the function (library mode). ...There had been some discussion that students don't hear contrast anyway and continue to make the same mistakes regardless. ...The bottom line is that it may not make sense to spend lots of money to duplicate a function that may not be used as much as you'd like."

Bob Peckham commented that one aspect of the discussion has to be the degree to which the importance of pronunciation accuracy has been de-emphasized in recent years in most foreign language curricula. He writes, "Our current interest in communication modes and strategies and acquisition models has taken many further away from the idea of having students contrast their pronunciation with that of natives." He then made reference to computer software which attempts to simulate this exercise: "I have not seen anything very exciting from voice recognition. Matching lines up does not do it. Few students would even fully grasp the meaning of this, and even fewer (here at least) would take the time to do this."

Mike Bush agreed in principal with Bob's observations. However, he wrote, "'matching lines' is in fact one technique that has been shown to work in improving pronunciation. In now 'ancient' research, the Defense Language Institute did a project with IBM (at least I am almost sure it was Big Blue) in which students were shown side by side on an oscilloscope-type display the wave forms of their utterances and the utterances of the models they were hearing. The improvement in pronunciation was significant when compared to students who could only hear their voices and the models on earphones. Although the technology worked, it was very clear that the approach was VERY expensive and cumbersome. This approach is implementable fairly easily on today's personal computers. The following questions remain, Is this the most effective use of student time? If it makes some sense, how much of their time should be required for this type of activity? ...Perhaps we would do better to provide more target language materials with which the students can interact."

Referring to the "matching lines", Derek Stearns Roff pointed out, "Just to muddy the waters a little further, we

"One consensus seemed to be that the rather simplistic speech recognition feature found in some software programs may not be as constructive as it first appears."

must remember that all graphical renderings of speech are not equal. We currently use four different programs which produce a graphical display of speech. ... As an experiment, I asked native speakers to try to reproduce the graph provided by the machine stimulus sentence. In every case, the graphs of the same sentence spoken by two native speakers were very different from each other and the program's model. In the brief experiment (3 – 8 attempts), not one native speaker was able to closely approximate the target graph. In contrast to the system Mike tested, these programs emphasize ideolectical differences and unimportant linguistic features. My experience suggests that anyone hoping to use currently available PC software for this kind of speech practice to aid the student must be sure the chosen software provides _useful_ feedback."

Several readers showed astonishment at the observation that not even native speakers could "correctly" replicate the native speaker! Joel Goldfield wrote, "To corroborate what Mike Bush has been observing, I have needed to contextualize...the use of any speech recognition used in the TriplePlay Plus series, for example, since many native speakers of Spanish, French, etc., have not succeeded in 'correctly' pronouncing items. In fact, reasonably good American speakers of Spanish, French, etc., seem to have better success with matching the speech algorithms than the native speakers."

Rachel Saury: "I think the interesting thing about this discussion is that a computer simply cannot at this point accommodate the unique range of voice input. I am sure a scientist studying sound would tell us that each utterance is like a fingerprint: utterly unique. The human brain is complex enough that we can accommodate the infinite, unlimited variation in sound waves. However, at this point, computers can only 'hear' or recognize a narrow range."

Steve Spinella emphasized his belief that mimicking speech can be useful: "I still believe that audio comparisons, particularly with visual accompaniment to sharpen the focus of the user, can be helpful in building discrimination in both recognition and vocalization. (Isn't that how we learn without the computer, anyway?)"

Steve pointed out that because vocalizations are indeed so complex and must be broken down into many components, it is important to isolate particular ones for practice and not be misled into thinking that any one exercise could incorporate them all. He explained, "There is another factor in all this—focusing on the item you are actually trying to duplicate. For example, the presence or absence of breathing

on a consonant, the flatness or 'roundedness' of a vowel, etc. These can be isolated using digital signal processing and therefore must be visible on some appropriate waveform graph. ...No single graphical representation is going to equally highlight a large range of potential differences. Variations in tone and volume are immediately evident in most graphs (developed for showing music), while individual phonemic distinctions require a closer look."

Steve continued, "The best programs, therefore, should include tutorial material on how to make the various sound distinctions in a language. Is there such material in your curricular textbooks? Do your courses test for discrimination and vocalization of individual phonemes? If not, why should we be surprised that students also deem it unimportant in their pragmatic use of study time, regardless of how it may hinder their actual linguistic progress."

Bob Peckham expressed similar thoughts: "The problem we have is not just unsophisticated technology. It is in the function concept of the software itself. ...In French..[there are]... phonemic glitches produced by the expansion of text type (typically regressive and progressive assimilation). There are also elements like differences in liaison. If I were smart enough to design a program, I believe I would concentrate on specific phoneme difficulties encountered by students because of their own L1 pronunciation. ...Perhaps one of the things we should be working on is the notion of L2 developmental phonetics: what phonetic difficulties have to be resolved first in order to give students the confidence and articulatory ability to accomplish speaking tasks at particular levels."

Several readers gave specific examples of software programs that did not only motivate the learner, but focused on a finite set of skills, including Team for ESL and In the French/German Body. Judy Shoaf described her impression of Team, writing that it is "...promising because it targets specific pronunciation problems and uses pairs of words or phrases with the type of readout that actually shows the phonological difference between the sounds. For example, beside or instead of the wave form in some exercises there is a diagram of where the vowel being pronounced falls on a chart of open and closed vowels. The model version and the student's recorded version are both shown for comparison." After noting how much work it can be for a teacher to design a lesson that is really successful at developing a targeted skill, she concluded, "There's a long way to go yet."

"Have you inspected your headsets lately?"

Although this discussion did not provide specific answers

to Mary's original questions, it did raise many of the important issues in evaluating what types of "record and compare" exercises are effective. One consensus seemed to be that the rather simplistic speech recognition feature found in some software programs may not be as constructive as it first appears.

**Keeping
Headphones
Clean/ Headphone
Hygiene (#3760),
September/
October 1997**

This discussion went from the serious to the quizzical to the absurd and back again. I'm sure that all who read the original postings were as amused as I was. It does, however, raise a delicate issue. Have you inspected your headsets lately?

Deborah Hovland got things buzzing when she wrote: "Today, my lab supervisor came to me with a rather pressing question: seems we've got a few students coming in who look like they 'have something,' as she says. She wanted my advice on how she should clean the headphones, and in particular the microphones on the headphones, so that students don't pass whatever it is they're perpetually incubating back and forth to each other....Suggestions?"

Read Gilgen opened discussion with his response: "When I first took over ..., our lab had a bottle of disinfectant available for students to clean their own headset if they were worried. No one ever asked to use it, so we discontinued it. We clean the headsets once in a great while. Maybe we just have cleaner healthier students here <g[rin]>."

Ursula Williams mused, "...There's a bit of germ hysteria out there again. Seen all the commercials for antibacterial dishwasher stuff? Sheesh!"

Mathew Mattingly offered a different twist: "Germs aside, the recent resurgence of greasy kid stuff in people's hair results in beslimed ear pads which are repulsive, if not unhealthy."

Carol Reitan wrote: "This lab has used for years a liquid germicide called 'Septi-Bar' with cheesecloth to clean headsets. (Cheesecloth supposedly removes louse nits—yuck.) ...But now, it is unavailable. Does anyone else use this? Have you found a replacement?"

Daniel Tom offered a good practical suggestion: "We now use a solution of 25% rubbing alcohol or denatured alcohol and 75% water. The other commercial products available contain very strong chemicals."

Jay Moore: "I've been told by my Tandberg dealer that using [pure] alcohol on those ear pads causes them to get hard and brittle, and I have seen the pads flake away, leaving bits of themselves on students' faces as they leave. He recom-

mended I just use warm water every day to wipe them clean. It still sounds less than sanitary to me.”

William Caldwell: “A box of moist towelettes close to the positions works nicely. Those with concerns like the opportunity to get certainty that the equipment is cleaned by doing it themselves.”

The discussion then turned comical, as Tag Tanalski described “several levels of defense” in the battle against dirty headphones. One example: “First, students entering the lab have their hair checked by one of our staff. Any Dixie Peach, Brylcreem, Wildroot Cream Oil or V.O. Five users are turned away and invited back after they have showered!” (Yes, it was a joke, as several alarmed readers realized after reading the entire posting.)

Other writers contributed quite entertaining “this actually happened stories” which featured earwigs and snakes as feature characters, but out of consideration for more squeamish readers I spare you these accounts here!

Returning to the serious, Pat Miller pondered this solution: “As we reopen our LLRC I am considering providing our patrons with individually wrapped first aid pads as they check out tapes. This gives them the opportunity to disinfect/clean the headsets at each use. Any comments on this idea?”

David Pankratz responded, “I...would not recommend passing out cleansing pads. I have the sense that this would give the students the impression that there is a problem, and that they will worry about it, possibly turning something into an issue when there may be none—or a relatively small one.”

Donna Apgar: “We don't make a big deal of it but we keep small containers of “steri-wipes” available to students. Many students use them. Others don't even notice them although they are placed in obvious locations within our lab. I feel good about providing this choice.”

Deborah Hovland thanked those who responded to her original question and concluded, “I have decided to take Daniel Tom's advice (3 parts water to 1 part rubbing alcohol) and mix it liberally with Carol Reitan's cheesecloth rationale. Add some antiseptic towelettes and a couple of pairs of rubber gloves, and I think we'll have ALL the bases covered.”

Discussions which take place on the LLTI are archived in a computer database maintained by Otmar Foelsche, the list moderator. This archive is a valuable and time-saving research tool. There are various ways to access the archive:

1) New as of this issue! Open Dartmouth College's World

The LLTI Archive

Wide Web (WWW) site <http://listserv.dartmouth.edu/archives/index.html>. Select "LLTI". The first option listed is "Search the Archives". Click on that link to go to the page which allows you to search all the documents for a term of your choice, such as the name of a product, a topic or a key word. You can also search for a word located in subject headings only. It is also possible to specify a time frame, allowing you to limit searches to recent postings. One of the options listed, narrowing a search by "author's address", was not working properly when I tried it. However, you can find postings by a particular author simply by entering that name in the "Search for" box. Remember that each time you add a search specification, the search parameters are further limited and will produce a smaller number of "hits." From the main "Archives of LLTI" screen it is also possible to select a specific week, such as November 1997, Week 3. Selecting this link will return all postings from that week only.

2) If you interested in relatively recent postings only, another way to search the archives is to open WWW site <http://www.reference.com>. Select "Advanced Search" at either the top or the bottom of the page. At the Advanced Search page, enter your search term in section #1. In section #2, type in "LLTI" under "Groups." (If you enter a search term in section #2 instead of section 1, it will return only those items which have the search term in the message header.) Within section #2 you may also specify the dates of the postings you want to search. When I last used this service, it was not possible to go back further than June 1997.

3) Listserv commands. You can retrieve the actual files by sending commands via email directly to the listserv: listserv@listserv.dartmouth.edu. To get a list of the archive files, send mail to the listserv with the contents: INDEX LLTI This will return a list of files which are the monthly archives. To request a particular month's archive, send the command: SEND LLTI LOGyymm. After downloading one or more of these monthly archives, you can search them for particular words or topics using your own search tools, such as the "find" or "search" features in any standard word-processing program.

4) Gopher. Conduct a Gopher search through these menus in this order:

- "Other Gopher Servers" (or some similar rubric—in other words, Gopher servers other than the one you are using locally)
- North America

- USA
- New Hampshire
- Dartmouth College
- Research Resources
- The Humanities
- International Association for Learning Labs
- LLTI Archive

At this point, choose one of the files, such as LLTI_1700-1799. This will bring up all those files which had the topic numbers 1700-1799.

5) FTP. The archive is also available via anonymous FTP to [ftp.dartmouth.edu/pub/LLTI-IALL](ftp://ftp.dartmouth.edu/pub/LLTI-IALL). You can download the

- LLTI-IALL Folder
- LLTI Archive

How to Subscribe to LLTI

To subscribe to the LLTI, send an electronic message to the listserv address. Use your name in the subscribe message:

To: listserv@listserv.dartmouth.edu

Subject:

Message: SUB LLTI John A. Doe

When your message is received, the listserver will respond with a message describing various basic procedures. You can now begin receiving messages posted by the other users.

Postings to the LLTI may not be sent to the listserv address, but must be sent to: LLTI@dartmouth.edu. To start a new topic, send your message to this address. You can respond to a discussion in progress by sending a reply to a posting on that topic.

If you want to unsubscribe or simply stop mail while you are away from the office, use the SIGNOFF command. (You do not need to give your name.)

To: listserv@listserv.dartmouth.edu

Subject:

Message: SIGNOFF LLTI

To learn more about the LLTI, send a message REVIEW LLTI.

Important! Please do not set up a so called automatic re-distribution list for LLTI on your own campus. These lists cause a lot of problems with returned mail going back to the LLTI editor rather than to the originator of the re-distribution list.

If you have problems using LLTI, you may send an email

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