The Hawaii State Department of Education offers university credit courses in English-as-a-Second-Language (ESL) techniques to all public school teachers, but the scarcity of trainers and the distance between schools and training sites constitute substantial obstacles. With the cooperation of the University of Hawaii's interactive television system, many teachers are now being trained through distance training (DT). This paper describes three models of in-service teacher training in distance education at three levels of interactivity. The most interactive of the models is closed-circuit TV with two-way audio and video, although not all sites have these facilities. The second model is two-way audio and one-way video. The third approach is to provide the course over cable TV on a public access channel. In all models, as the direct contact between the trainer and the teachers is attenuated, there is increasing need for the trainer to structure the class so that the teachers are kept active and involved. A description of the Hawaii Interactive Television System (HITS) is appended. Contains 20 references. (Adjunct ERIC Clearinghouse on Literacy Education) (Author/LB)
INTERACTIVE ESL IN-SERVICE TEACHER TRAINING VIA DISTANCE EDUCATION

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ABSTRACT

The Hawai'i State Department of Education offers university credit courses in ESL techniques to all public school teachers, but the scarcity of trainers and the distance between schools and training sites constitute substantial obstacles. With the cooperation of the University of Hawai'i's interactive television system, many teachers are now being trained through distance training (DT).

This paper describes three models of in-servicing through DT at three levels of interactivity. (I use the term interactivity because keeping the teachers actively involved in the training through guided activities is the key to effective in-servicing.) The most interactive of the models is closed circuit TV with two-way audio and video. Often, however, some remote sites do not have all these facilities. The second model is two-way audio and one-way video (the teachers see the trainer), and the third is providing the course over cable TV on a public access channel. In all models, as the direct contact between the trainer and the teachers is attenuated, there is increasing need for the trainer to structure the class so that the teachers are kept active and involved and do not become "ESL potatoes."
Background: Distance Training as a Solution to ESL In-Service Needs

Hawaii has approximately 10,000 students of limited English proficiency spread throughout most of our 270 schools on seven islands. As the state lacks sufficient resources to provide adequate ESL services to these children, under an agreement with the U.S. Office of Civil Rights the Hawaii Department of Education (DOE) committed itself to provide ESL training to content area teachers, and to certify in ESL those who work with limited English students and do not have an ESL trained co-teacher. This training is being delivered in part by providing University of Hawaii credit courses in ESL either for free or at a nominal cost. Since these credits can be used for both certification and count towards increases in salary range, they continue, after three years, to be oversubscribed. To meet this sudden increase in the demand for ESL courses, the Hawaii DOE began to work with the University of Hawaii's Hawaii Interactive Television System (HITS) to offer the courses via distance learning. (HITS is described in more detail in the Appendix.)

For the purposes of this paper, I am going to refer to distance training (DT), to differentiate it from distance education and distance learning which are used interchangeably in the literature but which typically refer to teaching students at a distance. It is not the purpose of this paper to argue for the effectiveness of distance training. Many articles in the literature attest to its value, especially in those areas where distance or lack of training staff are significant problems (Berube, 1990). DT can also can be cost effective compared to on-site delivery (Hackworth, 1987), although it is expensive and subsidies help - the actual cost of offering programming over HITS in 1990 was $165 per hour; the Hawaii DOE was charged only $15 per hour.

In this paper I will describe how ESL in-service training via DT can be made more effective and, especially, more interactive. The greatest weakness of all distance learning is the passive nature of the role of the learner. Marshall McLuan categorized television as a cool medium -- it requires very little of the viewer, physically or cognitively. In order to provide effective training, then, the ESL trainer must overcome this tendency of the teachers being trained to become "ESL potatoes" and get them actively involved in their learning.

This can be done in a number of ways, depending on the logistics of the DT class. I will describe three models of training, at decreasing levels of built-in interactivity. For each model I will make suggestions on how to make the learning more active, and will also provide some tips gathered from the experiences of myself and others as DT trainers in Hawaii.
A Brief Look at the Literature on Distance Training

Almost all of the literature on using telecommunications for learning would fall under distance learning or distance education for students. Little of it touches on the use of DT for in-servicing. An ERIC search on DT for inservicing produced 23 pages of citations, but only one which specifically addressed ESL (Berube, 1990), and that article was focused on the technology, not on the content of the training. The literature tells you in great detail about the hardware and logistical aspects of DT, but aside from an excellent manual by Nevis and Wright (1984), there is a lack of information on how to teach, how to use the technology to provide the most effective training.

Although much of the literature is on DT programs in Canada, Australia, or the northwest U.S.A. (distance) (Willis, 1991), and for Special Education (compliance) (Knapczyk, 1990; Pitcher, 1986), the issues of distance and compliance are also the main reasons for using DT for ESL training in Hawaii. With seven districts on seven islands, 22% of our schools are rural and the impetus to provide the training resulted from meeting the legal mandate to provide adequate ESL education for limited English speakers.

Gibson (1991) gives details of the history of DT in the Pacific, but almost all of it was using the most limited model -- pre-packaged lectures delivered over radio or "educational TV" with exercises, if any, completed by the students on their own and mailed in or graded by on-site teachers. Most articles published before 1988 dealt with this sort of DT and distance learning (e.g. Nevis & Wright, 1984; Winn & Ellis, 1986; Davison, 1985). At the end of the 1980's the availability of the computer and a considerable reduction in the cost of video production made many new models of learning possible. Knapczyk (1990) described a program using audiographics -- DT using computers with integrated sound and graphics using modems and scanners to communicate among sites. Benson and Hirschman (1988) described the use of an Electronic Blackboard -- a computer with a keyboard or graphics pad from which the instructor can control the display on all computers in the remote sites through a computer network. Lombardi (1991) added the telephone as a classroom tool for the distance teacher.

Nelson et al. (1989) detail the logistics of teacher training using two-way video and report high teacher evaluations of the course and the delivery (p. 4). At this time a few reviewers began to consider what it takes to be an effective DT trainer. Kober (1990) concluded that teachers who do well on television have "video presence," and cites one distance learning provider who does screen tests of prospective TV teachers.

Some of what teachers and trainers have mastered as good classroom pedagogy is not good DT pedagogy. Sometimes the message of the medium conflicts with the overt message, e.g., DT is very teacher centered, whereas the content of the ESL training I conduct stresses that ESL courses should be more student centered. Much, if not most, DT is highly verbal, and again, I teach that for limited English students the modality must be mixed with the verbal constantly being reinforced with visual, tactile, and other modalities of learning.
Three Models of ESL Inservice

Table 1 outlines the three training delivery models I have worked with in Hawaii.

**TABLE 1**
THREE MODELS OF ESL IN-SERVICE THROUGH DISTANCE TRAINING

<table>
<thead>
<tr>
<th>MODEL</th>
<th>MEDIUM</th>
<th>VIDEO</th>
<th>AUDIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Closed circuit</td>
<td>2 way</td>
<td>2 way</td>
</tr>
<tr>
<td>B</td>
<td>Closed circuit</td>
<td>1 way</td>
<td>2 way</td>
</tr>
<tr>
<td>C</td>
<td>Public access TV</td>
<td>1 way</td>
<td>1 way (Phone?)</td>
</tr>
</tbody>
</table>

Model A involves a closed circuit television system allowing for two-way video and audio at all sites. The trainer teaches from the master studio and the teacher-trainees gather at other HITS studios, mostly at the community colleges throughout the state. A camera broadcasts their participation back to the master studio, and they have voice or switch-activated microphones at their tables. At the University of Hawaii master studio I face a camera and a bank of monitors each of which shows one of the remote sites, so I can see and speak directly to individuals.

Model B also involves closed circuit but with one way video and two-way audio. The students can see and hear me, but I can only hear them. The rooms they are in do not have the capability to broadcast video. Actually, in Hawai`i it is common to have a mixture of Models A and B, with some sites fully two-way and one or two sites without return video.

Model C is quite different. The course is broadcast over public access television, and so is limited to one-way video and audio, although it is possible for the teachers to call the studio via public telephones or a dedicated line. This has many implications for the delivery, not the least of which is that you cannot predict your audience, both in the sense that anybody including your mother might tune in and see you demonstrating Total Physical Response, and in the sense that you cannot assure that the teachers who registered for the course are watching. They may be videotaping the show and watching it later at their leisure. Of course I strongly discourage this, but it happens anyway, greatly diminishing the potential for the class to benefit from those teachers’ experience and their interaction.

Note that Model D -- delivery of training through pre-recorded programming, is not an option in Hawai`i. The University of Hawai`i Department of ESL will not give credit for a "canned course."

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Each of these models requires a slightly different type of teaching, but each can be made interactive. The training doesn't have to be straight lecture, although it is likely that there will be quite a bit of lecture in Model C, perhaps more than the trainer is comfortable with.

**Promoting Interaction over the Airwaves**

The following are suggestions for promoting interaction between the trainer and the teacher-trainees as well as among the teachers.

**MODEL A**

The trainer should treat the teachers like they were in the far end of a big room. Although you cannot get to them, they are in a sense physically present. I use a lot of group work and have the teachers report on the results of their work. One exciting way to do an inter-site discussion is to have the teachers sit facing the monitors which show other sites, and have cameras set so that every site can see every other. One such arrangement which I have used is shown in Figure 1.

// Insert Figure 1 about here //

If a FAX machine is available, you can use that to exchange paperwork instantaneously. If the class meets weekly, mail materials to the sites. This will make them feel more a part of the group. Learn the students names and use them often, not just the site names. "Does anybody in Hilo have the answer?" is less likely to provoke a response than calling a teacher by name. To include everyone, provide all teachers in the class with a list of their classmates, then have teachers in different sites ask each other questions directly, and encourage dialog.

Murphey (1991) found it effective to put a monitor in the room which showed their own class to the students at each site, since he found that they were not looking at each other but rather intently watching the monitor showing the teacher or other sites even when someone at their own site was talking.

Put one person on camera at a site and do a demonstration with them. Treat them as if they were in front of you. If possible, visit other sites with broadcasting capability, even if it is not two-way. This will make you into a real person for the first time to the teachers at that site, and increase motivation. It is also a nice change of pace for you; it does get tiring staring at little heads on distant monitors.

**MODEL B**

Model B is harder because you can't see your students. You will need to call roll, find out who is there, and keep their names in front of you, even if it takes a lot of time. Your job is to keep all of the teachers personally involved. Ask a lot of questions. Give highly structured and timed group work, and make sure all sites give feedback. Do an inter-site jigsaw (Slavin,
"CIRCLE YOUR WAGONS"
Interactive Discussion
Through Distance Training
The teachers at each site master one part of the material (e.g. an article) and the whole class puts it together on the air.

Make sure that you maximize the two-way audio capability. Have the teachers talking as much as possible - sharing experiences, reporting on techniques they tried, responding to readings, and so forth. If they only voice their hear is yours, the opportunities for interaction and thus complete integration of the training will be lost. If they hear each other speaking they will be motivated to respond to each other and to offer their own ideas.

MODEL C

The biggest challenge in Model C is to get responses over the phone, even besides the technical problems. We had an 800 number (toll free), which the teachers could call during the class and be heard on the air. Interestingly, some of them called me at my office while I was on in the studio! Although on the final evaluations the teachers came up with many creative reasons they did not call, I am sure the biggest problem is shyness. Allow people to call in off the air and with questions to be answered on the air. This also eases the disruption caused by the caller breaking in during a presentation (you can’t raise your hand electronically on HITS). Another trainer had good response with telling the teachers, "Get on the phone and tell me how that felt" after an interactive exercise.

In addition to or in place of the telephone, use FAX and E-mail as much as possible. If you have FAX or E-Mail in your office but not in the studio, have the teachers send it to you there, and respond over the air. Mix up the programming, with guests (if they have "video presence"), video, and computers (see below for more on using computers). If teachers are watching together, find a volunteer to be a site activity coordinator and rely on t’s-em. Get them to report back by phone, FAX, or E-Mail. If you are teaching an extended course, assign reaction papers, and get your feedback to them as soon as possible. If the teachers are watching at home or watching alone, make a schedule of who will report on readings or give a reaction so that they will call in for sure. Be sure to plan for alternates if that person does not materialize.

ALL MODELS

Don’t keep reminding the teachers that it is hard to communicate in this style of instruction. I did that the first time I taught over DT and the they believed me and consequently put less effort into trying to communicate. It is sometimes better not to share some of the logistical problems you are having. Emphasize that it is fun to try a new way to teach and learn.

Don’t be afraid to stop for discussion among groups, especially in Model A where you can be sure that something is happening. When you are not the focus of attention put something attractive or interesting on the monitor so you don’t look idle, or put on the instructions for the discussion. See Bradley (1992) on the effectiveness of a “pause button" in video training.
Technical Considerations

Computers

It is possible to show computer displays over television in a variety of ways (Barker & Burnett, 1991). The Big Sky Network in Montana is distance learning with computers only (Robinson, 1991). You can feed the computer signal directly to computers on a network, similar to the Electronic Blackboard. In other systems the computer display can go directly into the video signal, and the viewers monitors will display the computer screen. The simplest method, and the method I use, is to aim a camera at the computer. There is a problem with lines appearing on rolling on the screen but this can be fixed with software.

Sound

Lapel mikes are best, a stand mike locks you into place, and if the instructor does not move it becomes boring quickly. We are used to television being very active and constantly stimulating. It is difficult to sit through a stationary talking head for any period of time.

It is important to practice and listen to the sound level. After years of talking to hundreds of teachers in cafeterias, I naturally project when I teach, but it is better to speak to a microphone as if you were speaking into a telephone. Also, sudden changes in volume is a good teaching technique, but it doesn't work electronically; the differences in sound level are even more exaggerated.

Picture

Watch TV to find out what to wear. For men, avoid a Nixon shadow, shave just before going on, and be sure to get enough sleep; bags under your eyes look terrible on TV and will interfere with your message. Watch a lot of public access programming, good and bad, to see what real people look like when they get on TV; network television is nothing like what your trainees will see.

Your movement must be deliberate, and the audience must have a sense of where you are going when you move. Random motion looks strange on television, and is very distracting. Also random gestures such as playing with a pencil can look much bigger on screen than in a classroom. Make the camera operator your partner and friend. Let her/him learn about how and when you move, what your range of gestures are.

Clothing

Avoid black and white, extreme contrasts; avoid wearing the same color as the backdrop or you will disappear. Call the studio beforehand and find out what color the backdrop is. Avoid busy patterns - checks, tight stripes, and flashy jewelry. No jewelry at all is better. If the backdrop is boring, find out if you can add something to the picture. For one DT class I
noticed an artificial plant in the hallway and asked if I could put behind me on the "set." A
plant works wonders, especially if you move a lot. If the background changes when the camera
follows you it doesn’t look so much like you are moonwalking.

When writing on a white board, use a black or other dark high contrast pen. If you are
using a blackboard, use white chalk and dull the edge to get thick lines. Thin or low contrast
lines will not show well.

A final tip: If it bothers you that your stomach sticks out, don’t show your profile! Everything
is exaggerated on television.

Materials

"Distance learning teachers often have to spend more time preparing for class -- and more
time encouraging class discussion. They also have to become adept at developing effective
visuals and follow-up activities, as well as encouraging independent study" (Miller, et al., 1992,
p. 34). You need more material to teach over DT than you do in an interactive on-site class.
"Our teachers have found that their 50 minute distance-learning classes have no down time; this
medium, they say, uses up far more material than a normal class" (Miller, p. 34). You may
also find that group activities will go more quickly as people seem to get restless after being
away from watching the monitors for a while.

Graphics

Any printed materials shown on television will need to be a larger type size than you use
on an overhead projector. I have found that a 24 point font displays best, and I follow a general
rule of no more than six words per line and five lines per page.

This will show clearly on TV.

Techniques

Don’t deliver the lesson from a script; reading is deadly in DT. Talk slower but not
slowly. Speak to the camera as if you were speaking to a class. If it helps, start by speaking
to the camera operator or a technician behind the camera.

Wait time

It is difficult in Models B and C to know how long to wait for an answer from a remote
site. Though it is good pedagogy to wait for student responses, you have to consider loosing
your audience. Of course it will depend on the value of the answer, but if the question is not
important to the flow of the lesson, I don’t wait very much at all. I am much more likely over
DT to move on to another person or answer the question myself than I would be in a regular
classroom. In timing the wait, I take into account two considerations: 1) silence is deadly on TV or radio - we’re not used to it; 2) you notice the silence more than your audience. Watch TV and time the silences. If a silence is well set up you can go for several seconds.

People’s attention span is much shorter on TV or radio. Don’t give extended examples orally. A little bit of a demonstration in a foreign language is going to go a long way. Be sure to laugh at your own jokes. It’s very lonely when you don’t hear any laughter. The television generation is used to sound tracks.

Self-training

When you watch local access TV at home, take notes on presentation, speech, graphics, movement, density of content, affect, whatever relates to your presentation. Take notes of what annoys you, what appeals to you. Get video tapes of your own classes, watch and have others watch and critique. Remember, even if you’ve been teaching since before television, DT requires a new set of skills.

A Final Word

Telecommunications offers us the opportunity to expand the reach of our in-service and to provide training to teachers who otherwise would be unable to improve their skills due to difficulties of distance or resources. Whatever the delivery model, with careful planning and the awareness that we as trainers have to retrain ourselves to make the most of this new medium, we can continue to provide the best possible training.
References


APPENDIX

Description of the Hawai‘i Interactive Television System (HITS)
The HAWAII INTERACTIVE TELEVISION SYSTEM (HITS) is a 4-channel interactive inter-island closed-circuit television network designed as an electronic communication service for use by the University of Hawaii and other state and county agencies. HITS provides the University of Hawaii with a powerful communication tool with which to implement subsection 5-2.d. of the Board of Regents' Bylaws and Policies which commits the University to equalize educational opportunities for residents of Hawaii who do not have ready access to campus-based instructional programs. HITS can reach distant learners assembled in classroom sites throughout the state, and through Cable TV may reach learners in their homes and work sites. Video or telephone links from remote classrooms enable distant learners to interact with the instructor as the lesson unfolds. At the University of Hawaii, the Office of Information Technology (OIT) has systemwide management and programming responsibilities of HITS.

HITS FACILITIES:
Transmission:
- UHM-KUY 201
- UHM-Moore 161
- UH H
- Kapiolani CC
- Kauai CC
- Maui CC
- Lanai (via MCC Skybridge)
- Molokai (via MCC Skybridge)

Receive:
- All UH campuses
- Military Bases (Hickam Air Force Base)
- Hospitals (Tripler)

OTHER TECHNOLOGIES:
SATELLITE - UHM and Maui CC has satellite downlink facilities which are connected to HITS. This allows systemwide reception of satellite feeds and participation in national and international teleconferences. UHH (CCECS) has a transportable satellite receive dish. UHM (LLL) is scheduled to have a satellite uplink in 1990, which will allow transmission of UH programs to locations outside the State.

CABLE - Commercial cable channels (through the State Department of Commerce and Consumer Affairs refranchising agreements) provide the University with another delivery mechanism for its programs. Cable will provide a tremendous tool for information dissemination by connecting to schools, businesses, and residences.

COMPUTERS - Due to the nature of distance education in Hawaii, computers provide a communication tool for connections between students and faculty outside of the formal class meetings. In addition, computer networks provide library support between UH campuses.
LEGEND:

- Approximate ITFS coverage areas
- Outgoing, Four-Channel Audio and Video
- Return, One-Channel Audio and Video

Video Origination:
- KHET
- UH-Manoa
- UH-Hilo
- Maui Community College
- Kauai Community College
- Kapiolani Community College-
  Diamond Head

Audio Origination:
- Any standard telephone

(Hawaii Interactive Television System)
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