At Phoenix College, in Arizona, most classes have seen an increasing number of disabled students, but usually only one student with a given disability is present. When five deaf students enrolled in a Plants and Society course in fall 1994, the instructor became aware of problems which were not evident with single disabled students. First, although sign interpreters were present the instructor noticed a communication gap with the students, especially with humor used to illustrate class material. Moreover, the students' grades were well below what they were capable of achieving. The situation was partially remedied when the deaf students chose to split into different lab groups and thus began communicating with hearing students. In addition, the instructor decided to learn about American Sign Language to understand some of the obstacles. Realizing that the Internet would allow deaf students to readily communicate with others while helping to improve written English skills, the instructor also arranged a class on using the Internet for the deaf students. Despite these efforts, three of the students eventually dropped out of the college, while the other two transferred to state universities. It is determined that future hearing disabled students at the college will receive computer instruction early in their education. (Includes a list of Internet addresses of interest to deaf students and contains eight references.) (BCY)
Have You Ever Seen a Voice Talking?...Well, I Have!

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Have You Ever Seen A Voice Talking?.....Well, I did!

"Nothing is new, under the sun".
That's said...and it's probably true.
But here's a story that seems new to me,
Perhaps it will seem so to you.

I've been training as a teacher for nearly 20 years. I teach at an urban community college in Phoenix, Arizona. Our students are a swirl of Hispanic, African-American, Native American, Southeast Asian, Caucasian and a few others! Mostly, they are the typical community college student...adult, returning to school after several years away, with families to support, short on time and money and with a definite purpose to their educational path.

My classroom time has been spent in various types of biology classes with a few side trips into humanities, integrated studies and biological drawing. Biology classes typically include weekly labs, so I see most of my students six hours per week. The class I'm currently working on, BIO 108 - Plants & Society, is specifically a transferable, 4-credit natural science class for students who are NOT biology majors. Many students have an "unnatural fear" of taking a "natural" science class. I find that a casual and relaxed approach on my part helps them to relax and do better in the class than they anticipated. A portion of the lab involves each student in the planting, cultivating and harvesting of a minimum of 8 different types of plants during the semester. We have a good time, get acquainted, go outside, get dirty, and grow about 800 plants per semester, in the flower beds, but that's another story.

In addition to the "usual mixture" of students, there has been an increasingly large number of disabled students. This inclusion of disabled students has become almost routine. All instructors receive a Handbook for the Disabled, note-takers are provided with special paper, transport can be arranged, the Special Services staff of the Learning Center is always available for help or information. Interpreters for the deaf are a common sight and prove no distraction for the rest of the class. Students have learned to be particularly considerate of disabled students and there are usually unsolicited volunteers for help in each class.

Before classes began for the Fall '94 semester, I was advised by Special Services that I would have five deaf students in the BIO 108 class (45 students total). They were all enrolled in the same lecture and lab sections and an interpreter was scheduled for all class times. A student "note-taker" was obtained for lecture. A study guide and lab manual, already part of the course, were supplied to each of the students and the interpreter. A tutor and a test taking procedure were arranged. We have a very active and efficient Special Services staff and it seemed that we were all prepared for a good class experience. I'd never had such a large group of students with the same disability
in one class and looked forward to meeting them. However, I found it unappealing to think of them as the five deaf students so to the voice in my head they became los cincos sordos...(Spanish for the five deaf student).

Over the years, I've had the opportunity to work with students with a wide variety of disabilities. Several of these have been deaf students. Sometimes things worked out really well...sometimes not so hot...but mostly it was O.K. Still, I'd never had more than one student with the same handicap in the same class before. I quickly learned that different things become obvious with a group. One person is, after all, just one person. When one person misses a major lecture point it can be assumed that they didn't pay attention, missed the notes, didn't read the book, dozed off...etc. When 5 out of 5 miss a major point there IS a communication problem that must be identified and addressed. Without a group there is no basis for comparison. In retrospect, this seems an obvious concept...but it was a fact I had forgotten. "Nothing illuminates the individual as nicely as the glow from a group."

My teaching style is informal, active and very visual. I use a variety of props and try to change the pace about every 15 minutes. This style encourages the students to watch me and the front of the room. It is an effective tool in most instances...until los cincos arrived. What had not been obvious with a single deaf student was glaring with five. Things were not going very well. They came to class, the interpreter came to class, I came to class, the rest of the class was there too...but these 5 were not getting the grades I thought they were capable of. Three of them had a start on failing the class. It pushed all of my "how else can I do this" buttons. It was driving me crazy! To add to the challenge, 5 other students in this same class were ESL - English as a Second Language. Ethiopia, Guatemala, Vietnam, Laos and Mexico were presenting problems of their own! But los cincos sordos were showing the least progress.

A major communication problem came from the difficulty in the translation of humor. Illustrative humor runs from innuendo to slapstick and timing really is everything. Verbal humor can't stand the lag time of translation nor the economic syntax of (ASL) American Sign Language. The same thing that makes ASL efficient breaks it for one-liners. Slapstick or visual humor is just that...visual. If you watch the interpreter, you don't see the "moves"...at least not enough to get the joke. Consequently, los cincos didn't get to laugh with the rest of the class and even worse, because they sat as a group at the front of the room they "heard the joke" at the end of the laugh as they looked around. What they saw was people laughing. This difficulty was never resolved.

In lab, I asked los cincos sordos if they wanted to be a separate group or whether they would prefer to scatter into other groups. They chose to scatter, each deaf student went to a separate lab group. This worked well and the groups absorbed and helped the individual deaf students. What was the difference? An individual deaf person can be effectively assisted by several hearing persons. In the lab groups, there was no separate interpreter. Mime, writing or sign spelling was necessary to communicate.
observed many of the hearing students using some degree of ASL as the semester went on. An unexpected source of communication occurred because many of the students in the class, and in this particular lab, are (ESL) English as a Second Language students. They are already accustomed to thinking in short word groups and communicating to others by common signs. At first, the class interpreter was flying around the room to try as cover all five lab groups! As the semester went on, things were much better and the deaf students were absorbed into their lab groups. Within the lab groups, slapstick humor was possible and we all learned that the deaf can laugh. As los cinco became more a part of the rest of the class, they became more relaxed. We thought of ourselves as a class with six lab groups instead of a class with five deaf students.

Five weeks into the semester we changed to a different tutor. The second tutor was in the same lecture and lab so he was able to explain many of the mnemonic "jokes" during tutoring sessions. The grades began to improve with the second tutor.

I still have an inaccurate idea of what the students see in lecture. What I think they see seems very confusing. I can provide some modification for these students, but must remember that my teaching style has been shaped and honed for those other 45 students in the same room. How frustrating.

Written portions of this course are done during the lab. It was with true surprise that I realized the writing level of one deaf student was about 4th grade. Can he read? Yes...but very slowly...and not very well. Is this part of the reason he is failing my class? The other four students wrote at a higher level but still only at about 9th grade level. None of these students were articulate on paper.

This realization sent me in search of more information on how to speak with these students in order to better evaluate their levels of understanding in the class. Two books on ASL, a VCR tape on ASL, personal communications with the head of the Interpreter Training Program and Special Services staff, coaching from the interpreter and students in class all helped me learn some things:

1. **ASL is fun to learn.** I practiced the alphabet in the shower, while reading, and while driving, (one guy signed back)! A few sentences stuck, things like, "Will you be ready for the exam on Tuesday?"
2. People my age, fifty, can get bursitis in several important joints if they practice ASL too much! I had to stop entirely for three weeks and then learn a totally new arm position in order to continue.
3. ASL is not English. It is as much a different language as Spanish or Tagalog.
4. Students using ASL have many of the same problems as other ESL students. Things like incorrect verb tenses, awkward sentence structure, inappropriate choice of words.
For example, as part of a paper on the use of a he-toal preparation for new mothers: Intended to say: A Woman's protein requirement is highest during lactation. But wrote this: Woman’s protein need is greatest when lactate is the time to come for babies.

5. Humor is quite possible within an ASL conversation. However, verbal humor, such as word-play, translates very awkwardly.

6. Deaf students benefit from talking to other students about common interests (i.e. Who is going to water the plants this week?)

7. Deaf students "speak" more correct English when writing than when signing. Signing speed is necessary to maintain continuity, there simply is not time to include every word.

8. Five community college deaf students are just as variable in talent, likes and interests as any other five community college students...except these five have to sit together and be together...even if they don’t particularly like each other! They must be able to see the interpreter.

9. Deaf students, like all students, write better when they write about something that they like and want to write about. I first learned how true this was when participating in a "Writing Across the Curriculum" project a few years ago. It still is.

Like just about everyone else, I have my ticket for the The Information Super Highway. The ISHway beckons and my eyes have gone around the world several times. While drifting through the Internet I was struck by the obvious. Los cincos sordos should be doing this too. Any voice can be seen.....including theirs!

Before long this whole thing became one of those nagging sets of questions that never quite goes away...the kind that whisper into my left ear and are always intruding into whatever else is going on. I know that many people are trained in special procedures of educating the hearing impaired...but I’m not one of them. However, I am trying to educate these very people. What can I do about this as a biology teacher in a community college? How can these students stop sounding "dumb" on paper and start sounding like everybody else? How can they take advantage of the technology that is widely available to communicate with other people thousands of miles away, or across town, and never mention their disability ... unless they choose to?

To do this, they must learn to write at a level that labels them as "educated". How can they do this? They must be able to "talk" on paper in regular English and not in ASL.

Can this be done? Of course...but it takes a lot of time and study. Should this be done? Only if the students wants to do it..... but the option does exist.

My point is, if the student wants to invest the time and effort the highway is already in place. As learning institutions we need to provide the vehicles!
A little looking turned up several special interest groups that are specifically designed for the deaf. There are mailing lists...there are classes...there are forums. There are other deaf people who could help Ivan write a better sentence...they've been down that road and know how to turn ASL into polished sentences. With some time and work these deaf students can choose to identify themselves as deaf, on the Internet, or not mention it at all. They can temporarily unhandicap themselves if they wish to.

When I asked the five students if they used computers all five said, "No". Does this mean that none of our deaf students use computers? No, but 100% of these five used them only as word processors.

The process has begun to try and provide our deaf students with easier computer access. All of our college students have computer access, but we seem to need a "better way" to get these particular students involved. There are, of course, the problems of money, space and computer instruction but all these things can be solved.

Imagine the conversations waiting to happen. They can talk to ANYBODY! Ronald can finally learn as much about Alternative Medicine as he can stay awake to see. Michele can discuss psychology until her keyboard suffers meltdown. They can talk and argue and laugh. There will be reasons to write English fluently. They need not be different or isolated when they are surfing the net with the rest of the nerds.

TWO SEMESTERS PASS
First Los Cincos Group Leaves Phoenix College

A "Special Project" class was the most efficient way for Los Cincos to have a place and time to learn to use the Internet. Special Project classes at our college require a written contract between the student and instructor stating the number of hours required for completion, location of work area and goal to be pursued. Our class was worth one credit (16 hours). We were delighted when the Arizona Dept. of Rehabilitation agreed to pay the student fees ($32.00/student). The goal was "fearless use" of the Internet. That goal has been achieved. Phoenix College Special Services paid for a student tutor and a student interpreter for all of our sessions. The tutor and interpreter volunteered their time when we had special meetings. There is no payment for instructors for Special Projects.

We started with two retired Macs installed in a spare biology prep room. They were slow but we could make all the noise we wanted. Deaf does not mean silent! After eight weeks we were pretty good and we transferred to a computer classroom in the CTL area (Center for teaching and Learning). We reserved the room for one hour once a week. The computers were new and fast. A work study student was our coach
and a newly installed program, "Netscape", was our easy way on...and out. We were able to hook up with the Explorer spacecraft and many other amazing things and laces. For the last several weeks of the semester, I would arrive to find everyone, including the student assistant, away and gone all over the country and world. I was lucky to get a wave and a grin!

It would be great to be able to report that the members of the Los Cincos at the end of the story were the same five that began it....but reality rules. Three of the original group dropped out of school for various reasons. The remaining two finished their community college work Spring '95 and one is accepted and transferring to the University of Arizona in the Fall. The other is accepted and transferring to Arizona State University beginning Summer '95. As spin-off, the tutor and I are working on our finger spelling and will be taking beginning ASL classes. The student interpreter was awarded a major scholarship toward her degree in education of the HI (Hearing Impaired). I believe that the communication skills of the students did improve and have no question that they will continue to use the Internet as a means of information and communication.

I hope that we will be able to work with this approach and incorporate it in the training of all our hearing disabled students as early in their educational process as possible. This information will be available to all of our instructors with hearing disabled students.

Perhaps you would like to look at, and talk to, some of the places, and people that we met during this experience:

- Deaf Magazine
  Internet Mailing List;
  Subscription Address: deaf-request@clark.net

- Deaf New World BBS
  ken.glickman@emailworld.com

- Deafness
  Usenet: Newsgroup:bit.listserv.deaf-1

- Disability Inf.
  Gopher: Name: U of Wis.. Madison. Trace Center
  Address: trace.waisman.wisc.edu

- Intimate Violence
  Listserv Mailing List listserv@uriacc.uri.edu

- Space Shuttle (Internet to World Wide Web)
  http://astro-2.msfc.nasa.gov

- Usenet Newsgroups alt.tasteless

- Yahoo (Comprehensive & Searchable)
  http://akebono.Stanford.edu/yahoo/
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