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Innovative Methods in Foreign Language Pedagogy: Urdu through Interactive Televideo (A Case Study)

I. Why Interactive Televideo for Hindi-Urdu?

THE TRIANGLE UNIVERSITIES OF NORTH CAROLINA—University of North Carolina–Chapel Hill (UNC–CH), North Carolina State University (NCSU), and Duke University (DU)—have great combined strength in South Asian area studies, and a history of cooperation and collaboration through the ten-year-old Triangle South Asia Consortium. But in the past, Hindi language instruction was not available on two of the three campuses. Although DU had one full-time Hindi faculty member, Urdu was not available on any of the three campuses. Moreover, the geographical distance among the three universities precluded easy cross-registration among campuses.

Despite significant student demand for both Hindi and Urdu at UNC–CH and NCSU, neither university was willing to create a faculty position for Hindi-Urdu until that demand could be quantitatively demonstrated.

In 1995, with a grant from the United States Department of Education, the Triangle South Asia Consortium launched a program of teaching Hindi-Urdu at both UNC–CH and NCSU simultaneously, using new interactive televideo distance learning technology. In what follows I present some of the issues involved in language teaching through distance learning and also describe some of the challenges we have faced in carrying out our program.

II. The Advantages of Language Instruction through Televideo

Before describing the technicalities of the interactive televideo medium as it operates in North Carolina, let me mention its two primary advantages. One is practical, the other is pedagogical. The practical advantage is obvious: televideo allows us to teach a less commonly taught language at universities and colleges where it would not otherwise be taught. In a way, it allows us to get our “foot in the door.” It is easier for a department to justify adding language faculty when televideo courses have already demonstrated and documented demand. This has been the case in North Carolina. Response to our televideo courses has been so large (we have over seventy-five students enrolled in the Elementary Level course in 1997) that we have been able to justify creating a second full time Hindi professorship.

The second advantage is pedagogical. Televideo is by definition an audio-visual medium which, when its interactive features are fully exploited, is extremely effective for language teaching. As described in detail below, this medium allows, and often necessitates, a number of pedagogical innovations which directly enhance language learning.

III. Description of the Medium

Let me describe the interactive televideo classroom environment. First imagine a normal language classroom. The instructor stands in front of the students, or moves among them interacting with them. But in the interactive televideo classroom, there are television monitors placed around the room through which the instructor can see another classroom full of students at a remote site. The instructor is miked, and the students' desks at both sites are equipped with microphones. Thus from the primary site, the instructor can speak to the remote students, and they can respond or ask questions as though they were in the same room with the instructor. The remote students are thus virtually present, and the students at both primary and remote sites can interact freely with each other and with the instructor. From the remote site, the students see and hear the instructor and the other students on the monitors. The instructor is thus virtually present among them and can respond to them as though he or she were in the room with them.

The interactive televideo medium essentially creates a combined “virtual classroom” out of the two classrooms at the two different sites.

This effect is enhanced by making certain that a camera is targeting whomever is speaking. Multiple monitors ensure that neither students nor teacher lose visual contact with each other at any time.

A. Class Structure

I have over seventy-five students in my first-year Elementary Hindi-Urdu class divided between two sites. This includes a mixture of graduate and undergraduate students, students taking the course because it is integral to their research, students satisfying the language requirement, and students just exploring. I also teach second-year Intermediate Hindi-Urdu through interactive televideo.

Each course meets four times a week. The televideo portion meets Mondays, Wednesdays and Fridays, and there is an additional recitation section on Tuesdays which is not conducted through televideo.

At each site I have a teaching assistant (TA). The TAs are essential for several reasons. First, the TA at the remote site functions as my representative both in terms of authority and for all of the logistical and house-keeping chores required. Second, the TAs also function as graders, and they collect and return students' assignments. Third, in the event of a technical malfunction of the network, the TA is prepared to conduct the class from the remote site. Fourth, the TAs oversee small-group work and answer individual student questions during and after class. Fifth, the TAs conduct the separate non-televideo recitation sections.

It is approximately twenty-five miles from NCSU to UNC-CH. I have made it a point to be physically present at each location at least once a week. Because there are only two locations at this time (UNC-CH and NCSU), this has not been difficult. In a situation with a larger number of sites and greater geographical distances, this commuting approach may become problematic.

I have discovered that it is important that drilling and all forms of instructor-student interaction be distributed evenly between the sites. It may even be advisable to favor the remote location(s). The students are accustomed to this practice and it thus ensures that the students at the remote site pay careful attention. In addition, I have trained myself to look into the cameras often to reinforce the remote students' perception that I am "present."

B. Televideo-based Teaching Tools: A number of teaching tools are made possible by this technology.

1. An overhead camera replaces the blackboard and traditional overhead projector. Prepared slides and drawings as well as props and “realia” are all blown up on the overhead and sent to monitors at the primary and remote sites. I can merely write on a sheet of paper instead of using a blackboard or preparing slides in advance. I can also control the camera zoom to make the images as large or as small as desired.

2. In combination with the overhead camera, I can use a light pen to draw or write temporarily over existing images.

3. Video and audio playback are hard-wired in the control room so there is no necessity of lugging equipment around. I have used video clips often during exams as the basis for comprehension questions.

4. Split-screen techniques are easily used when it is desirable to have two images on screen at once, for example in a dialogue or debate between two sites, or when I am speaking about an image on the overhead camera or on video.

5. Instant replay can be used, for example, when students perform a skit, and then I ask other students to view the skit again and answer questions about it.

6. Hard-wired computer and internet connections are also useful, especially considering the quickly expanding number of language-related sites on line and the widespread availability of CD-ROM and other language teaching software.

7. Archive tapes of each class are kept, allowing students to view and review tapes of class sessions. The tapes thus become additional resources for self-teaching. Students can review the course at will.

C. Benefits of the Medium: There are several ways in which the use of televideo enhances classroom learning.

First, the remote students can actually see and hear me better than the students at the primary site. Indeed, I have observed students in the classroom with me watching me through the monitors instead of looking at me in the flesh. Since each student is miked, I can more easily hear them and they can more easily hear each other than might be the case in a class of similar size in a normal classroom. The cameras are also ideal for zooming in on my gestures or facial expressions or those of students,

providing exposure to the non-verbal cues that are very important to spoken language. This factor may explain why the optimal class size for tele-video language classes is larger than that for normal language classes.

Second, the use of visual aids is also facilitated by the televideo system. I can employ images, photographs, magazine and press clippings, and hand-drawn sketches with ease on the overhead camera. At will I can zoom in on a portion of a picture and blow it up. In normal classrooms, special large size visual aids must be utilized in order to be visible to all students. Likewise, audio-visual materials can be easily incorporated into every televideo class without the special equipment arrangements that must be made in a normal classroom.

Third, I have observed that students take the class more seriously because of the presence of cameras. This is actually a larger issue related to the psychology of learning. Televideo learning is *not* simply learning passively by watching television. Often my TV-generation students enter the course with the impression that they will merely sit back and watch me lecture and that they will be able to absorb Hindi-Urdu passively through the television screen. Televideo courses in other disciplines are often conducted this way. But in interactive language classes, the students are drawn into the “show” and become part of it. Their words and actions, their drill responses, their skits, their presentations, their contributions to discussion are transmitted through the same screen as my words and actions. They can see themselves, correct themselves, and learn from their peers in ways that are not possible in a standard classroom.

IV. Pedagogical Issues

While I still use the same types of quizzes, exams, homework assignments, oral tests, self-study materials, etc. as I did when I taught in a standard classroom for twelve years, my courses have become more intensely interactive in response to televideo. For example I make greater use of contextualized role plays, dialogues, skits, oral drills, in-class discussion of readings, etc. Rather than spending a lot of time on grammatical explanations, I expect students to have read the textbook in advance and class is used primarily for exercising new concepts and reinforcing old material. I have also used the capabilities of televideo effectively for testing: e.g., to show images or video clips as the basis for exam questions. Likewise for televideo I have increasingly incorporated visual aids and realia in the classroom. All of these activities are proven to have intrinsic value for language

instruction even in the absence of televideo, and televideo further enhances their usefulness.

I see no pedagogical disadvantages inherent in the televideo classroom. In particular, there seems to be no difference in the amount of material I can cover compared to past semesters in a normal classroom or in the students' ability to absorb that material as evaluated by their performance on written and oral tests. In comparison to a normal classroom approach, however, it is imperative to use more numerous visual aids, and to capture and hold the students' attention through more extended drilling and student-to-student interaction. From a technical point of view, it is helpful to use directed student response rather than "cold-calling." For example skits, presentations, role plays, and even simply going around the room in an established order better allow the camera operators to focus on the appropriate student. Cold-calling often leaves the camera operator hunting for the student speaking until it is too late. In this regard, the instructor should walk around the room and engage individual students rather than conduct drill from the podium, thus allowing the camera operators to follow him or her and identify the appropriate students more quickly.

Also the instructor must have good "entertainment skills" in order to sustain productive levels of attention. These include the ability to use to advantage a variety of aural and visual aids, a sense of humor, and an interactive teaching style.

V. Technical Issues

Technical capabilities are a major consideration for the effective use of distance learning. Before instituting a televideo course, it is imperative to determine whether your university's infrastructure can handle a fully interactive course. Look for the following at each site:

1. Sufficient cameras: There should be at least three cameras: one to track the instructor, at least one for the students, and one for the overhead. These can all be handled by one camera operator if he or she is alert, well trained and familiar with the studio and equipment. Televideo for language teaching depends on rapid cuts between teacher, students and overhead. It is very disturbing when you hear disembodied voices speaking or when you have to interrupt class to wait for the camera to pan around in search of someone. The overhead camera zoom should be in the instructor's control, but beyond this, the instructor should not have

to think about the operation of the cameras. Split screen and dissolve capabilities also make an important contribution to the presentation of the class on screen.

2. Sufficient audio capabilities: Major problems can be caused by audio feedback, by improper mixing balance and by improperly placed microphones. Each student, TA and instructor must have a properly placed and connected microphone. In my class microphones are built into each student desk. The TA and I have wireless lapel mikes allowing us to move freely around the room. The technician must be alert for adjusting the mixing balance constantly. If one student is whispering or rustling papers while another student or the instructor is speaking, then the technician must instantly reduce the noise volume and enhance the volume of the person speaking. Furthermore, technical audio problems originating at any site as well as in the linking network can throw the class temporarily off-line. Such problems can be avoided by pre-class sound checks and having an audio engineer on call.

3. Personnel: Televideo language courses require a dimension of interactivity not found in televideo courses in other disciplines, and the camera and sound operators will need to be much busier than they would be for a straight lecture course. In general one well-trained operator can just barely handle a televideo language course if he or she is required to run cameras as well as sound. We have had problems with under-trained staff, and with staff who are not up to the intensely interactive nature of my course. The operators cannot “step away” to use the bathroom or get a cup of coffee (believe it or not, this has happened). UNC-CH uses primarily student technicians, while NCSU has a full-time staff of professional studio operators. On the other hand, UNC-CH has more than one student on duty for each course, while NCSU has only one technician running each course. In my experience we have had more problems at UNC-CH with lapses in operator attention, but then we have to pay significantly more for using the facilities at NCSU.

4. Hard-wired audio and video playback: This is very handy for televideo language courses. It is very helpful if the instructor has control of cuing and fast-forward/rewind for playback.

5. Intersite cooperation: This is a fundamental technical issue. Even though they are part of a single system, UNC-CH and NCSU have different schedules: different first and last days of classes, different exam days, different course timing blocks, different holidays, different Spring and Fall breaks, etc. Ideally, to preserve the syllabus sequence and to make most efficient use of the instructor's time, the two universities'

schedules should be brought into synchronization. A related problem is the fact that there are currently more courses vying for space on our network than there are slots. For this reason, Hindi-Urdu classes are at risk of being given awkward time slots or of not continuing at the same time slot from the Fall to the Spring semester. This is especially a problem when it forces students to break their course sequence due to scheduling conflicts. Ideally, the universities involved must be willing to adjust course schedules and exam schedules to accommodate each other. Also, if the course is being funded by more than one university, budgeting and accounting complications can arise. These are all issues to be aware of.

VI. Different Configurational Models

The configuration we use in North Carolina is by no means the only possible one. Below are several possible alternatives which may be appropriate for other situations. In all configurations, assume that the total number of students remains within a manageable number for foreign language teaching.

Configuration A (NC model): One professor, few sites (2–3) in geographical proximity, TA at each site, professor commutes between sites.

Configuration B (hub and spoke): One professor, many sites (4+) or sites at large distances, TA at each site, professor stays at one site.

Configuration C (team teaching): Course is taught by a team of professors, one at each site, TAs useful but not required.

In any of the above configurations, the TAs theoretically may be replaced by a well-organized electronic communications system (e-mail, newsgroups, on-line homework submission, testing and grading, etc.). We are currently working on creating course Internet websites for Hindi-Urdu using Devanagari and Nasta'liq font readers.

VII. Conclusion

Interactive televideo courses are clearly unsuited for certain situations. For example, it would not make sense to combine two standard-size classes into one large televideo course in an attempt to save money on instructor salaries. Furthermore, a language program eventually may outgrow the televideo medium, especially at Elementary and Intermediate levels, as has happened in North Carolina. When there are sufficient students for

standard (non-televideo) courses at each site, televideo can be retained for advanced level courses, special topics courses, or team-taught literature courses.

In cases where televideo teaching is justified practically, its advantages outweigh the technical hurdles to be overcome. With experience and a creative approach, the instructor can run the class more effectively than in a normal classroom, with the additional advantage of being able to offer the course at multiple locations simultaneously. The potential number of remote locations is subject only to the technical limitations of the network itself. In addition, the pedagogical modifications demanded by televideo teaching (i.e., a more interactive, visually-focused approach) are in themselves beneficial to language teaching.

In conclusion, I would invite all of you to visit North Carolina and see for yourselves how our televideo language courses operate.

VIII. Questions and Answers

Aren't students less likely to pay attention to a teacher on a television monitor? Yes, unless full advantage is taken of the medium's interactive capabilities. A static shot of a long-winded professor almost begs students to start whispering among themselves. A high level of interactivity in conjunction with lively camera editing can help solve this problem. For example when the class is engaged in discussion or dialogue, the camera must cut back and forth between the various speakers at various sites. If the instructor is conducting a drill, or reading a text, or using props or realia, the camera must cut actively between the instructor's face and the students' faces, or the text or object in question.

Are students more reluctant to interact with the teacher and with other students in front of cameras and microphones? In the beginning of each semester we have some trouble with camera-shyness. Students rapidly get used to being on camera however, especially as they get to know the students at the other sites and realize that instead of being before an unknown and infinitely large audience, they are among friends. Moreover, the cameras and mikes actually draw most students out by making them feel that they are "on stage."

How do you save money when you need more TAs, as well as technicians in addition to the instructor? Isn't this kind of teaching ultimately more expensive than two normal faculty members would be? First, televideo technology is not designed primarily to save money. Its justifica-

tion is rather to make courses available to a wider audience through sharing of resources. Remember also that the whole televideo apparatus is not set up just for one course. Televideo language courses are best taught at universities where the infrastructure is already in place. The overhead is thus absorbed by a full complement of courses offered using the studios and personnel. When the overhead costs are thus spread among multiple courses, the system is operating at greater efficiency.

Does this mean that language teachers will be replaced by video monitors? As in the North Carolina case, televideo allowed us to offer Hindi and Urdu at universities where they would not have been offered otherwise, and this is its fundamental utility. This sort of arrangement is ideal in cases where two or more universities have demand for a language but where alone they cannot justify offering it or engaging a full time faculty member. Televideo allows a unique kind of faculty time-sharing where the faculty member teaches a normal course load and carries a standard number of contact hours, but teaches at multiple universities simultaneously. This works best when the universities share the cost of this faculty member. Likewise, as in North Carolina, when demand for one language has been demonstrated, televideo can serve as a tool for building a larger program by involving additional faculty to teach advanced language and literature courses or related languages. In one sense, televideo creates demand by marketing courses to a broader audience. In short, we are talking about synergies between multiple universities rather than efficiencies at a single university.

Is there a limit on the class size or number of locations that can be handled by televideo? Yes. As with any foreign language course, it is important that each student have an opportunity to put new concepts into active usage in each class meeting. It is my sense that televideo allows larger numbers of students to be actively involved in learning than a traditional classroom, and I would like to see this tested statistically. In part this is due to the fact that the cameras and microphones effectively pull the students into class participation. Rather than passively watching a show, they become part of it. Like it or not, their every word, every gesture, every expression is captured on camera and on tape. Another factor is the presence of the TAs who are crucial to the operation of the televideo course but are not necessarily available in a regular language course. The TAs effectively increase the teacher/student ratio, thus allowing a larger class size.

A Remark

I have prepared a short video showing excerpts of the class in progress which is available upon request. However, a videotape cannot capture the class atmosphere for several reasons. For example, in the classroom, a student can view simultaneously the instructor, the overhead display, and the students at the remote sites, while a video can only show what is happening on one monitor at a given time. Also, a videotape cannot switch back and forth between teacher, other students, and overhead as quickly as the individual student's attention can. Nevertheless, these excerpts can give you some idea of what is possible in the televideo classroom. □