

## **The Logistics of Teaching an Interactive Television Course to Remote Sites**

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### Introduction

Old Dominion University (ODU) began developing distance education programs in Engineering Technology approximately eight years ago. We presently offer upper division courses in Civil, Computer, Electrical and Mechanical Engineering Technology via interactive satellite television (Teletechnet) to over 27 sites throughout the Commonwealth of Virginia. Students with associate degrees in appropriate curricula may take these courses toward a Bachelor of Science in Engineering Technology degree from ODU. All of the necessary upper level lecture courses are made available via television and are primarily taught by full-time ODU faculty. Except in a few instances, all receive sites are located at Virginia community colleges where a full-time ODU site director provides the necessary student advising and functionality of the site. Facilities at these sites vary somewhat but all consist of at least one classroom with several monitors and a two way audio system for communication with the instructor at the delivery site (ODU).

### Logistics

The logistics of presenting a course to remote sites via interactive television (or other method) is extremely important. Logistics should be a major consideration in the development stages of distance education programs so that effective teaching is not compromised. However, all problems cannot always be foreseen. Such problems must be adequately addressed as quickly as possible. Much careful planning occurred in the preparation of ODU's distance education programs, but unforeseen circumstances did occur. Eight years of experience has helped us solve most of these problems. The following are logistical areas that should be addressed:

- Preparation of faculty
- Availability of faculty to students
- Exchange of homework, tests
- Testing
- Weather and/or communication breakdown
- Special problems
- Graduation

Preparation of faculty: The preparation of faculty to teach courses via interactive television may not really be logistical in nature but will be addressed. Faculty members must "buy in" to distance learning in order to be an effective teacher. ODU offers instructors several workshops on how to teach on television including topics from verbal and written communication to the use of visual aids such as Power Point. Instructors are given opportunities to "polish" their skills on a regular basis. Teachers know that their presentation is not only "live" to sometimes over 100

students, but is also being taped for future viewing. Lack of preparation for class would be much more visible to more students than traditional classroom teachings. For the extra, more refined preparation required, Engineering Technology faculty members are given an extra load hour for a three credit course. Many faculty members were anxious to be the first to teach on television while others were somewhat reluctant. At the end of the Fall 1996 semester, all of the 16 Engineering Technology faculty members had taught at least one course on television.

Availability of faculty to students: Traditionally, on campus students visit faculty during posted office hours for assistance with course work and for guidance in academic matters. They may also have short meetings with faculty members before and after class. These types of opportunities are obviously not available to students at remote sites. Therefore, other opportunities must be available for remote students to access the faculty outside of the classroom. Remote students must be made aware of the faculty member's posted office hours, but their form of communication will be different. At ODU, remote students may access their instructors through a toll free telephone number or via e-mail. Because almost all of the remote students are employed full-time during the day, e-mail access is becoming more and more popular. Because some of these students may not be able to communicate during their normal working hours (when most office hours occur) many faculty members give the student their home phone numbers. Faculty members are also given Teletechnet telephone cards so they may call students from home at the University's expense. The important thing is that faculty members must be responsive to inquiries from off-campus students and must maintain their office hours (as they should with on-campus students). Faculty members must respond as timely as possible so that remote students do not feel like they are "out in the cold".

Exchange of homework, tests: From a student's perspective, having test and homework graded and returned in a timely manner is a critical part of a course. Most faculty are conscientious in this respect for on-campus courses and will return course work within a week and usually by the next lecture class. From the outset this was a major goal of the televised courses, also. As part of the original organization of Teletechnet course, a courier service was utilized to provide timely delivery of course work. Over the course of eight years, this system has been modified and improved to provide the best possible service to and from the most remote areas of Virginia. It also takes dedication and commitment from faculty members to be particularly responsive when they receive student work to be graded. They cannot be planning to grade a test the day before their class and expect it to be delivered. A typical scenario might involve a Thermodynamics course taught on Thursday evening (All Teletechnet courses are taught one night per week for two and one half hours with a break). Students at each remote site would turn in their assignments to the site director. The courier service would pick up the assignments (as well as assignments for other courses) from each site on Friday and deliver them to a central location at ODU on Monday morning. These would be delivered to the faculty member by 2:00 p.m. on Monday (or he/she could pick them up by noon). In order to ensure delivery to all sites by Thursday afternoon, the faculty member would grade all assignments and return them to the central ODU location by 3:00 p.m. Tuesday with cover sheets indicating the various site locations. (Assignments returned to the central location by 3:00 Wednesday would reach approximately 90% of the sites.) The courier service then delivers the graded assignments to the remote sites for distribution to the students during their next class. The scenario allows

approximately 25-27 hours for the faculty member to grade papers which could be as many as 120 at a time. This time must be rigidly set aside for grading and is one of the demands that faculty “buy into” when teaching a televised course. Other handout material must also be sent in time for students to properly utilize it in completing their assignments. In general, faculty members must plan well ahead the distribution of materials and return of graded assignments. The university, with faculty input, is currently studying alternate methods of submitting assignments, primarily utilizing the computer and e-mail.

Testing: Of primary concern to the faculty members is the security and proper administration of tests at the remote sites. Tests are generally sent to the sites a few days before the class with instructions on how to administer them, i.e. testing time, closed or open book, in class or take home, etc. The site director or his/her staff assistant is responsible for administering the tests, distributing them and picking them up. Site directors have been instructed on how to maintain security and how to proctor the tests to recognize and prevent opportunities for possible cheating. During testing periods, the faculty member is generally available either via interactive video or by telephone (to reduce communication costs). As with homework assignments, site directors collect the completed tests and ready them for pick up. Currently, there does not seem to be a consensus concerning who makes the decision when a student requests to take the test late (or early). Some faculty members believe the student should contact them directly to receive permission, while others believe that the site director should make that decision, since he or she may better understand the situation. Topics such as this are discussed at regular semiannual meetings of faculty, department chairs, and site directors.

Weather and/or communication breakdown: Site shutdowns due to inclement weather (snow or ice) and problems with communication equipment are unforeseen occurrences that may happen at one or more sites during the time of a scheduled class. A faculty member is usually made aware of such a situation just before class begins. However, thought should be given beforehand concerning what action should be taken. While some procedures are standard at each site, the faculty member must inform the site directors and students of his or her expectations. As a matter of record, all broadcast courses are video taped at the delivery site and at the receive sites, giving the University a record of the lecture for future reference and the site a copy for additional viewing by students if they so desire. Generally, if just a few sites are “down” because of weather or other problems, the class is broadcast as normal and video tapes are sent to those sites not receiving the broadcast. Students at those sites are required to come to the site and view those tapes before the next class. In cases where a large number of sites may be shut down, the broadcast may be canceled by the faculty member and information covered in other sessions. It should be noted that, after eight years of broadcasting courses, most technical difficulties have been “ironed out” with several “back up” systems in place. Snow or ice storms may affect three or four sites once or twice a year.

Special problems: Special problems in a variety of areas have surfaced during the eight years that ODU has been involved in Teletechnet. There are times when remote students have complaints about a particular course or faculty member, just as they might if they are on campus. There must be a way for these complaints to get to the right person. While site directors might relay these concerns, sometimes students must be directly heard by the faculty member’s supervisor.

Of course, they may directly call (or e-mail) the supervisor, but the Teletechnet also provides students the opportunity to anonymously fill out “complaint” cards which are sent to Teletechnet administrators. If several complaints are received involving the academic delivery of the course, the administrator will call the supervisor (usually the department chair) and possibly arrange a meeting with the chair and the faculty member involved. The students must know that their concerns are being addressed. Another problem that has occurred infrequently is the suspicion by the faculty member of cheating by one or more students at remote sites. While the University has a comprehensive general policy regarding this issue, having students that are remote to the main campus make it particularly difficult to deal with logistically. With on campus students, the situation can many times be addressed by face-to-face meetings between the students and faculty member. Remote students may have to travel to the main campus for a meeting with the faculty member or University’s Honor Council. Most special problems that occur are handled on an individual basis and information stored for future reference.

Graduation: Remote students must feel a part of the University. This can mostly be accomplished through their relationship with the faculty members and site directors and the responsiveness of these individuals and the rest of the University to their needs and concerns. One final way is to include them in the graduation ceremonies. At ODU all graduating remote students are invited to participate in graduation ceremonies at the main campus. However, because of the distance involved and the fact that most of them are employed full-time, most students do not participate. For these students, Old Dominion University provides a special graduation ceremony each semester. Faculty and university administrators, including the President and Provost, assemble in the main broadcast classroom on campus, while students assemble in classrooms at the various sites. Students are able to observe the ceremony through the same monitors through which they receive their classes. After comments by the President, all remote graduates are announced by College, with their pictures put on the screen for viewing by all graduates. Planned remarks from some remote students are made and others are solicited during the ceremony. The “platform party” then departs with recessional music.

### Conclusion

In the delivery of distance learning programs, there are many obvious area that must be addressed: type of delivery system, facilities, personnel required, cost, schedules, etc. As part of the preparation and continued development of such programs, logistical matters such as preparation of faculty, faculty availability to students, exchange and grading of course work, testing and dealing with special problems must also be considered. Faculty must be encouraged and supported by the system so that they may be as effective as they are in the regular class room. Remote students must feel that they are a part of the program and University and special efforts must be made to be particularly responsive to student needs and concerns. Institutions must make logistics a part of the planning and implementation process.

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