This paper discusses why distance education is not the cure all that political leaders hope it will be, and outlines some of the reasons why distance education sometimes results in education that is separate and unequal. It identifies some of the major categories of distance education: correspondence courses, one-way televised courses (broadcast, satellite or cable), one-way pre-packaged and professional produced televised courses (broadcast, satellite, cable, or videocassette), two-way interactive televised courses (compressed video, cable or satellite), and Internet or Web-based courses. The growth of distance education is briefly discussed. The potential and the dangers of distance education for the Appalachian region are discussed, based on the author's own experiences at a community college in Kentucky. Advantages and disadvantages of distance education are highlighted. Five problems are identified and discussed: (1) technical access in Appalachia; (2) student preparation/personal resources; (3) limited program options; (4) course content and tacit knowledge; and (5) standardization and the commodification education. (AEF)
Distance Learning: Silver Bullet or Educational Apartheid?

by
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Thesis
Distance education is being promoted by many in government and education as a solution to the problems of educational access in Appalachia (as well as other rural areas). In the fall of 2000, political and educational leaders met in Hazard, Kentucky to discuss the needs of eastern Kentuckians for access to bachelors and masters level programs. While the idea of building a new “bricks and mortar” four year institution in the region was discussed, the primary conclusion of the meeting was that the primary solution to eastern Kentucky’s problems would have to be sought through distance education. The tone of the meeting was that distance education was a “silver bullet” which could cure most, if not all, of eastern Kentucky’s problems with educational access. In this paper I will discuss why distance is not the “silver bullet” or cure all that political leaders hope for. I will outline some of the reasons why distance education sometimes results in education, which is not only “separate” but also “unequal” – a type of educational apartheid.

Some Definitions
Distance education is a catchall term for a wide range of methods for delivering course content to students. The different forms of distance education vary in whether or not they are synchronous (everyone – teacher and all students involved at the same time in the same activities) or asynchronous (teacher and each student engaging in various course activities at different times of the day and for week). Distance education types also vary in the control that the instructor of record has over the course materials, the amount of interaction between instructor and student, the amount of interaction among students, as well as the mode of delivery.

Some of the major categories of distance education are:
1. Correspondence courses;
2. One-way televised courses (broadcast, satellite or cable);
3. One-way pre-packaged and professionally produced televised courses (broadcast, satellite, cable, or video-cassette);
4. Two way, interactive televised courses (compressed video, cable or satellite);
5. Internet or web-based courses.

The Growth of Distance Education
Distance education at the college level is nothing new. Correspondence courses have existed for more than a century. One-way televised college courses have been available since the 1950’s. But in the last twenty years have seen distance education become more wide spread, popular, and more commercial. The first pre-packaged, nationally distributed distance education courses were introduced in video format in...
the early 1980's. Live courses beamed by satellite to remote locations quickly followed. In the 1990's the development of compressed video technology made interactive television instruction manageable for more and more colleges. Most recently the explosion of the World Wide Web, has prompted the rapid development and spread of distance education via the Internet.

In 2000 Peterson, purveyor of guides to college education, published a 876 page *Peterson's Guide to Distance education* which listed more than 1,000 degree and certificate programs available through distance education, and 900 institutions offering distance education courses. The degrees and certificates are available in everything from accounting to visual and performing arts, and individual courses range from abnormal psychology to zoology. Health sciences, social sciences, business, and education have the most distance education offerings, with computer sciences close behind. Every state in the union has at least three or four institutions that offer distance education programs; some have several dozen. Although community colleges and regional public institutions are most common on the lists, even venerable institutions such as Harvard and Stanford have distance education offerings.

Kentucky has whole heartedly embraced distance education. In a March 2001 press release Dr. Mary Beth Susman, CEO of the Kentucky Virtual University announced that Spring 2001 enrollments had reached 3,014 students, nearly double the enrollment of one year ago. KyVU is the fastest growing on-line "institution" of its kind – a consortium of universities, colleges and community colleges offering courses and degrees (from Associate of Arts to Master's degrees) on line. Many of the students participating in Distance Education through KyVU are from eastern Kentucky. Eastern Kentucky students also participate in large numbers in courses through satellite, interactive television, and telecourses offered through KET.

**An Evaluation Based on Personal Experience**

I have been actively involved in the delivery of distance education for five years at Southeast Community College's Whitesburg campus in Letcher County Kentucky. I have been the instructor of record for KET pre-packaged telecourses, taught an interactive video course for Southeast's three campuses, and have developed and now teach an on-line web courses for the entire Kentucky Community and Technical College System. From this experience and interaction with other faculty, I see both the potential and the dangers of distance education for the Appalachian region. While distance education most certainly does make accessible certain knowledge, skills, and credentials to people who would not otherwise have them, I believe it makes even sharper the caste system that exists in American higher education. While I am in general a fan and supporter of distance education, I feel that not enough attention has been given to the negative aspects of it from student's perspective.

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1 Patrick, Sue "KYVU Does It Again!" Press Release from Kentucky Virtual University. March 01, 2001. Distributed via e-mail.
First Some Positives
Where I am located in eastern Kentucky there are three four year institutions within driving distance of our population: two small private colleges in Kentucky – Alice Lloyd College and Pikeville College; and one public institution in another state – the University of Virginia’s College at Wise (formerly Clinch Valley College). The expense of the private colleges is prohibitive for many and being small their programs are limited. Also, Alice Lloyd’s emphasis is on residential learning and limits the number of students who commute. UVA’s College at Wise is less expensive since changing its rules to provide tuition “scholarship” to Kentucky residents within 50 miles of the Virginia border. But it also does not offer the range of programs that Kentucky’s regional Universities provide. None of these institutions offers graduate work.

Consequently, distance education provides an opportunity to eastern Kentuckians not available in any other way. An excellent example is my office mate, who is completing a master’s degree in Rehabilitation Counseling in which almost all of her credit hours were obtained through some form of distance education. As a full-time faculty member, wife and mother of two children, there was no way other way for her to obtain a masters degree than through distance education.

Even when people have institutions within driving distance that can provide the educational offerings they need, that does not necessarily mean they can take advantage of them. Small community colleges like Southeast Community College do not offer extensive evening courses, and little if anything on weekends. Also some potential students have family situations, job commitments or health problems that make getting to campus at any time difficult if not impossible. In my experience teaching on-line courses, the two reasons most often given by students for choosing a web-based course is either child care responsibilities or health problems. For these students education that they can access without leaving their homes is the only solution.

Now the Negatives
While there are advantages and disadvantages to all forms of distance education, most of my comments will focus on internet or web-based distance education. The reason is that on-line courses are quickly outnumbering other types of distance education, and have a number of advantages for delivering institutions and for students over other forms of distance education. Internet based education is the cheapest and easiest form of distance education for educational institutions to provide (aside from old fashioned correspondence courses which are rapidly being displaced as the speed and ease and even costs of electronic communications improve over postal communication). Web-based instruction requires far less investment in equipment and labor than either satellite or interactive television.

Interactive television in its present form is hardly an escape from “bricks and mortar” as learners must have a room with a great deal of very expensive technology in it – television monitors, speakers, microphones, and a sophisticate computer to run the entire system. In addition, interactive television requires technically trained personnel.
at each site where there are students, as well as technical assistants for the instructor at the originating site. Satellite courses are almost as labor intensive.

**Problem One - Technical Access in Appalachia**

On-line instruction requires access to fast, powerful computers, and quality internet connections. Many of the people that we would like to reach with higher education in eastern Kentucky have neither of these available in their own homes. At the bare minimum on-line students need a Pentium class or equivalent computer, with the most recent on-line browsers, and modem and ISP that can connect them at a minimum of 44 K. While some on-line instructors try to tailor their course materials to the lowest end user, most do not. Even if the basic course materials are simple HTML, the websites through which the materials are accessed are memory intensive, and instructors provide links to many graphics intensive sites on the internet, that older, slower computers and modems simply cannot load.

In eastern Kentucky one is dealing with an economically depressed population that does not have computer access from home. Public access points are NOT a solution for potential students. Most on-line classes require as much as six to eight hours a week of actual on-line access to read materials, do exercises, and most of all to engage in interaction in learning forums and chat rooms. Public access computers generally have strict time limits on use, and are not available at convenient hours for on-line students. One of the most common reasons for students to drop out of an on-line course early in the semester is because they do not have a suitable computer and internet access in their own home.

**Problem Two - Student Preparation/Personal Resources**

Distance learning is not for everyone. It takes a certain type of student to be successful. In my experience, students who are successful in distance learning would probably also be successful in the classroom — if they could get there. But the reverse is not necessarily true. Distance learning success requires self-motivation, self-discipline, and well-established organizational skills, study skills and computer skills.

Many on-line instructors comment about how much more one-on-one interaction they have with on-line students (through e-mail, bulletin boards, and chat rooms) than they do with traditional class room students. While this is true, it ignores the flip side of the coin. Students who are unable or unwilling to sustain this high level of interaction with the instructor (and/or other students) will fall by the way side and either drop out or fail the course. In the classroom, a student who does not wish to participate can still survive. They show up, sit quietly, absorb the lectures, listen to the conversation, take the tests, and still manage to pass the class and gain some knowledge. This is not possible for the on-line student. Not to participate is not to pass the class.

My experience over two semesters and 60 students suggests that women do better with the on-line learning format than men. Men seem to have much greater difficulty entering into the student-to-student interaction of on-line bulletin board discussions. In my two courses only one male student successfully completed the course. That
student was only able to get started on the course after contacting me by telephone and having verbal conversations. He continued throughout the semester to rely on telephone conversations rather than the electronic communication, and never did much communication with other students.

Only a small percentage of students have the personal preparation and resources to successfully utilize distance learning makes distance education programs a nice supplement to tradition delivery systems but no replacement for them. In particular, in eastern Kentucky the types of people who are most in need of greater educational access are probably least prepared for distance learning.

**Problem Three - Limited Program Options**
Currently in Kentucky only a limited number of certificate and degree programs are available entirely through on-line learning. A few more may be available through a combination of different types of distance learning, but not many.

Two Associate degrees are available on-line, one in business and one in Network and Information System Technology. Four bachelors degrees can be obtained on-line: in Human Services, Applied Science/Agriculture, Business Administration in Hospitality Management, and Human Resources Leadership. And five masters degrees are available, in business administration, Managing information technology and communication disorders.

Any student who might wish for a liberal arts education, or natural science or mathematics education cannot find what they want on-line. Graduate degrees in the humanities, social sciences, or sciences are not available in Kentucky. Some of these programs are available through distance education from institutions outside Kentucky. When they are, the costs are often prohibitive for the underserved population of eastern Kentucky. However, a review of on-line education nationally shows that degree programs tend to be concentrated in business, education, human services and computer applications (not programming). There are few degree programs in the core Arts and Sciences on-line.

**Problem Four - Course Content and Tacit Knowledge**
Probably one reason that the number and type of degree programs available on line is so narrow is recognition of the limitations of distance education. One of those limitations is the loss of tacit knowledge so important in most academic fields and occupations. Tacit means understood without being openly expressed. Tacit knowledge is that which can only be learned through direct experience -- through seeing and hearing another person. Tacit knowledge is not found in written materials and some times not even in recorded lectures. This may be because translating it into specific written or verbal instructions is difficult or simply because it never occurs to anyone to do so.

One simple example is pronunciation. A person whose vocabulary is learned primarily by reading, and not through hearing educated speakers will know how to use words,
but often not how to pronounce them. It would be very difficult for students in eastern Kentucky to learn to use standard English in speaking (as opposed to writing) without being exposed to a variety of standard English speakers. Whether or not it is fair, the ability to speak standard English is a major bar that must be crossed for economic advancement in the United States.

The natural sciences have long recognized the importance of tacit knowledge. This is why natural sciences faculty lobby for colleges to require laboratory classes, even for general education students. One cannot learn the intricacies of measurement or proper use of laboratory equipment by reading about them or even viewing demonstrations on television. It requires hands on trial and error under the watchful eyes of someone who themselves has learned through tutorship of others. Tacit knowledge is why we require our medical students to do rotations, our nurses to have practical experience, and our radiologists to observe and practice under the watchful eyes of a practitioner.

Tacit knowledge exists in fields outside of science and medicine as well. I've learned through teaching statistics that students cannot learn to select a random sample from a random number table with only written or even verbal instructions. They require someone standing over them to catch the thousands of little mistakes that can be made, but which are impossible to anticipate ahead of time and put in written instructions.

In most academic disciplines there is a considerable gap between the way in which the research process is described in the texts and especially the research reports and journal articles, and the way in which research is really done. This difference can only be learned by direct participation of students in research activities with faculty who are physically present.

The importance of tacit knowledge is tacitly acknowledged by the stance of elite American institutions on distance education. Nancy S. Dye, president of Oberlin College, an elite liberal arts institution, adamantly opposes adopting “virtual” education at her institution – because “real education is a social process.” MIT, which is considering creating a web page for every course it offers, is quite clear that they are not entering into “distance education” because as MIT professor of civil and environmental engineering Steven Lerman says “the syllabus and lecture notes are not an education. The education is what you do with the materials.” Many elite institutions that are entering into the distance education arena are focusing their involvement to business oriented training and short technical courses. This is the

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2 Dye, Nancy S. “Late Night Reflections of a College President.” Address to the Cleveland City Club July 11, 1997.
approach taken by NYU, Stanford, Harvard, and Duke. They are not developing distance education alternatives for their traditional undergraduate courses or most of their graduate level programs (other than some in business and education). Their focus instead is on the lucrative corporate training market.

As a society we already have a stratified educational system in which graduates of community colleges and regional public institutions rank below flagship public universities, and those rank below the elite private universities. Distance education, which is being adopted largely by those institutions at the bottom of the prestige ladder, may increase the educational divide rather than decrease it.

Problem Five - Standardization and the Commodification Education

Developing distance education programs includes significant pressures for standardization of educational content and the commodification of the educational product.

Developing online courses is highly labor intensive. Faculty who are asked to do this are rarely given adequate release time for development. Some financial remuneration may be given, but it rarely corresponds to the time commitment involved. KCTCS was typical in that it provided course development faculty overload payment equivalent to one course for work that generally took a minimum of eight weeks of full-time effort (40 hours a week minimum). Consequently in developing courses faculty are encouraged to make use of existing web-based resources – especially those that are provided free from a small number of large publishing companies. Publisher resources include companion websites, with practice quizzes, links and discussion groups for students, downloadable graphics and PowerPoint presentations for faculty.

This is problematic for several reasons. Depending on free publisher resources dramatically reduces the choices for texts in many disciplines. In sociology, even among those large publishers who do develop extensive internet resources for faculty, they do so only for a small number of the texts they publish. The texts chosen for development in Sociology, for example, are very mainstream and pedestrian in nature. Innovative, creative texts with identifiable theoretical perspectives are not given internet development. This may be less of a problem in the natural sciences and mathematics where there is greater agreement on a dominant paradigm. But this is seriously problematic in the social sciences, where competing paradigms abound.

Intellectual diversity is further eroded, because many sponsoring institutions, such as KCTCS, take the “build it once” and “repeat it often” approach. While individual faculty are still welcome to create their own web-based courses, KCTCS has a core curriculum leading to two associate of arts degrees which were designed by an original core of faculty designers. As new faculty participate in the program, they are expected to utilize the pre-existing course. The decisions about text, readings, topical

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organization, structure of assignments and examinations have already been determined. It is not surprising that it is easier to find faculty to participate in this program in mathematics, writing, and the natural sciences where there is more agreement on basic paradigms, and more difficult to find new faculty to participate in the social sciences. This adds to the problem of a lack of diversity – the small number of faculty participating.

Whether course materials are pulled from a corporate shelf or created by institutional faculty, then passed on as a package, the process tends to turn the creative interaction of faculty and students into a commodity relationship. This relationship between a purveyor and a buyer undermines true education – which is as Nancy Dye of Oberlin College said – at heart a "social process."

A note regarding gender and on-line classes (4-6-02): After teaching five additional on-line sections, I have had a number of male students who have successfully completed the course, but the drop-out or failure rate for males students continues to be higher than for female students, largely I believe due to the requirement for student to student communication in my courses.
I. Document Identification:
   Title: "Distance Learning: Silver Bullet or Educational Apartheid?"
   Author: Sue Greer-Pitt
   Corporate Source: Appalachian Studies Association
   Publication Date: April 1, 2001, Appalachian Studies Conference
   at Appalachian Studies Conference

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