

ACSP Technology Committee Report

Spring 2001

The Potential Impacts of
Technology Enhanced Learning and Distance Learning
on Academic Planning Programs

Table of Contents

- i. Introduction – G. William Page, Technology Committee Chair, University at Buffalo, The State University of New York
1. Web based courses - Bill Drummond, Georgia Tech
2. Interactive video based courses - Ernie Sternberg, University at Buffalo, The State University of New York
3. Programmed learning courses - Varrki George, University of Illinois at Urbana-Champaign
4. Distance education courses taught by two or more planning programs –
David Godschalk, University of North Carolina at Chapel Hill, and Joochul Kim, Arizona State University
5. The potential of an ACSP developed “Introduction to Planning” distance education course for freshman or H.S. level students - David Godschalk, University of North Carolina at Chapel Hill, and
Nancy Frank, University of Wisconsin-Milwaukee
6. How Internet II, which merges video with the web, may influence distance
education - Nancy Frank, University of Wisconsin-Milwaukee
7. Issues of ownership of distance education content, - Varrki George,

University of Illinois at Urbana-Champaign

8. Corporate Universities - Joochul Kim, Arizona State University

Introduction

to

The Potential Impacts of

Technology Enhanced Learning and Distance Learning

on Academic Planning Programs

by

G. William Page, Chair, ACSP Technology Committee

Purpose of this Report

Starting in the fall of 1999, the ACSP Technology Committee undertook the task of preparing a report on the potential impacts of Technology Enhanced and Distance Learning on academic planning programs. This is a large and complex topic that encompasses a wide range of pedagogical techniques. At the most familiar, technology enhanced learning can be accomplished by bringing a slide projector or PowerPoint presentation into the classroom. At the other end of the spectrum, a course may be taught using the World Wide Web that has no face-to-face contact between the student and the instructor and no established time for class interaction. Such a course is called an Asynchronous Distance Learning course, meaning that students can complete the course on their own schedule within a semester and in any location. While Distance Learning has the greatest potential to impact planning programs, this report attempts to provide advice to planning programs on this wide range of topics.

In 1999, the incoming ACSP President, Bruce Stiftel, suggested that many planning programs had little knowledge of potential impacts of Technology Enhanced and Distance Learning and that such a report would be helpful. Our committee decided on a two-year project. Year one of the project included identifying a list of important Technology Enhanced and Distance Learning topics, requesting input from planning faculty on these topics, preparing short reports on each topic, and disseminating a draft report in the May/June issue of ACSP Update. We presented

our report at a panel on Distance Education at the 2000 ACSP Conference in Atlanta. In response to feedback we have revised and expanded our work into this final report.

While our field has actual experience with only a few of the most innovative technology-enhanced learning and distance learning courses, there has been considerable discussion of their significant potential to have revolutionary impacts on higher education. Computer technologies are changing the way students learn, just as they are dramatically changing societies. This report is the intended modest first step by ACSP to start a dialog on this important topic. Confronted with a rapidly changing higher education environment and diverse new competitors, planning programs need information, analysis, and judgement to make good decisions about if, when, and how they should get involved in technology enhanced and distance learning.

Why this is an Important Topic

Much of the discussion about Technology Enhanced and Distance Learning has focused on academic programs defensively adopting these modes of instruction. This defensive posture of planning programs may result from perceived or real pressure from Deans or Provosts. Pressure may be to achieve higher productivity through Technology Enhanced and Distance Learning, or pressure to maintain student enrollment in the face of new competition from existing or new planning programs starting to offer planning degrees partly or completely by Distance Learning (see Chapter 8, "Corporate Universities").

"Not only do the new forms of distance education portend a change for student populations, but also they will force faculty to develop new modalities of teaching and administrators to provide a new infrastructure for support. As a result, the advent of distance education is forcing many institutions to review and amend many of their existing policies and procedures" (American Council on Education, Developing a Distance Education Policy for 21st Century Learning, March 2000).

"One corporate entrepreneur recently told me: 'You know, you're in an industry which is worth hundreds of billions of dollars, and you have a reputation for low productivity, high cost, bad management and no use of technology. You're going to be the next health care: a poorly managed nonprofit industry which was overtaken by the profit-making sector'" (A. Levine, *The Soul of A New University*, The New York Times March 13, 2000, P. A25).

Our committee believes these concerns may become significant for some planning programs; however, we believe that the preeminent reason planning programs should consider adopting Technology Enhanced and Distance Learning is to improve the quality of their programs.

Technology Enhanced Learning

Technology Enhanced Learning has the most immediate potential to improve our pedagogy. There is clear evidence that our present students are increasingly attracted to computer-based activities. For better or worse, the World Wide Web has become the first choice of many students for finding information. For students who have grown up playing computer games, the vivid graphics and high levels of interaction with the computer that Technology Enhanced Learning provides are attractive and effective teaching tools.

Distance Learning

There are claims that Distance Learning techniques can improve the quality of our programs; however, their potential to dramatically expand student enrollments is likely to be the primary motivation for planning programs to develop Distance Learning courses. The opportunity to choose the time they will study has the potential to dramatically expand our student population to adult learners and to students in other regions or countries by reducing the impediments of workday time restrictions and time-zone differences.

Distance Learning courses have the potential to improve planning programs. Many students are attracted to the promise of asynchronous learning that holds the potential for them to learn at their own pace and at times they are most interested in learning. This has the potential to be a better experience than attempting to teach part-time students who occasionally have a hard time staying awake in an evening class after a full work-day. There are likely to be courses that are especially conducive to Technology Enhanced and Distance Learning. Because of the considerable effort and cost of developing a high-quality Technology Enhanced or Distance Learning course, there may be great advantages to have ACSP create a course that different planning programs can use as an "Introduction to Planning" for high school students or freshman (see Chapter 5, "The potential of an ACSP developed "Introduction to Planning" distance education course for freshman or H.S. level students"). There are likely to be situations in which cooperation between planning programs may improve the quality of planning programs by using Distance Learning. There may be regions in which cooperation between planning programs at different universities on developing Distance Learning courses can allow high-quality planning courses on specialized topics that some of the participating planning programs may be too small to provide by themselves (see Chapter 4, "Distance education courses taught by two or more planning programs"). Universities in different countries that establish cooperative arrangements also may

use Distance Learning courses to provide content that would otherwise not be available.

Technology Enhanced and Distance Learning Courses

We will need to develop criteria to measure the success of Technology Enhanced and Distance Learning courses in planning programs. Clearly, merely adding visual material or computer interactive components to a course will not guarantee a better course, or make a boring class interesting. Additional graphic components at the expense of content or that do not relate effectively to the content can make a course worse. As more Technology Enhanced Learning planning courses are taught, faculty can share their observations on the techniques that are most effective. Existing student course evaluation methods will provide some feedback on those aspects of Technology Enhanced and Distance Learning courses that students think are most effective. We should strive to develop accreditation criteria and benchmarks for the role of Technology Enhanced and Distance Learning courses in Planning programs.

The most likely courses in which Technology Enhanced Learning can improve our teaching may be large lecture courses. Seminar, workshop, and studio courses that demand a high level of interaction between the instructor, the student, and the student's work-in-progress are possible by Technology Enhanced Learning (see Godschalk and Lacey, Learning at a Distance: Technology Impacts on Planning Education, *Journal of Planning Education and Research* 20:4, June 2001), but these courses present additional difficulties and lack some of the clear benefits that Technology Enhanced Learning offers large-lecture format courses. Experience using Technology Enhanced Learning in a graduate planning theory seminar concluded that the technology improved the course in significant ways, although in-class discussions were rated by students as more valuable than the internet threaded discussions (see Willson, Comparing In-Class and Computer-Mediated Discussion Using a Communicative Action Framework, *Journal of Planning Education and Research* 19: 409-418, 2000).

Technology Enhanced and Distance Learning allow us to improve our use of visual aids and supplementary materials to our lectures and they present new opportunities that may not be available in a classroom setting. We can transfer the lecture content and any visual content of our existing large lecture courses to computers with relatively little modification. Technology Enhanced Learning then offers the opportunity to significantly improve the delivery of these courses by enriching these courses with computer-enhanced capabilities and in an on-line format that especially appeals to our current student population. Animation, video, photographs, graphics are all available to clarify and emphasize the content being presented (see Chapters 1, "Web based courses" and Chapter 2, "Interactive video based courses", and Chapter 6, "How Internet II, which merges video with the web,

may influence distance education”). Programmed learning techniques that employ on-line testing with immediate feedback on performance can be used to enable students and the instructor to monitor how well each student is learning the course material on each assignment (see Chapter 3, “Programmed learning courses”).

Accreditation and the Future

How Technology Enhanced and Distance Learning affects accreditation is one of the most important issues facing ACSP and planning programs. This issue is important because of the potentially great affect on existing accredited planning programs when a planning program based entirely on Distance Learning techniques becomes accredited. This already is happening in programs offering the Master of Business Administration. It is likely to happen in the not distant future in our discipline. The Planning Accreditation Board has acted prudently concerning Distance Learning (see Chapter 1, “Web based courses”). The Board set requirements that allow the possibility of an accredited planning program that is delivered using Distance Learning techniques, but insured that on a case-by-case basis the burden of proof is with the program to convince the Board that the quality goals of the accreditation standards are met.

The purpose of this report is to offer advice to planning programs, and I want to add some of my personal advice. I strongly advise every planning program to gain experience with Technology Enhanced and Distance Learning courses as soon as possible. When important decisions will be needed in the foreseeable future, experience with such courses will be invaluable. Without critical deadlines, we have the luxury of incrementally developing Technology Enhanced and Distance Learning courses. Many planning faculty already use some Technology Enhanced and Distance Learning techniques. My advice is for planning program administrators to provide incentives to add additional Technology Enhanced and Distance Learning techniques to selected courses. There are several course management software packages available to assist faculty. Examples of such software include TopClass, WebCT, FirstClass, Lotus LearningSpace, Web Course-in-a-Box, Asymetrix, Blackboard CourseInfo, and others. Most universities have a unit on campus that provides such software, training on its use, and assistance in developing Technology Enhanced and Distance Learning courses. Developing high quality Technology Enhanced and Distance Learning courses demands considerable time, effort, and skills that most faculty have not developed. To improve the quality of our programs, we will need to develop these skills. It will be better to start sooner rather than latter.

Topic 1. Web-Based Courses for Planning

By Bill Drummond

A. Introduction of the topic

Web-based courses are academic courses consisting of multimedia materials delivered to remote or on-site students via the Internet's World Wide Web. Students usually interact with the course instructor via email, and with other students through group email lists or Web-based discussion boards. Hypertext markup language (HTML) is the current standard used to format multimedia content for Web distribution. Extensible markup language (XML) will probably replace HTML in the next generation of Web content. Related terms include online courses and distance learning, although the latter term is broader and can encompass course delivery technologies such as video-based courses and correspondence courses.

B. Potential benefits

The potential benefits for Web-based courses are substantial. Teacher and student no longer need to be physically located at the same place at the same time. Web-based courses can extend educational opportunities to new classes of students such as workers with full-time jobs, persons with limited geographic mobility due to family responsibilities, and persons with physical handicaps or learning disabilities. Also, once a sufficient number of students take a Web-based course it becomes cheaper to deliver than a traditional course, since the marginal cost of an extra student is largely the added cost of teacher time for student interaction and grading. No additional physical infrastructure is required.

C. Potential cost

The most direct cost for Web-based education is the cost of converting traditional, largely lecture-based content and graphics to a multimedia format suitable for the Web. This process requires a substantial amount of time from the teacher and a significant level of technical expertise from either the teacher or a technical assistant. Once the material has been converted other, smaller, costs include the maintenance of a Web server, and necessary updates to the course material, including the updating of hyperlinks.

There may also be substantial educational costs for Web-based courses in comparison with traditional education. Students and teacher no longer have a direct relationship, so course material may not be easily altered to accommodate the particular strengths and weaknesses of classes or of individual students. Spontaneous student-teacher and student-student interactions are much more

difficult, if not impossible. Education becomes much more of a private experience, rather than a corporate one.

D. Target audience

The target audience for Web-based courses includes traditional on-site students, traditional students desiring courses not available at their educational institutions, full-time workers unable to become full-time students, persons with limited geographic mobility, and planning professionals with an interest in upgrading their knowledge or skills. Although the potential target audience is large, it is significantly reduced by the lack of a full, distance-learning-based accredited degree program.

E. Pedagogical model

Compared to traditional education, the pedagogical model for Web-based courses represents substitution of technology and fixed multimedia content for the partly fixed, partly spontaneous human interaction at the heart of lecture-based education. Depending on course content, this substitution may be more or less successful. We could expect that methods courses, such as statistics or GIS would work well as Web-based courses, while courses such as planning theory or dispute resolution would not.

F. Identification of existing models

A recent (late summer 2000) Web search of online planning resources, planning course syllabi, and standard distance learning course catalogs discovered no examples of Web-based courses at accredited planning programs. The search did discover several interesting examples that would repay further study.

1. Gilbert A. Stelter of the University of Guelph, has developed an undergraduate course named "Reading the Community: Doing Urban History at the Local Level" <http://www.uoguelph.ca/history/urban/menu.html>. Although it is not, strictly speaking, a Web-based course, it provides one of the fullest available examples of an entire body of planning-related course content published on the Web.

2. The geography department of the University of Southern California offers a three-course graduate certificate in geographic information systems, delivered through Web-based courses <http://www.usc.edu/dept/geography/learnGIS>. The certificate can be integrated in U.S.C.'s 28-unit Master of Planning and Development Studies (MPDS) degree.

3. Rice University offers a Web-based course, "Statistical Methods in Psychology" using the David Lane's Hyperstat Online Web site <http://davidmlane.com/hyperstat/>. William Troachim's Research Methods

Knowledge Base <http://trochim.human.cornell.edu/kb/index.htm> performs a similar function for social science research methods.

4. Penn State's Department of Agricultural Economics and Rural Sociology currently offers, though distance learning, a graduate certificate in Community and Economic Development. A Master's degree program in Community and Economic Development is planned to begin in August 2001. Additional details are available at <http://www.aers.psu.edu/cedev/index.htm>.

G. Potential impact on planning education

At present, Web-based courses are having little impact on planning education, except for the incorporation of online materials into traditional courses. Because planning is a cross-disciplinary profession, planning education will certainly be able to take advantage of online courses in areas such as statistics, GIS, and microeconomics. Some of these courses may be developed by planning educators. Core courses in planning theory, planning history, and planning law do not appear to lend themselves to Web-based instruction as well as do the methods courses. Introductory courses within individual planning specializations such as transportation, land use, and economic development, may be good candidates for conversion, but specialization courses beyond the introductory ones will probably be too narrow in focus to repay the conversion effort. However, the market could be large enough to support a Web-based undergraduate introductory planning course. (See Godschalk and Lacey, "Learning at a Distance: Technology Impacts on Planning Education." *Journal of Planning Education and Research*, forthcoming.)

This economic calculus could change if an accredited planning program began working to convert a full planning curriculum into Web-based courses. The national and international demand for a Web-based planning degree from an accredited program would be substantial, quite possibly substantial enough to repay the large initial investment. But could and should such a program be accredited? One day, perhaps sooner than we might expect, the Planning Accreditation Board will have to answer precisely this question.

Topic 2. Interactive Video Courses

By Ernie Sternberg

A. Introduction of the topic

I'm teaching a course using interactive video to bring remotely sited experts into the classroom. It's a seminar on disaster planning from multidisciplinary perspectives.

B. Potential benefits, Allows specialists from around the country to come into the classroom to discuss a highly specialized subject. Could potentially be shared among multiple dispersed classrooms.

C. Potential cost, Online charges (about \$20/hour) plus facility rental charges at remote sites (highly varied rates), plus local technical assistance if charged, plus payments to remote lecturers (we did not pay anyone this time.) Technology for connecting multiple classrooms and remote lecturer is still very difficult.

D. The target audience, or impacted individuals and groups, Planning programs, engineering programs (interested in having their students learn about non-engineering aspects of disaster preparedness), and architecture students. In future, could be dispersed among multiple campuses.

E. Pedagogical model, Critical to prevent "talking heads" syndrome. This is not conducive to good education. Essential to balance video-based instruction with local on-site human contact and direct supervision--in this case, a direct project done with the instructor. Ideally, when dispersed among multiple classrooms, the class will have local faculty conducting projects in each site.

F. Identification of any existing models or applications, I don't know of a precedent for doing this.

G. The potential impact on planning education.

In the long run, could be used to share expertise among multiple classrooms about topics that few planning programs can individually provide on their own because interest is too limited on any single campus. Currently, too expensive and technology for multiple classrooms is still not available. Probably several years before this is technically and economically feasible. Note that this can contribute more to educational quality and choices, less to productivity.

Topic 3. Programmed learning courses

By R. Varkki George

The World Wide Web evolved from serving formatted documents to hosting increasingly sophisticated client-server applications. This evolution has had significant implications for using the Web as a technology for enhancing learning. This technology has been applied primarily in the form of programmed learning; in particular, in the form of automated quizzing applications.

Quizzing applications present students with a series of questions regarding the subject matter covered in a course. A quiz question elicits one among a number of different types of responses: true/false, multiple choice, and fill-in-the-blanks. A quiz can be set up so that it can be taken multiple times (or not), and each time a different set of questions are presented, or the same questions are presented in a

different sequence. When the same questions are presented repeatedly, different versions of each question can be presented each time. The system can keep track of detailed information about each session for each student (time taken to complete the quiz, number of correct responses) as well as the number of attempts made. Using these automated quizzing applications, students get immediate feedback on their performance rather than having to wait for extended periods while quizzes are checked manually.

Given the extent to which these applications make it easy to administer quizzes to large numbers of students, it is not surprising that quizzing applications are mostly used in large-enrollment courses in which objective knowledge can be assessed (engineering, physics, chemistry). It is also not surprising that teachers of such courses were the ones to first develop these applications. While some claims have been made about improvements of the students' learning experience (which is often hard to quantify), the more popular claim has been that these technologies bring efficiency to teaching such large courses.

The benefits of quizzing applications have gone beyond courses in the hard sciences. At the University of Illinois, a quizzing application has been used to improve the delivery of Spanish language courses. In light of high enrollments and limited instructors, the quizzing application proved to be both efficient and effective in helping students acquire language skills. This experience suggests that quizzing applications are not just useful tools for assessing knowledge acquisition. These applications can also be a platform for guiding students through systematic reviews of subject material. Especially if they can take quizzes a number of times, and when they get immediate feedback on their performance, students can develop a good sense of how well they know the material covered in the quizzes.

On the face of it, quizzing applications may appear to have limited applications in planning education. Many topics covered in planning curricula tend not to be of the type in which objective knowledge is assessed. However, because quizzing applications can foster systematic and thorough review, they have a potential role in self-paced courses. For instance, they could be very useful in continuing education. One such course, a review of current planning topics, is being developed at the University of Illinois.

Topic 4. Distance education courses taught by two or more planning

Programs

by David R. Godschalk.

Introduction

Are there economies of scale to be gained from sharing distance education courses among two or more planning programs? Under what circumstances would it be feasible and desirable to co-teach distance education courses?

As a general case, there appear to be substantial economies of scale from sharing distance education courses among planning programs. This would seem to be most feasible and desirable when there is an interest in distance education among smaller or more specialized programs, coupled with a lack of resources at any one program to develop and teach the desired slate of courses. It could also be desirable when two programs that are widely separated in space want to collaborate (e.g., a U.S. and a developing country program).

A. Potential benefits

Some benefits to be gained from sharing distance education courses are:

- Allowing smaller or more specialized programs to offer a broader selection of courses (for example, two or more programs collaborate on course design and teaching with one specializing in economic development and one in physical development; or both programs sharing the same course in planning law);
- Bolstering the technical and technological capabilities of each collaborating program (an issue when the necessary technical and course design support may be thinly spread);
- Development of inter-university faculty and student relationships (bringing together faculty and students across institutional or even national boundaries).

B. Potential cost

Most of the costs of sharing distance education courses would be related to the time and energy necessary to initiate and get approval for the collaborative arrangements. There would also be hurdles of cross-institutional registration, technology, cost-sharing, and program accreditation to be negotiated. This would be simpler if each course was designed and taught by one institution, with students simply registering there. It would be more complicated, but presumably still feasible, if there were to be joint teaching.

C. Pedagogical model

The pedagogical model would be the standard distance education model, which lends itself well to any time, any place learning. The model would need to be adapted for inter-university teaching requirements, and for joint teaching, if that were to be done. Use of the model also might entail negotiation of course materials ownership issues and of assignment of teaching credits among faculty.

E. Identification of existing models

We have not identified any operating models of distance education courses taught by two or more planning programs, though there may be some in other disciplines. However, five North Carolina schools (Appalachian State University, East Carolina University, the University of North Carolina at Charlotte, the University of North Carolina at Greensboro, and the University of North Carolina at Chapel Hill) are actively exploring the formation of an inter-university consortium to provide undergraduate distance education courses in planning. One benefit of such a consortium is that it could allow the accreditation of an undergraduate planning major at those schools that do not have the necessary five planning faculty members. This will require that the PAB develop standards for assessing such jointly taught programs.

F. Potential impact on planning education

Planning education could benefit from the broadening of the many smaller and more specialized programs. Networking resources through shared distance education courses could even ensure the survival of some troubled programs, while adding richness to other presently stable programs. Adding inter-institutional attention to course design and teaching quality could benefit planning education as a whole, assuming that red tape and bureaucracy were kept under control.

Topic 4. Distance education courses taught by two or more planning

Programs, as a supplement to David Godschalk's report on this topic

By Joochul Kim

1. Introduction.

If planning programs at remote locations experience an increase in demand for some courses and lack faculty resources, this offering could work. Also, beginning next academic year, some university courses in Korea will be lectured in English, thus providing us with opportunities to develop courses together.

B. Potential benefits.

Community-based learning courses could be a nice one here, since students can learn first hand some critical regional differences.

D. The target audience, or impacted individuals and groups.

Perhaps all students, but more than likely it will be work adults who take some planning courses.

E. Pedagogical model.

F. Identification of any existing models or applications.

G. Potential impact on planning education.

Internationally, both planning faculty and students could benefit.

Topic 5. The potential of an ACSP developed "Introduction to Planning"

distance education course for freshman or H.S. level students

by David R. Godschalk

Introduction

Is there a market for a standard, distance learning, introductory course in city and regional planning at the college freshman or high school senior level? If so, then should ACSP consider developing and distributing such a course?

A strong argument can be made for affirmative answers to both questions. This paper outlines the benefits and costs, discusses the target audience and pedagogical model issues, identifies an existing model, and speculates about the potential impact on planning education. It draws upon a survey and case study of distance education in planning conducted at the University of North Carolina at Chapel Hill (see Godschalk and Lacey, Learning at a Distance: Technology Impacts on Planning Education, Journal of Planning Education and Research 20:4, June 2001).

Potential benefits

A standard distance learning course that introduced city and regional planning to college freshman and/or high school seniors could have a number of benefits, including:

- An increase in public understanding of the role of planning in achieving public interest goals (increasing the number of informed consumers of planning);
- An increase in the numbers of applicants to planning degree programs at both the undergraduate and graduate levels (increasing the amount of interest in becoming a planner);

- An increase in the overall national quality of introductory coursework, due to the application of more resources in developing and updating the standard course (focusing effort on one high quality product);
- A reduction in the need to develop and teach individual introductory courses in existing planning programs, freeing up faculty resources for more advanced teaching (reducing the need to reinvent the wheel);

Potential cost

Creating a standard distance learning introductory course would require dedication of time and resources by the course designers, as well as a systematic review process to ensure that the product met national standards. There could also be some costs for materials, such as software licenses. To avoid conflicts, it would be wise to specify licensing of course materials by ACSP or APA.

Target audience

Two target audiences exist--high school seniors and college freshmen. While it might be possible to design a single course that would serve both groups, it might be necessary to create two versions of the course in order to account for differences in curricula, available faculty, etc. Starting with college freshmen might be the most feasible approach.

Pedagogical model

The basic model involves use of technology to post assignments and lecture materials, chat rooms for student-to-student and student-to-faculty discussions, and interactive simulations, such as SimCity, to involve students in problem solving exercises. The result is any time, any place learning.

Identification of existing models

Professor Linda Lacey has designed and taught a successful introductory planning course using distance learning at the University of North Carolina. Her course design and teaching experience are described in Godschalk and Lacey (2001). Other models could be explored within the burgeoning field of distance learning offerings by other disciplines.

Potential impact on planning education

The potential impact is substantial, particularly relative to the costs of developing the course. This venture could be an effective way to introduce distance learning to planning educators, many of whom have not yet attempted to use it. It could

demonstrate the usefulness of this innovative learning technology and speed up its adoption, both in the U.S. and abroad. It could also serve to develop more student awareness and interest in planning careers.

Topic 5. The Potential for an ACSP developed “Introduction to Planning” distance education course for college freshman or H.S. level students

By Nancy Frank

“Introduction to Planning” at the high school or early college level serves multiple goals, but the most important is probably student recruitment. By introducing students—often for the first time—to the planning profession, planning degree programs seek to attract bright, motivated students to the field of planning, and to their own programs. Another important goal is preparing young adults for the responsibilities of citizenship by informing students about the issues and values that underlie seemingly mundane (and boring) planning decisions in their communities.

The benefits of expanding the number of students who have an opportunity to be introduced to the topics covered in an “Introduction to Planning” are well-identified by David Godschalk. Godschalk identifies only one cost, however—time and resources. I want to explore whether other costs may also be worthy of further discussion.

Potential Costs

A substantial range of opinion exists among academic planners about what ought to be covered in an introductory course. Some faculty members understand such a course as primarily an introduction to what planners do and why they do it, without too much emphasis on how planners plan. Others understand an introduction to planning course to be about surveying the history of planning. Within this group, some will want to emphasize the social planning elements within our professional history, while others will be particularly concerned to present the grand plans of the past. Just reaching agreement about the appropriate content of the course will be a major hurdle. If the course that is developed is attractive to only a minority of schools, the considerable investment of ACSP and the course designers will not reap the hoped for benefits.

While the purpose of an introductory planning course is to inform and inspire young people to become engaged in planning—whether by pursuing a planning career or merely by paying more attention to planning in their communities, a distance education course may show planning in its worst light. The experiences that seem

to ignite students' interest in planning are listening to the experiences of practicing planners, making field visits to neighborhoods or sites that demonstrate planning successes, and other activities that actively engage students in the process. The use of SimCity as a learning tool helps to achieve this objective—both in conventional courses and in distance education courses. A substantial risk exists, however, that a distance education course at the undergraduate or high school level will be astoundingly dull.

Careful consideration of pedagogy, reading assignments, and writing assignments will mitigate this risk. At this early stage in the development of distance education, perhaps experimentation across a large number of programs represents a better approach, rather than putting all of our effort and resources into a “national course” before the academy has fully tested the opportunities and limits of internet education.

Godschalk suggests that a standard course would eliminate the need for a conventional classroom course at each planning program. This benefit is probably overstated. Distance education is likely to appeal to students with a particular learning style and to students who are bound by time or distance and need to take some (or all) course work at a distance. According to the a guide to distance education published by the University of Idaho (<http://www.uidaho.edu/evo/distglan.html>), “Students must be highly motivated and proficient in computer operation before they can successfully function in a computer-based distance learning environment.”

Offering only a distance education course at the intro level may reduce the number of students interested in taking the course, rather than increasing it. A student who has a choice and needs to take a general education course in “people and society” may choose classroom-based courses in ethnic studies, urban affairs, sociology, or anthropology simply because it is a face-to-face learning experience rather than requiring the added effort of a distance education course. Addressing the needs of students with few educational options is an important goal. Consequently, the distance education offering needs to be understood as something programs add on to what they are already doing in order to expand their reach, rather than substituting the distance intro course for their existing on-campus course.

Potential Impact on Planning Education

It may yet be too early to predict the impacts on planning education. If students flock to distance education as a learning method, the impact could be large. If, however, students continue to prefer classroom-based experiences, a substantial investment in a distance education course could require an overall increase in resources devoted to a freshmen level course, in order to provide both alternatives, or the number of students being exposed to planning education could decline if program offer only the distance education course and that learning method proves unpopular for traditional, campus-based students.

The benefits of attracting non-traditional students through a distance education course—which might include not only prospective planning students, but also adult learners interested in expanding their horizons—may make this investment worthwhile nonetheless.

Topic 6. Internet 2

By Nancy Frank

Over eighty percent of PAB accredited planning programs are at universities that are members of Internet 2. An additional 14 non-accredited ACSP member schools are also members of Internet 2. What is Internet 2 and how can planning programs at member schools potentially benefit from this technology?

To learn whether your university is a member of Internet 2, visit the Internet 2 website at <http://www.internet2.edu>.

What is Internet 2?

Internet 2 (I2) is a consortium of over 170 universities whose purpose is to develop the internet applications of tomorrow. The goals of I2 are to provide a high speed network to avoid “traffic jams” on the broader internet, to foster innovation in internet applications, and to quickly move those applications to the broader “global commodity” internet. In techno-lingo, I2 provides a “bigger pipe,” but it also provides a laboratory for testing advanced networking techniques that should improve traffic flow on the regular internet once the techniques are fully developed.

How fast is I2? A T1 internet connection runs at 1.5 Mbps, but I2 runs at much higher speeds—90 Mbps, 622 Mbps, and 2.4 gigabits per second are some of the numbers cited. A recent Internet 2 “land speed record” was set when 8.4 gigabytes of data were transferred from Redmond, Washington to Arlington, Virginia in less than 82 second, for a speed of 900 Mbps. To put this in perspective, “At speeds of 622 megabits per second, 322 copies of a 300-page book can be sent every seven seconds” (http://www.vbns.net/press/press_faqs.html#WHAT).

Interactive video applications are likely to dominate the development of I2, at least in the social sciences. The Internet2 Digital Video project, for example, offers digital video conferencing and live video transmission across the internet.

Benefits

Internet 2 video could allow faculty at I2 member institutions to do live guest lectures—or even team teach courses—without requiring satellite. A simple digital

video camera connected to an appropriately equipped computer and software is all one needs. The possibilities for collaborative teaching are endless. Picture inviting a panel composed of Judith Innes, John Forester, and Seymour Mandelbaum to answer students' questions about planning theory—live via the internet.

I2 also paves the way for fully interactive, low-cost distance education. With current technology and the existing I2 network, potential planning students in North Dakota, for example, could use video conferencing facilities at the University of North Dakota to obtain a planning degree at any of the planning programs at I2 member institutions, if a distance education degree program was available.

This technological possibility must overcome several institutional and pedagogical challenges, but the basic technology is available. In the future, if the networking improvements arising from I2 result in dramatic improvements in speeds on the regular internet, the potential impact for distance education would be even greater, allowing students to take fully interactive courses from their homes or offices.

Research benefits are also apparent. Large data files, such as those used in GIS and other visualization applications, can be transferred very quickly over I2.

Costs

Costs fall into three categories: monetary costs, coordination costs, and pedagogical costs.

Member schools are already connected to I2. In fact, all internet traffic between member schools is already traveling via I2 rather than the regular internet. So, in a sense, we are all using I2 already. Programs do not need to “rent” bandwidth to use I2.

The more serious direct cost involves coordinating to use I2 to its full potential. Since I2 applications are largely experimental, faculty have needed to collaborate with computer science faculty in order to use I2. This situation appears to be changing, however. At the University of Wisconsin—Milwaukee, for example, a workshop was held recently to inform faculty about how they can use I2 for one-on-one interaction video phone calls, meetings between groups of individuals at multiple locations, and distance education. Campus support for using I2 is also beginning to evolve.

At UWM, for example, the campus provides an equipped room to departments for \$40 per hour, which can be reduced to \$10 per hour with matching funds allocated each fiscal year. This fee covers the cost of the equipment, software, and a technician to provide all necessary technical support. For a typical three-credit course, assuming similar costs and setup at each of two participating universities, the total semester cost would range between \$900-3600. Other campuses may have fee structures that increase or decrease these costs.

At UWM, experience in video instruction over I2 is extremely limited. A faculty member pursuing this teaching approach could anticipate unpredictable difficulties. As UWM's Information and Media Technologies staff put it, "You would definitely be a guinea pig."

As noted above, institutional and pedagogical hurdles remain before I2 will be used to its fullest potential for distance education. Institutional investments and partnerships need to be formed before students will be able to access graduate programs in planning from universities (and in regions) that lack planning degree programs. Few universities are likely to make their networking infrastructure available to individual students seeking a degree program that is not offered at the host institution. Regional partnerships between institutions with complementary program arrays may evolve, but this will likely be a slow process. Opportunities within states may evolve more quickly, especially among public university systems seeking to increase student access while reducing institutional overlap.

The transfer of pedagogy to distance education is discussed elsewhere in this newsletter. While fully interactive video with high quality production values reduces the necessity for development of new pedagogies, some problems remain. If a course is taught as both an on-site course and a distance education course, routine classroom activities—such as breaking up into smaller discussion groups and work groups—will create awkward inequalities among students in relation to how they access the group. The impacts on student learning of attending a class remotely are not well understood.

Potential Impact on Planning Education

In summary, the potential impacts on planning education are dramatic, but uncertain. The interactive video potential of I2 could increase the expertise available in all planning programs. Distance education through the use of interactive video could also increase diversity by, for example, bringing urban students together with students from more rural settings or older students together with traditional college-age students.

Substantial progress needs to be made, however, before interactive video distance education can replace more traditional pedagogy in planning. Information is not yet available to gauge whether students attending a class through interactive video are able to participate fully and effectively in classes.

Topic 7. Issues of ownership of Web-based content

By R. Varkki George

The World Wide Web was initially a way of seamlessly and freely sharing information. Over the years, however, the focus has increasingly shifted to the

commercial potential of the Web. At the same time, there has been an upsurge of interest in protecting intellectual property rights, and more importantly, in capturing the commercial value of such rights. These two trends have profound implications for using the Web in technology-enhanced learning, as pedagogical values clash with commercial values.

Of course, capturing the commercial value of information and knowledge is not a new idea; this is the engine that has driven the publishing industry since its inception. Today's e-commerce technologies allow content to be placed in password-protected locations only accessible by students who have paid tuition, or by others on a pay-per-view basis. Alternatively, revenue might be generated by including advertising with the display of content; this is a very traditional way of raising revenue while disseminating information, though perhaps not in an academic context.

These new technologies have three characteristics that are unprecedented: easy delivery of content to an extremely wide audience; easy replication and modification of this content by others; tight control of access to this content. The first has very positive implications for pedagogy: the ability to reach a wide audience especially non-traditional learners; the ability to have content tested and critiqued by a wider set of individuals than traditionally possible. The second two characteristics could act together to negate any advantage from the first: concerns that others will replicate content, and perhaps capture commercial value, lead to tight control and thus limits on access to the content. Some in the software development community have adopted methods that might indicate a partial way out of this quandary. Open source software exposes its inner workings (the source code) to the public as a way of promoting better quality through wider scrutiny, and faster development through widespread participation. This software is distributed under a license that allows others to alter the code and capture commercial value but requires them to keep the source code public. Those who are interested in widespread access to and development of their Web-based content, could distribute this content under a similar license.

It is not just a question of whether or how much instructors who author Web-based content should profit from such authorship. The potential for realizing commercial value is now pitting Universities against the faculty they employ. The distinction used to be fairly clear: faculty have the rights to royalty from books and text books they publish; royalties from patents on ideas developed using University resources are usually shared between the individual and the University. In the new world, knowledge and the vehicle used to transmit the knowledge (which sometimes are ideas that can be patented) are tightly coupled, and it is becoming increasingly difficult to separate the two. As a result, ownership of such developments is becoming increasingly contentious. How can commercial value be used to motivate individual innovation while protecting the institution's ability to capture some of this value? How are we to share revenue from content developed by an individual

and delivered via equipment and infrastructure owned by the institution? Various institutions are continuing to wrestle with these kinds of questions.

Topic 8. Corporate Universities

By Joochul Kim

1. Introduction.

Basically, there are two types of Corporate Universities: 1) universities or learning centers run by corporations (Motorola University, Intel and others) 2) for-profit universities like the University of Phoenix.

I. Corporate University

a) Definition: The Corporate University is an educational organization, which is established and run by a corporation. It functions as the strategic umbrella for a company's total education requirements for all employees and the entire value chain, including customers and suppliers (from Corporate University Exchange Newsletter). Some claim that there are now more than 1,800 corporate universities nationwide.

b) Main reasons for creating corporate universities:

- +To systematize the training function.
- +To maximize the investment in education.
- +To drive changes in the organization.
- +To spread common cultures and values in the organization
- +To develop the employability of the workforce.
- +To remain competitive in the marketplace.

c) Core-curriculum (competency levels):

- *Learning skills (information process, self-development).
- *Basic skills (reading, writing and math).
- *Interpersonal skills (listening, conflict resolution and negotiation skills).
- *Creative thinking and problem solving.

*Leadership and visioning.

*Self-development/management.

II. For-profit University

- a) They are not mom and pop trade schools, but are the accredited, degree-granting, for-profit institutions such as the University of Phoenix, Sylvan Learning System, the British Open University, DeVry, Inc. and others.
- b) They have received lots of attention these days because most traditional universities are perceived to be inflexible and inconvenient to many working adults. For-profit universities sell convenience (including shorter lengths of completion time), efficiency of market place and accountability in educational quality. Most of these organizations claim that assessment is what they do best.
- c) Mode of educational delivery is still based on classroom setting. Distance learning for the University of Phoenix, is only about 10% of the delivery system at present time. Their main target student population is working adults (24 years of age and up).
- d) Academic operation is based on part-time teachers, group-presentation and learning assessments. Emphasis is on practical knowledge over theoretical knowledge and very flexible curriculum (can be changed instantly by the Provost, if the market place demands it).

B. Potential benefits.

For some areas, a linkage with major corporations to target their educational needs will be a major contribution that planning schools could make. For example, limited degree programs for adult learners, certificate programs for strategic planning methods and some practical courses for employees can be provided.

Without sacrificing academic missions of each institution, market segmentation study can be carried out to meet challenges from for-profit universities (i.e., some public administration programs in the country have been negatively affected by degree programs from the University of Phoenix.).

C. Potential costs.

Depending upon the size of schools, faculty resources can be a problem when partnering with corporations. I wonder how fast one can create a faculty line upon recognizing specific areas to compete with for-profit universities.

D. The target audience, or impacted individuals and groups.

Clearly adult learners. Based on my survey of corporations, most adult learners are interested in receiving college degrees (both undergraduate and graduate degrees). Most companies provide tuition reimbursement programs so that cost is not an important issue any more. Flexible schedule, convenience and job-related studies are important factors.

E. Pedagogical model.

A combination of traditional classroom learning (corporation on-site, if needed), distance learning and internet learning may be an ideal model.

F. Identification of any existing models or applications.

This phenomenon is so new that all of us will have to adapt to change and create our own.

G. Potential impact on planning education.

Partnership with corporations is a good thing. Since planning education emphasizes the community-based learning, faculty members who value practice or a linkage between theory and practice could participate in this newly emerging venture.

If for-profit universities decide to venture into planning degree programs, potential impacts on planning programs could be unevenly affected based on location, size of programs, cost-ratio and market demand.

We need to revisit our educational mission for working adults.