Distance Education Best Practices Manual
http://www.rdnewman.com/manual

1: Key Points in Distance Education History[28]

1837
Isaac Pitman (left) teaches correspondence courses by shorthand in Great Britain.

1873
Anna Ticknor becomes known as the "mother of American correspondence study."

Anna Ticknor establishes the Society to Encourage Studies at Home n Boston to provide educational opportunities for women across class boundaries.

Although largely a volunteer organization, over 10,000 members participate in its correspondence instruction over a 24-year period.

1883
The State of New York authorizes degrees by correspondence at the Chautauqua Institute. Chautauqua trained Sunday school teachers during the summer and then completed training through correspondence study during the winter.

1892
William Rainey Harper establishes the first college-level courses by mail at the University of Chicago creating the world's first university distance education program.

1906
The Calvert School of Baltimore becomes the first elementary school in the United States to offer correspondence study.

1920
The United States Marine Corps begins enrolling troops in correspondence courses through the Marine Corps Institute, originally known as the Vocational Schools Detachment, Marine Barracks, Quantico, Virginia.

The Marine Corps Institute continues to thrive with approximately 150 courses at both vocational and baccalaureate levels.

1934
Already one of the first colleges to offer radio courses for credit, the State University of Iowa becomes the first educational institution to broadcast courses via television.

1963
The Instructional Television Fixed Service (ITFS) is created as a result of a Federal Communications Commission (FCC) resolution reserving selected transmission frequencies to be licensed to local credit-granting institutions for educational purposes.

The channels can be used solely to deliver instruction, or in partnership with companies that deliver a subscriber-based video service that competes with land-based cable television systems to deliver entertainment programming. ITFS provides low-cost, limited (20-35 mile range) distribution of broadcast courses. The full allocation of 20 channels is usually available to be used by school systems, colleges and universities in most communities.

The first university to apply for ITFS licensing was the California State University (CSU) System.

1967
President Lyndon Johnson signs the Public Broadcasting Act authorizing the creation of the Corporation for Public Broadcasting to promote non-commercial use of television and radio.

CPB's primary purposes included developing high quality programs, establishing a system of national interconnection to distribute the programs, and strengthening and supporting local public TV and radio stations.

In January of 1969, CPB negotiated with AT&T to interconnect 140 stations, creating the first true national public television system. This system became permanent in November 1969 with the establishment of the Public Broadcasting Service (PBS). The establishment of National Public Radio (NPR) in 1970 ensured equal interconnection between public radio stations.

1981
Annenberg/Corporation for Public Broadcasting (CPB) begins funding the development of television courses.

The Public Broadcasting Service (PBS) then establishes a programming service devoted to national delivery of educational programs known as the Adult Learning Service (ALS).

ALS currently coordinates with over 190 public television stations and some 2,000 colleges to deliver telecourses for college credit. Beginning with a small portfolio of seven telecourses, the catalog has grown to over 100 courses with an annual enrollment reaching over 500,000.

1984
The first online undergraduate courses are delivered by the New Jersey Institute of Technology.

1989
The first online degree programs are offered by the University of Phoenix and Connect-Ed.

1999
The US Department of Education establishes the Distance Learning Education Demonstration Program, which will serve as a pilot program of 15 post-secondary schools, systems and consortia permitted to offer federal financial aid for distance learning programs.

Learning portals, including Hungry Minds, Click2Learn, eCollege, and Blackboard emerge on the education landscape.

2: Distance Education Issues

Participants: Analyze the learner and understand what he/she is trying to accomplish with the course. Determine what hardware, software, and network capabilities the learners will be bringing to the "class." [27]

Do not develop courseware and materials that are beyond the reach of the average learner's hardware and software. Recognize that not all learners are comfortable with technology, and the technology will not always work when and how it should.

Determine how much time you expect the learners to spend online using newsgroups or web-based materials. Require learner participation. The asynchronous nature of online learning can lead to feelings of isolation by the learners. Participation and interactivity are key elements to keep the learners engaged. [27]

Instructor: As the instructor, understand what you are trying to accomplish with distance education that cannot be achieved through other methods. Make sure distance education and technology are not being used for the sake of using them.

Create online materials that work well with your approach to teaching. If you are not comfortable with the layout, content, or design of the instruction, you cannot expect your learners to be comfortable. Keep your expectations for the learning realistic. Get feedback from your fellow instructors before releasing the technology-driven materials to students. [11]

Materials: Ensure that you have the rights to use any materials in the course, whether it is an image or a section copied from a textbook. Remember, just because it is on the Internet does not mean it's free to use … even if it *is* for education! Be prepared to protect the rights of your materials too. State objectives and align assignments, activities, and assessments with the objectives. [11]

Assessment & Evaluation: Recognize the relevance and importance of alternative assessment to distance education. Use the technology and asynchronous environment to your—and your students'—advantage.

Create assessment opportunities with electronic portfolios, journals, collaborative

learning, and writing. Do not force a traditional test into the materials if it isn't needed. Evaluate and revise.

Use feedback from the learners and formative and summative evaluations to determine any changes that could improve the course for future learners. [11]

3: Global Diversity Issues

Digital Divide: The digital divide is the "gap between those who can effectively use new information and communication tools, such as the Internet, and those who cannot."[7] The inability to reach underdeveloped countries may even further divide the educational inequalities. [17]

Collaboration: There must be collaboration concerning the development and delivery modes for courses offered across international boundaries. Collaboration insures the ability to manage the support techniques incorporated into the courseware. [23]

Accreditation and Certification: There must be a way to transfer the credits and recognize the quality of distance education courses delivered across international boundaries. [40]

Jurisdictional Issues: Before offering a distance education course in another country, you must be aware of the governing authority, and any laws and limitations involved.

Instructional Content: Develop courseware to recognize differences in culture. Do not use jargon in distance education material. Consider potential differences in participation and assessment requirements. Consider the restrictions on free expression and democratic participation and the fears about the contamination of cultures and values. [7]

Instructor and Student Support: Develop support system for students and instructors. Provide instructors with training in cultural diversity.

4: Domestic Diversity Issues

Hybrid Programs: Distance education or E-learning currently has many domestic uses. Many institutions are using online resources to support their more traditional education programs. Distance education is being used to enhance the quality of traditional primary and secondary schooling and to deliver instruction to students in remote or rural areas. [32]

Equal Distribution of Benefits: Students in under-funded institutions receive the same quality opportunities as the more affluent schools systems and ensures diverse participation in online events.

Student & Faculty Anonymity: Distance training allows for the discussion of sensitive topics to be discussed online both from the faculty and student perspective. Also the online interactions tend to be very cross-cultural and allow ample time for students to

consider responses fully before posting to an ongoing discussion. The anonymity allows students comments to be evaluated without racial or sexual bias. [21]

Increasing High Education Opportunities: Domestically higher education has also invested heavily into online programs to increase exposure to their academic programs. Those institutions that offer only distance learning are referred to as "open universities," and those are further defined by the size of their enrollment; mega-universities are large open universities, each of which enrolls more than 100,000 students per year. [32] Culturally, this means students who could not have previously attended due to financial or distance considerations have more choices and opportunities.

Wider Access: Using technology to free learning from the limits of time or space makes education available to more people. Some of those already in the labor force may find distance learning the only option for upgrading skills, finishing a degree, or pursuing another degree. Distance learning helps many adult learners balance the demands of work and family with their pursuit of more education. [18]

<div align="center">

5: Learning Objectives

</div>

Learning Objectives state what the learner is expected to know at the end of the instruction. They should be specific and measurable. Oftentimes, learning objectives are also called performance objectives because they state what the learner will be "doing" or "performing" after the completion of the instructional unit.

The writing of good objectives leads to the development of good instructional materials, and a wealth of information is available to facilitate this process. Students are motivated by knowing what they are going to learn and motivated again when they have attained the knowledge.

The ABCDs of Well-Stated Objectives: Heinich, Molenda, Russell, and Smaldino[10] provide a framework for developing well-stated objectives:

- **A**udience—specifically state the audience and whose behavior is going to be changed.
- **B**ehavior—state the behavior that the learner is going to be performing after the instruction.
- **C**ondition—include the conditions under which the behavior will be observed, for example, if they will be using a particular tool or text.
- **D**egree—state the degree of accuracy or proficiency that must be achieved during the performance.

Suggestions for Writing SMART Objectives: The Association of Colleges & Research Libraries (ACRL), a division of the American Library Association (ALA) provides suggestions for writing SMART Objectives.[1] The ALA/ACRL website provides specific examples for using the SMART method of writing objectives and the ability to practice writing SMART Objectives.

- **S**pecific—concrete, use action verbs.
- **M**easurable—numeric or descriptive.
- **A**ttainable—feasible, appropriately limited in scope.
- **R**esults-focused—measures outputs and results (not activities).
- **T**imely—identifies target time/date; includes interim steps and a plan to monitor progress.

A Quick Guide to Writing Learning Objectives: Don Clark[5] provides yet another framework for writing learning objectives. Clark's quick guide to writing objectives provides a list of action verbs for the tasks that must be performed and where it falls when looking at Bloom's Taxonomy of learning. It provides some examples of the conditions that the task must be performed under and how well the task must be performed.

6: Communication

Modes of Communication: Two common modes of communication used in the distance education environment are synchronous and asynchronous. Synchronous communication occurs when the learners and the instructor are working at the same time, though not necessarily in the same location. Asynchronous communication occurs when the learners and the instructor can participate in the learning environment at different times.

Interaction: Interaction between learner and instructor must be frequent and meaningful. Most interaction between learner and instructor will be in the form of feedback. Frequent and timely feedback is required for retaining and motivating students. Interaction between students in an online environment is referred to as participation. Requirements for participation in online discussions must be established and clearly stated.

Netiquette: Netiquette is network etiquette, which are the rules for communicating and minding your manners in an online environment. Since body language (visual) and tone of voice (audio) are missing in the online environment, netiquette will help you understand and get along with others in an online environment. Visit the netiquette home page at http://www.albion.com/netiquette/.

Course Documents: The syllabus is the roadmap for the coursework. It must be complete and clear so the learner can use it to move through the course at will. It must contain all requirements, such as attendance and participation, all assignments and their due dates, and any instructor expectations. The documents must be written free of jargon and sensitive to cultural and diversity issues.

Informal Communication: Provide a location in the online environment for informal communication, which can help build a social community in the distance-learning environment. [22]

Instructor Presence: Students feel more connected to instructors who show their

"presence," that is, those who allow their personalities to come out in their lectures and through their online discussion. [22]

Learning Teams: Create learning teams to facilitate collaborative learning. Consider using techniques to improve the communication skills of the team members. Emelo and Francis[9] suggest a three-step process for developing virtual collaboration skills: (1) practice intentional action, (2) broaden one's personal awareness of their behavior, and (3) improve the quality of the communications.

Student/Instructor Communication: Ensure the student can communicate directly and privately with the instructor. Provide multiple modes of communication such as email address and telephone number.

7: Technological Modes

Correspondence study: Correspondence study is the earliest form of distance education. It began as a means of reaching rural populations over expansive distances, mainly through the mail. The postal system currently remains the mainstay delivery system in the advanced countries and the primary means in less-developed countries. [8]

Prerecorded media: As educators looked for ways to improve the correspondence process, they began adding pictures and other graphics with study texts. Then, audiotapes and, eventually, videotapes were added to the collection of materials sent to distant learners. [36]

Two-way audio: The first widely used live, synchronous form of distance education used two-way audio with either a telephone hookup, a radio broadcast with telephone call-in, or shortwave radio transmissions. In all cases, the distant learner and the instructor were connected with some form of live, two-way audio connection. Teachers lecture, ask questions, and lead discussions. Learners listen, answer, and participate. Often, print and non-print materials are sent to distant learners, similar to correspondence study. [36]

Two-way audio with graphics: Two-way audio improved with the implementation of technology to provide graphics synchronously to participants. One example of this technology is Netmeeting®, which allows participants to view an electronic blackboard or slide presentation while listening to the lecture. [36]

One-way live video: Sessions are transmitted over public television using either local cable or satellite technologies. Courses are scheduled on specific dates and times. A good example is the project by West Virginia Public Television.

Two-way audio, one-way video: Sessions are transmitted over public television or satellite using either local cable or satellite technologies. Two-way audio is added by the use of open phone lines and, in some cases, teleprompters, which feed back to the host site, integrating student and instructor communications. [36] Here is an example of a situation where state colleges have collaborated and combined resources to share the cost

burdens of satellite communications system; it is called Indiana Higher Education Telecommunications System (IHETS).

Two-way audio/video: Using compressed video and video teleconferencing equipment, content can be presented at as many sites as needed. Students may ask questions and receive feedback, much like a formal classroom. [36] The market is loaded with vendors offering video teleconferencing services; Polycom™ is one of the largest providers.

Desktop two-way audio/video: Desktop systems use personal computers and the Internet to connect local and distant learners. Increasingly, the Internet has the capacity to connect personal computers for the sharing of video and audio information. Also available are inexpensive servers functioning as reflector sites or bridges to connect multiple sites. Quality of the image and connection is proportional to the users connection bandwidth. [36] A current example of this technology is called Interwise. Depending upon the users' Internet bandwidth, the software will allow real-time audio and video of large meetings and training events.

8: Learner Attributes

Motivation: Regardless of how and where learning takes place, motivated learners have higher success rates. Because of the challenges inherent in distance learning, motivation is required if the learner is to succeed. [36] Robyler indicated that self-motivation—coupled with the ability to "structure one's own learning" — led to success in the distance learning environment. [33]

Without the formality of the traditional classroom setting, learning becomes autonomous. It is up to the learner to take advantage of the opportunity for learning through discussions and other forms of interaction. If the learner lacks motivation, he/she may find it easy to withdraw from the course when confronted with the challenges of distance education. Some of these challenges include responsibility for scheduling coursework and learning to work with the delayed responses inherent in asynchronous learning.

Time Commitment and Management: In the asynchronous environment, learners "attend" class at different times. Students need to arrange time in their schedule to attend class and to do so regularly. [36] If the learner is an adult, this may require scheduling class time around work and family commitments. In traditional learning, the student has a structured class schedule to follow. However, the traditional student can also benefit from time management skills. Despite its structured schedule, traditional learning requires the student to set aside time for class work outside of the classroom. Still, it is the total absence of time and place structure that separates the distance learner from the traditional learner.

Goal-Oriented: The distance learner who enters the distance education environment without a specific goal, whether it is a degree or a certification, faces not only the inherent challenges of distance learning but also the challenges of persisting through the course. A study conducted by M.R. Garland found that the "uncertainty of an educational

or professional goal" became one of the primary psychological and sociological barriers preventing students from completing distance learning coursework. [36]

Despite the challenges of distance learning, it is the environment's leisure-based structure that allows the student to discontinue course work without "tangible" implications. In an asynchronous course, there is no classroom to be physically absent from, no face-to-face learning to miss, and no timed schedule to keep. Once these tangible aspects are removed, the learner can leave a course without the feeling that anything is missing. However, an asynchronous learner with a specific goal cannot "drop" from a course without the realization   that the goal too is dropped.

Interaction: Distance learning implies a separation of time and place and teacher and learner. The "purest form" of distance learning is asynchronous learning, which takes place at different times and different places for both the teacher/instructor and the learner. [36] This separation also separates distance learning from traditional learning.

One aspect of distance learning brings "life" to this environment: interaction. Three types of interaction prevalent in distance learning environments include: learner-content interaction, learner-instructor interaction, and learner-learner interaction. Of these, "learner-learner interaction has proven to be a productive part of the learning process." [31]

The implementation of interaction allows the teacher/instructor and the learner to rise above the flatness of distance learning. The teacher/instructor acts as moderator and stimulates the learning process by keeping the students engaged in the course. Remaining engaged and interested in the subject can be key to keeping a distance learner in line for successful completion of the course or degree program.

9: Theoretical Framework

Theoretical framework refers to the major theories upon which distance learning is based.

Some key distance learning theorists:

- Malcolm Knowles & Andragogy
- K.P. Cross & The CAL Model
- J. Bruner & Constructivism
- Howard Gardner & Multiple Intelligences
- B.F. Skinner & Behaviorism

Key theories

Malcolm Knowles & Andragogy: Knowles' theory of andragogy is an attempt to develop a theory specifically for adult learning. Knowles emphasizes that adults are self-directed and expect to take responsibility for decisions. Adult learning programs must accommodate this fundamental aspect. Andragogy makes the following assumptions about the design of learning:

- Adults need to know why they need to learn something.
- Adults need to learn experientially.
- Adults approach learning as problem solving.
- Adults learn best when the topic is of immediate value. [14]

•**K.P. Cross & the CAL Model:** The Characteristics of Adults as Learners (CAL) model consists of two classes of variables: personal characteristics and situational characteristics. Personal characteristics include aging, life phases, and developmental stages. Principles of the CAL model:

- Adult learning programs should capitalize on the experience of participants.
- Adult learning programs should adapt   to the aging limitations of the participants.
- Adults should be challenged to move to increasingly advanced stages of personal development.
- Adults should have as much choice as possible in the availability and organization of learning programs. [13]

•**J. Bruner & Constructivism:** Constructivism is a philosophy of learning founded on the premise that, by reflecting on our experiences, we construct our own understanding of our world. Each of us generates our own "rules" and "mental models," which we use to make sense of our experiences. Learning, therefore, is simply the process of adjusting our mental models to accommodate new experiences. Principles of constructivism:

- Learning is a search for meaning. Therefore, learning must start with the issues around which students are actively trying to construct meaning.
- Meaning requires understanding wholes as well as parts, and parts must be understood in the context of wholes. Therefore, the learning process focuses on primary concepts and not isolated facts.
- In order to teach well, we must understand the mental models that students use to perceive the world and the assumptions they make to support those models.
- The purpose of learning is for an individual to construct his or her own meaning, not just memorize the "right" answers and regurgitate someone else's meaning. Distance education is inherently interdisciplinary, the only valuable way to measure learning is to make assessment part of the learning process, ensuring it provides students with information on the quality of their learning.

Constructivism & Instructional Design

- Curriculum—Constructivism calls for the elimination of a standardized curriculum. Instead, it promotes using curricula customized to the students' prior knowledge. Also, it emphasizes hands-on problem solving.
- Instruction—Under the theory of constructivism, educators focus on making connections between facts and fostering new understanding in students. Instructors tailor their teaching strategies to student responses and encourage students to analyze, interpret, and predict information. Teachers also rely heavily

on open-ended questions and promote extensive dialogue among students.
- Assessment—Constructivism calls for the elimination of grades and standardized testing. Instead, assessment becomes part of the learning process so that students play a larger role in judging their own progress. [25]

•**Howard Gardner & Multiple Intelligences:** The theory of human intelligence (Multiple Intelligences), developed by psychologist Howard Gardner, suggests there are at least seven ways people perceive and understand the world.

Gardner labels each of these ways a distinct "intelligence" — in other words, a set of skills allowing individuals to find and resolve genuine problems they face:

- Verbal-Linguistic—The ability to use words and language.
- Logical-Mathematical—The capacity for inductive and deductive thinking and reasoning, as well as the use of numbers and the recognition of abstract patterns.
- Visual-Spatial—The ability to visualize objects and spatial dimensions, and create internal images and pictures.
- Body-Kinesthetic—The wisdom of the body and the ability to control physical motion.
- Musical-Rhythmic—The ability to recognize tonal patterns and sounds, as well as a sensitivity to rhythms and beats.
- Interpersonal—The capacity for person-to-person communications and relationships.
- Intrapersonal—The spiritual, inner states of being, self-reflection, and awareness.

Principles:

Individuals should be encouraged to use their preferred intelligences in learning. Instructional activities should appeal to different forms of intelligence. Assessment of learning should measure multiple forms of intelligence. [15, 26]

B.F. Skinner & Behaviorism: Behavior theorists define learning as nothing more than the acquisition of new behavior. This theory is relatively simple to understand because it relies on observable behavior and describes several universal laws of behavior. Its positive and negative reinforcement techniques can be very effective—both in animals and in treatments for human disorders, such as autism and antisocial behavior. Behaviorism often is used by teachers, who reward or punish student behaviors.

Principles:

- Behavior that is positively reinforced will reoccur; intermittent reinforcement is particularly effective.
- Information should be presented in small amounts, allowing responses to be reinforced ("shaping").
- Reinforcements will generalize across similar stimuli ("stimulus generalization") producing secondary conditioning. [16, 24]

Useful links

- http://tip.psychology.org/theories.html
- http://www.hcc.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/adults-2.htm
- http://www.funderstanding.com/about_learning.cfm
- http://www.emtech.net/learning_theories.htm

10: Students' Perspective Issues

Distance Student Identity: The typical distance education student is a working adult. Data collected by the National Center for Education Statistics[30] shows that more than 90 percent of the distance learning programs are directed to adults in undergraduate, graduate, and continuing education programs.

Andragogy: Also known as student-centered learning, andragogy was proposed by Malcolm Knowles. He felt that adults learned differently from the approach typically used with children, known as pedagogy. One reason is that adults need to have a reason or a benefit to the process, also, as adults, they tend to learn better when they have input into the process. [30]

Constructivist Theory of Learning: Evolving from Piaget, Bloom, Gagne, and Vygotsky is a theory of learning that stresses the importance of experiences, experimentation, problem-solving, and the construction of knowledge. While initially directed to children, constructivism can also be applied to adult learning by drawing on the vast experiences of an older population. [30]

Zone of Proximal Development: This theory was developed by the educational theorist Vygotsky and consists of the teacher, the learner, and a problem to be solved. The teacher provides an environment in which the learner can assemble or construct the knowledge necessary to solve the problem. [30]

Profiling a Student Population: There are many models for developing content. One common concept is to determine your target audience so that the objectives can more closely fit the need based upon a variety of cultural issues. A variety of characteristics are important, including demographic, motivational, academic preparedness, and access to resources. [30]

- **Demographic Characteristics:** Examine cultural issues such as the age, sex, ethnicity, race, primary language spoken, family responsibilities, disabilities, and occupation of potential students.

- **Motivational Characteristics:** Examine cultural issues of your targeted population. What are the potential students educational goals and objectives? What are student career goals and objectives? Why might students be interested in

a distance learning program?

- **Academic Preparedness:** What is the student educational achievement level? What are student skill levels? What formal background do the students have with the subject matter of the program? What are their personal interests and experiences that relate to the subject matter? What experience(s) do students have with distance learning?

- **Resources:** Distance education increases availability of top name colleges to areas of the world who have not traditionally been able to attend. Issues such as: How will students pay for tuition and fees? How much time will students be able to devote to distance learning? What access do students have to media and technology (radio, television, computer, Internet, etc.)? Where do students have access to media and technology (home, work, school, community center)? What access do students have to academic support facilities (library, media center)? What access do students have to people resources (tutors, mentors, colleagues, other learners)? All must be considered.

Student Feedback and Evaluation: All online content must be monitored to determine effectiveness and alert faculty to changes in the target population. In a traditional classroom, faculty have visual indications of the quality of the course and the satisfaction of the students.

Critical to this evaluation is data collected concerning student performance and participation and satisfaction with their distance learning courses or programs. Data on student satisfaction can be helpful in improving a course or program and planning for future programs. While data gathered from student satisfaction surveys tend to be quantitative and are most important for comparison to other courses or programs, qualitative data can also provide insight into which aspects of a course work well and which are problematic. [30]

Student Support Services: By definition, many distance learning students are geographically separated from their colleges or schools. A simple act such as purchasing a textbook, taken for granted at a campus where a bookstore customizes its inventory for the courses offered, may prove problematic for a student who lives many miles away. [30]

- **Basic Student Services:** Basic student services such as admissions advisement, financial aid counseling, registration, and paying tuition and fees are complex activities in most institutions.

- **Library, Media & Technology:** Services that directly support instructional activities, such as libraries, media centers, or computer laboratories, need to be considered when delivering distance learning. Reserve readings, video clips, recordings of classical music, or simulation software needed to solve science problems are examples of instructional materials generally available on campus to students.

- **Advisement & Counseling:** While high attrition for distance learners might relate to pressures of time, employment, or family, institutions should not accept this as a natural outcome of this type of learning. On the contrary, distance learning providers must consider support services such as advisement and counseling that might help stem attrition.

Technology and Equity Issues: A major benefit of distance learning programs is to increase the opportunities for isolated students to pursue an education program. The choice of technology becomes very important when considering the cultural concerns. This is particularly critical in developing countries where access to television or computer-based Internet technologies is limited or nonexistent. Even in developed countries, access to newer computer technologies may be limited to segments of the population.

- **Gender Issues:** Gender issues in technology have a long history in the United States. A concern exists that females are less likely to engage in technology-based, and especially computer-based, activities than males. However, with regard to distance learning technology and especially Internet access, any gap that existed between the sexes seems to have narrowed. [30]

- Furthermore, recent research indicates that females are enrolling in Internet-based distance learning programs and succeeding comparably to males. Both males and females made similar use of Internet based distance learning, had similar attitudes about their e-Education in the Global Environment experiences, and shared a common desire to take more courses using the technology. [30]

- **Minority Concerns:** Minority access to technology is yet another issue. The U.S. Congress's Office of Technology Assessment (1988) reported that in primary and secondary schools, predominantly African-American schools were significantly less likely than predominantly white schools to have computer equipment.

- In terms of access to Internet technology in the home, 44.2 percent of the white households in the United States have access to the Internet as compared to 29.4 percent for African-Americans. [30] Novak and Hoffman also indicated that the gap or "digital divide" between the two races was narrowing and that a more significant factor in Internet access was family income.

- **Disabled Issues:** Distance learning technology also can become the educational vehicle for homebound or disabled persons. Current survey data indicates that 16 percent of the distance learning providers target their programs for disabled persons. Every indication is that these programs are popular and provide a valuable service to this population. Computer-based technologies have evolved to become important communications tools for the disabled. Regardless of the impairment (hearing, vision, or mobility), computer-based assistive technologies have been developed that can greatly aid the learning process in both distance learning and traditional settings.

11: Teachers' Perspective Issues

Environment:

The teacher should try to create a meaningful learning environment that utilizes:
- Life
- Work
- Educational experiences

Creating a friendly, social environment in which learning is promoted is also essential for successful moderating.
- Make as much interaction public as possible.
- Create a space for non-classroom-related interaction.

Every student should be given every opportunity to improve until the learning experience comes to an end. Reasonable accommodations for the students' needs and desires should be made:
- Consider culture
- Invite discussions about students background and experiences (ex. Students can post a biography at the start of class)
- Invite conversations about different cultures. Often it is better to learn from peer discussion than read a document at the start of class about diversity.
- Religions have different non-work days, which need to be considered when forming team charters.
- Physical abilities
- Learner style preferences

The facilitator must make participants comfortable with the system and the software that the conference is using.
- Make the technology transparent so the learner may concentrate on the academic task at hand.
- Provide technology support.

Organization:

Present the syllabus (student/teacher contract) setting the agenda for the class:
- The objectives of the discussion
- The timetable
- Procedural rules
- Decision-making norms

Presentation:
- The teacher should present the curriculum in a manner and provide students with the proper tools that assist the students with easily translating theories into

applications.
- The student should expect little or no lecturing. Lecturing yields marginal results in the online environment.
- The student should not be subjected to tests requiring memorization. Case analysis would be more appropriate.
- The moderator uses questions and probes for student responses that focus discussions on critical concepts, principles and skills.

Availability and approachability:

- The facilitator should solicit feedback from the students and observe and respond as appropriate throughout the entire process.

- With respect to the course evaluation process on a regular basis (i.e. weekly updates of what has been turned in and what is missing).

- Timely and quality feedback on student contributions to discussion, homework activities, projects and quizzes.

- The facilitator should be online everyday (at a minimum 5 of 7 days). This depends upon how the class is conducted. If the students meet 5 of 7 days but whatever days they choose, they will expect to hear from their teacher daily. The teacher needs to communicate office hours.

Time to facilitate an online course requires more hours than a traditional class.

Overcoming transition from Brick to Click:
- Lack of verbal and visual cues
- Ask—explicitly and frequently—whether people understand the material or the directions.
- Make clear the fact that we are receptive to questions, and we need to answer those questions promptly, clearly, and in such a manner that people feel comfortable asking further questions.

12: Administrative and Staff Issues

Implementation of Distance Education: Administrator is responsible for making decisions about implementing distance education in their organization. Requires support from the top level of the organization. Administrator is responsible for determining policy for distance education programs with the support of the management team. Administrator may also be responsible for marketing of the program.

Budgeting Polices: Although funds are not required for buildings and equipment, a budget sufficient to cover the development of course materials and delivery of the distance education program is required. [39] Capital funds may be necessary for the update of computer equipment.

Establish Staff: Establish sufficient staffing of distance education teachers. Many Distance Education Program Managers complain of inadequate staffing. [35] Consider providing economic or other compensation for distance education instructors. [29]

Training and Support for Teaching Staff: Consider the appointment of a Distance Education (DE) coordinator to ensure a successful distance education program. DE coordinator can support the faculty with technology and other issues related to online learning.[35] Provide training to instructors on the technology used in the distance education environment. Provide continuous communication with administration and staff to develop share ideas and concerns and to build community.

Training and Support for Students: Provide special services such as library, online registration, purchase of required materials, academic and financial advisors.

Technical & Administrative Support: Ensure compliance for issues such as software licensing, copyright, intellectual property rights, and accessibility (e.g., 508, SCORM). Administrator is responsible for the database containing staff and student information and evaluation of course and instructors.

13: Copyright

What is copyright?

Copyright is a form of protection provided by the laws of the United States (title 17, U.S. Code) to the authors of "original works of authorship," including literary, dramatic, musical, artistic, and certain other intellectual works.

This protection is available to both published and unpublished works. Section106 of the 1976 Copyright Act generally gives the owner of copyright the exclusive right to do and to authorize others to do the following:

- To reproduce the work in copies or phonorecords;
- To prepare derivative works based upon the work;
- To distribute copies or phonorecords of the work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
- To perform the work publicly, in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works;
- To display the copyrighted work publicly, in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work; and
- In the case of sound recordings, to perform the work publicly by means of a digital audio transmission.

In addition, certain authors of works of visual art have the rights of attribution and integrity as described in section 106A of the 1976 Copyright Act. For further information, request Circular 40, "Copyright Registration for Works of the Visual Arts."

It is illegal for anyone to violate any of the rights provided by the copyright law to the owner of copyright. These rights, however, are not unlimited in scope. Sections 107 through 121 of the 1976 Copyright Act establish limitations on these rights. In some cases, these limitations are specified exemptions from copyright liability. One major limitation is the doctrine of "fair use," which is given a statutory basis in section 107 of the 1976 Copyright Act.

In other instances, the limitation takes the form of a "compulsory license" under which certain limited uses of copyrighted works are permitted upon payment of specified royalties and compliance with statutory conditions. For further information about the limitations of any of these rights, consult the copyright law or write to the Copyright Office.

Who can claim copyright

Copyright protection subsists from the time the work is created in fixed form. The copyright in the work of authorship immediately becomes the property of the author who created the work. Only the author or those deriving their rights through the author can rightfully claim copyright.

In the case of works made for hire, the employer and not the employee is considered to be the author. Section 101 of the copyright law defines a "work made for hire" as:
- a work prepared by an employee within the scope of his or her employment; or
- a work specially ordered or commissioned for use as:
- a contribution to a collective work
- a part of a motion picture or other audiovisual work
- a translation
- a supplementary work
- a compilation
- an instructional text
- a test
- answer material for a test
- an atlas
- if the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire.

The authors of a joint work are co-owners of the copyright in the work, unless there is an agreement to the contrary.

Copyright in each separate contribution to a periodical or other collective work is distinct from copyright in the collective work as a whole and vests initially with the author of the contribution.

Two General Principles

Mere ownership of a book, manuscript, painting, or any other copy or phonorecord does not give the possessor the copyright. The law provides that transfer of ownership of any material object that embodies a protected work does not of itself convey any rights in the copyright.

Minors may claim copyright, but state laws may regulate the business dealings involving copyrights owned by minors. For information on relevant state laws, consult an attorney.

How long copyright protection endures

Works Originally Created on or after January 1, 1978:
A work that is created (fixed in tangible form for the first time) on or after January 1, 1978, is automatically protected from the moment of its creation and is ordinarily given a term enduring for the author's life plus an additional 70 years after the author's death. In the case of "a joint work prepared by two or more authors who did not work for hire," the term lasts for 70 years after the last surviving author's death. For works made for hire, and for anonymous and pseudonymous works (unless the author's identity is revealed in Copyright Office records), the duration of copyright will be 95 years from publication or 120 years from creation, whichever is shorter.

Works Originally Created before January 1, 1978, But Not Published or Registered by That Date
These works have been automatically brought under the statute and are now given federal copyright protection. The duration of copyright in these works will generally be computed in the same way as for works created on or after January 1, 1978: the life-plus-70 or 95/120-year terms will apply to them as well. The law provides that in no case will the term of copyright for works in this category expire before December 31, 2002, and for works published on or before December 31, 2002, the term of copyright will not expire before December 31, 2047.

Works Originally Created and Published or Registered before January 1, 1978
Under the law in effect before 1978, copyright was secured either on the date a work was published with a copyright notice or on the date of registration if the work was registered in unpublished form. In either case, the copyright endured for a first term of 28 years from the date it was secured. During the last (28th) year of the first term, the copyright was eligible for renewal. The Copyright Act of 1976 extended the renewal term from 28 to 47 years for copyrights that were subsisting on January 1, 1978, or for pre-1978 copyrights restored under the Uruguay Round Agreements Act (URAA), making these works eligible for a total term of protection of 75 years. Public Law 105-298, enacted on October 27, 1998, further extended the renewal term of copyrights still subsisting on that date by an additional 20 years, providing for a renewal term of 67 years and a total term of protection of 95 years.

Public Law 102-307, enacted on June 26, 1992, amended the 1976 Copyright Act to provide for automatic renewal of the term of copyrights secured between January 1, 1964, and December 31, 1977. Although the renewal term is automatically provided, the Copyright Office does not issue a renewal certificate for these works unless a renewal application and fee are received and registered in the Copyright Office.

Public Law 102-307 makes renewal registration optional. Thus, filing for renewal registration is no longer required in order to extend the original 28-year copyright term to the full 95 years. However, some benefits accrue from making a renewal registration during the 28th year of the original term.

For more detailed information on renewal of copyright and the copyright term, request Circular 15, "Renewal of Copyright"; Circular 15a, "Duration of Copyright"; and Circular 15t, "Extension of Copyright Terms."

Fair use

According to Section 107, "the fair use of a copyrighted work . . . for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement." The legislative history of the law (House of Representatives Report No. 94-1476) noted that no adequate definition of the concept of fair use had emerged, and that no generally applicable definition was possible. Rather, the doctrine should be viewed as "an equitable rule of reason," with each case to be decided on its own merits against the criteria provided in the law.

The phrasing here is critically important. Section 107 does not grant educators wholesale permission to use copyrighted materials simply because they work in schools or colleges. Only a fair use is legal, and fair use cannot be determined until four essential criteria have been considered.

Congress deliberately wrote the criteria in broad, general terms to provide a flexible structure that could be applied across a multitude of potential fair use scenarios without the need for constant revisions to the law. No single criterion is enough to deny fair use. Even if one criterion weighs against, the use may still be legal if the other three criteria weigh in favor.

The criteria include the following:
- The purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes. Uses in a nonprofit, educational setting are more likely to be fair use than those in a corporate training or proprietary college setting. Reproduction for purposes of criticism or commentary may be considered more favorably, even if for commercial purposes.
- The nature of the copyrighted work - Nonfiction works are more likely to be considered fair use than fictional or artistic works containing a higher degree of creative expression. Published works are generally favored by courts more than unpublished materials, and printed works more than audiovisual materials.

Publications designed to be consumable, such as workbook pages or standardized test forms, should never be reproduced without permission.

- The amount and substantiality of the portion used in relation to the copyrighted work as a whole. - The law itself does not provide specific limits or percentages, although criteria have been set in negotiated guidelines that will be discussed below. In many cases with printed materials, the entire copyrighted work is desired, such as a journal article, illustration, or photograph. The case for fair use can be enhanced if no more of the published original is taken than is necessary to meet the user's needs. This criterion also has a qualitative component in that reproduction of even a small proportion of a work may exceed fair use if that portion contains the heart or essence of the original.
- The effect of the use upon the potential market for or value of the copyrighted work . . . In infringement suits, the courts consider whether it was reasonable to expect the ultimate recipient of a reproduction to have purchased that copy or paid a licensing fee. Courts also consider effect in the context of the potential financial harm to the copyright holder if the act in question were a widespread practice. This factor has particular implications for video-based distance education courses. Under the current law, audiovisual materials cannot be transmitted without permission, partly because of fears of copyright owners that the transmissions will be recorded and reused at receive sites, resulting in a potential loss of sales.

14: Handouts, Study Guides and Visuals

Printed Material: Printed material can enhance the teaching, learning, and managing of distance education. [36] The most common are discussed here.

Syllabus: The syllabus for a distance learning environment must be provided on the first day of class and contain the instructor information, the textbook and any other required materials and the logistics such as meeting times and locations if applicable. It must contain all policies such as attendance and participation as well as special items set forth by the individual instructor or institution. The syllabus must contain the course and unit goals and objectives along with instructional activities, assignments, and assessment information and due dates for all assignments. [36]

Interactive Study Guide: An interactive study guide can prove to be a useful tool, especially if the distance education program uses some type of telecast or video. The study guide contains an outline of the course or instructional unit and materials such as graphics, tables, and exercises to enhance the learning process. The student must have the guide prior to the beginning of the instructional unit. [36]

Text: If textbooks are required and the course is entirely online, students should be able to purchase the textbook online before the beginning of the start of class. If textbooks are available to be viewed online, provide the ability to print.

Visuals: Supplementing the written word with visuals will aid in comprehension. Use

visuals, such as conceptual maps and graphics to show relationships and to clarify difficult concepts. When using visuals in distance education consider the size of the file and the speed of transmission of the visual to the learner's computer.

Graphic Design Principles: Design all material in accordance with graphic design principles. [36] Consider size, font, color, and contrast when designing graphics and other visuals. The Mathematics Department at Duke University has an online interactive book about design principles.

15: Internet Communication Tools

Internet Definition
A global network connecting millions of computers. More than 100 countries are linked into exchanges of data, news and opinions. [37]

Communication
A process by which information is exchanged between individuals through a common system of symbols, signs or behavior. [20]

Attending an online class usually means connecting to the Internet or intranet using a personal computer and communications equipment. The client or student end usually uses a modem (56 kilobits per second) or cable modem (11 megabits per second).

Medium
How we physically send and receive information
- Modem: Slow method of communication where the user dials into an Internet Service Provider; user connects and disconnects as needed
- DSL/Cable modem: Fairly fast, popular method of connecting to the Internet; connection can remain constant
- T1: Very fast Internet access; also remains connected if the user chooses

Protocols
A protocol is a set of "rules" for computer-mediated communication, such as the Internet and servers. There are many protocols or rules for performing specific functions on the Internet. TCP/IP is often called the language of the Internet.
- HTTP: *Hyper Text Transfer Protocol*, used for web browsing
- SMTP: *Simple Mail Transfer Protocol,* used for sending mail
- NNTP: *Network News Transfer Protocol,* used for newsgroups
- FTP: *File Transfer Protocol*, used to send and receive   files
- TCP/IP: *Transmission Control Protocol/Internet Protocol,* the "universal" computer language that facilitates all the communication taking place over the Internet

Delivery Modes

Internet communication can be in real time (synchronous) or at different times

(asynchronous). Once you have a user ID, password, communication equipment, and have installed and configured some client software on your computer, you can connect to your classroom or other Internet-accessible sites.

- Asynchronous (Different time-different place or different time-same place)
  - o Blackboard
  - o eMail server
- eMail clients (Yahoo!, AOL)
- Newsgroup clients (Outlook Express)
- Streaming video (AppleQuickTime, Real Networks)
- Synchronous (Same time-same place or same time-different   place)
  - o Instant Message/Chat
    - ▪ AOL Instant Messenger
    - ▪ MSN Messenger
    - ▪ Yahoo!
    - ▪ ICQ
    - ▪ Trillian
- Telephone
- Microsoft LiveMeeting

Classroom Delivery Systems

There are companies that will either sell you the learning management system software or host your classroom on their servers.

- Blackboard
- WebCT

Using Internet Tools

Often computers are thought to be time wasters and not savers. Part of successful online communications is becoming proficient at searching for things.

Finding things quickly:
- Google
- Dogpile
- ProFusion
- Mamma
- Ask Jeeves

Emotions
Emoticons are facial expressions made by a certain series of keystrokes. Most often producing an image of a face sideways. These emoticons help set the tone during remote communications, such as instant messaging or email. Often your tone does not transfer, but the emoticon is a visual clue to your intention. [6]
- http://www.muller-godschalk.com/emoticon.html
- http://www.computeruser.com/resources/dictionary/emoticons.html

- http://www.clicksmilies.com/

What's new?
- Wireless connectivity has freed the student to access their class anytime, anywhere—even from coffee shops.
- Wireless example: Middle Tennessee State University, http://www.mtsu.edu/~wireless/

16: The Web as a Teaching Tool

If you want students to take your site seriously, you must demonstrate that you consider it essential by incorporating it into your teaching method.

Here are some suggestions for promoting and using your site and other online and/or asynchronous communication tools.

Give a site tour. If you have a face-to-face classroom in conjunction with the site, use the meeting to demonstrate the site's features. If your class is asynchronous, provide documentation explaining the features and uses of the site to the learners.

Include an FAQ. A frequently asked questions list can provide a quick reference for learners while addressing the typical issues students confront with the site. This should also allow them to report any problems with the site, providing you with valuable feedback.

Use the site in class. Promote the site through either the lessons or materials. Don't forget that you spent the time to create the resource—use it.

Give credit. If you provide web-based resources as optional learning tools and opportunities, find a way to reward the students who use them.

Let them find it. If students ask questions about the site or questions that can be answered with the online materials, direct them to the site for the answers.

Online communication

Online communication requires participation. Without it, learners have nothing to keep them engaged. Online discussions may falter for the following reasons:
- No community: If there is little exchange between students in the online discussion, their interest is likely to wane.
- No motivation: Make sure the learners understand that discussions are an important part of the learning process and their grades.
- Unfamiliarity: Make sure the learners understand the process for retrieving and posting messages.

To encourage participation in online discussions:

Participate. Use the opportunity to facilitate discussions by responding to posts and leading learners to new avenues of discussion. If they see that you are participating, they will be encouraged to participate as well.

Give credit. Let the learners know that their participation and use of the site and its materials, including discussions, is being rewarded.

•Encourage collaboration. The isolated nature of online learning requires interactivity to keep students engaged. If they work together in a collaborative environment, they are more likely to remain interested and involved.

Be realistic. Use feedback from the students to understand which aspects of the online environment are not working. Refine and improve any web sites, online materials, or asynchronous discussion procedures for future courses.

17: Assessment Issues

The debate over standard vs. traditional assessment methods will probably continue forever (as will the debate over grounded vs. technology-driven environments). Each type of assessment has its advantages and disadvantages, and each has a role in creating a complete education experience for the students.

Whether the assessment is a lengthy multiple-choice exam, an exam comprised of timed, written essays or based solely on performance in discussions and projects, the ultimate goal should be assessment of learning. There may be no way to determine if that learning stems from the success of the assessment method, teaching method, or from a student's desire to learn, however, if instructors at all levels 'go' with what feels right for them, then every learner will eventually confront both types of assessment to their benefit.

The question shouldn't be: *Which method is best?* The question should be: *Are learners being exposed to each method?* "

Basic Principles of Assessment [19, 34]
- Assessment determines if the goals of a training or educational program are being met
- Assessment ascertains a program's effectiveness
- Assessment influences student motivation and learning
- Good assessment enhances instruction
- Good assessment is valid
- Good assessment is fair and ethical
- Good assessments use multiple methods
- Good assessment is efficient and feasible
- Good assessment appropriately incorporates technology

Types of Assessment
- Multiple Choice: This category includes multiple choice, fill-in the blanks, true/false, matching questions. These assessments are easily scored, sometimes with the use of technology, however good test items require careful development. Critical thinking skills and creativity cannot be measured with these closed-ended questions.
- Alternative/Authentic Assessment most conducive to Distance Education:
    - Portfolios—shows a student's progress over time. In your portfolio, you might include the individual papers that you wrote, some items from your learning team newsgroup to show how you interact/communicate with others, and the assessments you receive from your instructor (Electronic Portfolios: A New Idea in Assessment).
    - Case Studies—allows students to apply learning to real-life situations. A case study typically asks a specific question to be answered. Can be performed individually or with a learning team.
    - Projects—similar to case studies but usually larger in scope. Can be performed individually or with a learning team. Usually starts with a problem and includes the planning and implementation of a real-world solution.
    - Discussion Questions—open-ended essay questions allow students to show that they understand the material by applying the knowledge in written format. Since there is generally no one correct answer, the students within the class get to "hear" other opinions and ideas. It also provides for additional participation between the students as they critically reflect on each other's responses.

Develop Criteria and Standards for Assessment
- Identify fair and effective grading practices. Kathy Schrock's Guide for Educators contains a wealth of information on developing rubrics. The material is located at Discovery Channel School
- Develop assessment that is valid. Make sure you are measuring what you think you're measuring. The techniques and instruments and their relevance to the learning environment must be evaluated.
- Develop assessment that is reliable. A reliable scoring process will ensure that the results of the rating are consistent regardless of who performed the assessment and when.

18: Evaluation Issues [38]

Why Evaluate?

Effective teachers use a variety of means, some formal and others informal, to determine how much and how well their students are learning. For example, to formally evaluate student learning, most teachers use quizzes, tests, examinations, term papers, lab reports,

and homework. These formal evaluation techniques help the instructor to evaluate student achievement and assign grades.

To evaluate classroom learning informally, teachers also use a variety of techniques. For example, teachers pose questions, listen carefully to student questions and comments, and monitor body language and facial expressions. Informal, often implicit evaluations permit the teacher to make adjustments in their teaching: to slow down or review material in response to questions, confusion, and misunderstandings; or to move on when student performance exceeds expectations.

When teaching at a distance, educators must address a different teaching challenge than when teaching in a traditional classroom. For example, instructors no longer have:
- A traditional, familiar classroom.
- A relatively homogeneous group of students.
- Face-to-face feedback during class (e.g. students' questions, comments, body language, and facial expressions).
- Total control over the distance delivery system.
- Convenient opportunities to talk to students individually.

For these reasons, distance educators may find it useful to not only formally evaluate students through testing and homework, but to use a more informal approach [2] in collecting data to determine:
- Student comfort with the method used to deliver the distant instruction.
- Appropriateness of assignments.
- Clarity of course content.
- If class time is well spent.
- Teaching effectiveness.
- How a course can be improved.

Types of Evaluation

Evaluation can be either formative, summative, or a combination of both.

Formative evaluation:
- Is an on-going process to be considered at all stages of instruction.
- Will enable the instructor to improve the course as he/she proceeds.
- Facilitates course and content adaptation.
- Will identify major gaps in the instructional plan or the need for minor adjustments.

Some strategies that educators can use to collect formative data from their distant students include:
- Post cards: provide each student with pre-stamped and preaddressed postcards. On a weekly basis, have students use the postcards to share their concerns or respond to questions during the last three to five minutes of class.
- Electronic mail: Can be a very effective way for instructors and students to

communicate. Another plus, while the instructor is eliciting information about classroom learning, students   become familiar with the use of electronic mail, a valuable skill.
- Telephone: Call students often. Ask them open-ended questions (e.g., "What snags did you run into on the second writing assignment?") to let students voice their concerns. Follow with probes (e.g., "Then, will you need more information sources?"). Set phone-in office hours but be sure to welcome calls at other times.

Summative evaluation:
- Assesses overall effectiveness of the finished product or course.
- Can be a springboard in developing a revision plan.
- Can be a baseline of information for designing a new plan, program, or course.
- Will not help current students since it is conducted upon course completion.

Some questions that educators may want to ask students when collecting summative data include:
- List five weaknesses of the course.
- List three (or five) strengths of the course.
- If you were teaching the course, what would you do differently?
- Student background information: age, level in school, number of distance delivered courses taken prior to this one.
- What would you recommend to a friend planning to take this course?
- What did you think would be covered in this course but was not?
- Would you recommend this course to a friend? Why or why not?

Evaluation Methods

Within the context of formative and summative evaluation, data may be collected through quantitative and qualitative methods.

Quantitative evaluation:
- Involves asking questions, which can be statistically tabulated and analyzed, frequently using a scale, check list, or yes/no responses.
- Limits students to responding to the categories made available to them.
- Needs a large student sample for relevant statistical analyses.

Quantitative methods may be most useful for gathering information on large numbers of respondents for whom more in-depth, personalized approaches are not feasible. However, they do have some significant drawbacks:
- Many distance education courses have relatively small class sizes with students from various backgrounds. These small, stratified populations typically defy relevant statistical analysis.
- Quantitative surveys typically result in a rate of return of under 50 percent. A low rate of return often suggests that only those feeling very positively or negatively about the course   responded to the evaluation.

- By definition and design, forced choice surveys offer respondents a limited number of possible response options. Therefore, fresh insights and unique perspectives falling outside the provided response categories go unreported.
- The cumbersome and often tedious nature of quantitative data collection can discourage formative evaluation, and often results in an over-reliance on summative evaluation.
- Statistical analysis often results in an illusion of precision that may be far from reality.

Qualitative evaluation:
- Is typically more subjective.
- Involves gathering a wider range and depth of information.
- Is more difficult to tabulate into neat categories.
- Will be less affected by typical small class size.
- Is a more flexible and dynamic method.
- Is not limited to pre-conceived topic of inquiry.
- Allows for student output of topics.

Can use:
- Open ended questioning—with respondents asked to identify course strengths and weaknesses, suggest changes, explore attitudes   towards distance delivery methods, etc.
- Participant observation—with the distance educator observing group dynamics and behavior while participating in the class as an observer, asking occasional questions, and seeking insights regarding the process of distance education.
- Non-participant observation—with the distance educator observing a course (e.g., an audio conference, interactive television class, etc.) without actually participating or asking questions.
- Content analysis—with the evaluator using predetermined criteria to review course documents including the syllabus and instructional materials as well as student assignments and course-related planning documents.
- Interviews—with a facilitator or specially trained individual collecting evaluative data through one-on-one and small-group interviews with students.

What to Evaluate

Consider the following areas:
- Use of technology—familiarity, concerns, problems, positive aspects, attitude toward technology.
- Class formats—effectiveness of lecture, discussion, question and answer; quality of questions or problems raised in class; encouragement given students to express themselves.
- Class atmosphere—conduciveness to student learning.
- Quantity and quality of interaction with other students and with instructor.
- Course content—relevancy, adequate body of knowledge, organization.

- Assignments—usefulness, degree of difficulty and time required, timeliness of feedback, readability level of print materials.
- Tests—frequency, relevancy, sufficient review, difficulty, feedback.
- Support services—facilitator, technology, library services, instructor availability.
- Student achievement—adequacy, appropriateness, timeliness, student involvement.
- Student attitude—attendance, assignments submitted, class participation.
- Instructor—contribution as discussion leader, effectiveness, organization, preparation, enthusiasm, openness to student views.

Evaluation Tips
- Check out and adapt already published questionnaires; there's no need to re-invent the wheel.
- Draft and revise questions; change if necessary.
- Make use of follow-up probes.
- Alternate between instruction and interaction.
- Sequence your questions for best effect—go ahead and ask for suggestions for improvement before asking for what is good. This will help convey sincerity for seeking improvements.
- Place open-ended questions after quick answer questions. This gives students built-in thinking time.
- On summative evaluation, assure anonymity. This can be accomplished by having all questionnaires sent to a neutral site where they would be removed from their envelopes and forwarded to the instructor without a postmark.
- Establish rapport by being interested and supportive. Withhold judgmental responses.
- Adapt to the student in degree of formality and pace of communication.
- Use evaluation as a method for understanding teaching and learning.
- Try to get both positive and negative feedback. It is important not only to know what is not working, but also what is working.

Innovations in Distance Course Evaluation

A model suggested by Open University of Great Britain has set aside the traditional approach to course evaluation by incorporating more naturalistic methodologies with holistic perspectives.

This second perspective for evaluation uses focus groups, interviews, observations, and journals to collect evaluation information in order to obtain a rich and colorful understanding of events related to the distance education activity.

19: References

[1]ALA (American Library Association) website. Retrieved November 1, 2003, from http://www.ala.org/.

[2]Angelo, T. & Cross, P. (1993). *Classroom assessment techniques: A handbook for college teachers*. San Francisco: Jossey-Bass Publishers.

[3]Bauman, M. (n.d.). Online Learning Communities. Retrieved November 8, 2003, from http://leahi.kcc.hawaii.edu/org/tcc_conf97/pres/bauman.html

[4]Berge, Z. (2001, September 29). *The Role of the Online Instructor/Facilitator*. Retrieved November 8, 2003, from http://www.emoderators.com/moderators/teach_online.html

[5]Clark, D. (2000). *A quick guide to writing learning objectives.* Retrieved November 1, 2003, from http://www.nwlink.com/~donclark/hrd/templates/objectivetool.html.

[6]Computer User.Com. (n.d.). *Emoticons*. Retrieved November 18, 2003, from http://www.computeruser.com/resources/dictionary/emoticons.html

[7]Digital Divide Basics (2003). Retrieved October 20, 2003, from Digital Divide Network website at http://www.digitaldividenetwork.org/content/sections/index.cfm? key=2.

[8]Eastmond, D. (2000). Realizing the promise of distance education in low technology countries. *Association for Educational Communications & Technology.* Retrieved, November 12, 2003, from University of Phoenix's ProQuest database.

[9]Emelo, R. & Francis, L. (2002). Virtual team interaction. *Training & Development.* 56 (10). Retrieved October 30, 2003, from University of Phoenix's ProQuest database.

[10]Heinich, R., Molenda, M., Russell, J., & Smaldino, S. (1999). *Instructional Media and Technologies for Learning Supplement: Custom edition for University of Phoenix.* Upper Saddle River, NJ: Merrill.

[11]Horton, S. (2000). *Web Teaching Guide.* New Haven: Yale University Press.

[12]Illinois Online Network (ION). (2003, May 7). What Makes A Successful Online Facilitator. Retrieved November 8, 2003, from http://www.ion.illinois.edu/IONresources/onlineLearning/instructorProfile.asp.

[13]Kearsley, G. (n.d.). *Adult Learning (K.P. Cross).* Retrieved November 2, 2003, from http://tip.psychology.org/cross.html.

[14]Kearsley, G. (n.d.). *Andragogy (M. Knowles).* Retrieved November 2, 2003, from http://tip.psychology.org/knowles.html.

[15]Kearsley, G. (n.d.). *Multiple Intelligences (H. Gardner).* Retrieved November 2, 2003, from http://tip.psychology.org/gardner.html.

[16]Kearsley, G. (n.d.). *Operant Conditioning (B.F. Skinner).* Retrieved November 2, 2003, from http://tip.psychology.org/skinner.html.

[17]Kelly, M. (1992). *So you want   to offer a distance education course in Hong Kong?* Retrieved October 20, 2003, from http://www1.worldbank.org/disted/Policy/Global/jur-01.html.

[18]Mariani, M. (2001). Distance   learning in postsecondary education: Learning whenever, wherever. *Occupational Outlook Quarterly.* 45(2), 2-11.   Retrieved October 23, 2002, from University of Phoenix's Library InfoTrac OneFile.

[19]McMillan, J. H. (2000). Fundamental assessment principles for teachers and school administrators. *Practical Assessment, Research & Evaluation.* 7(8). Retrieved November 20, 2003, from http://pareonline.net/getvn.asp? v=7&n=8

[20]Merriam-Webster. (n.d.). *Communication.* Retrieved November 18, 2003, from http://www.m-w.com/cgi-bin/dictionary.

[21]Merryfield, M. M. (2001). The paradoxes of teaching a multicultural education course online. *Journal of Teacher Education.* 52(4), 283. Retrieved October 23, 2002 from University of Phoenix's Library InfoTrac OneFile.

[22]Meyer, K. (2003). The Web's impact on student learning. *T.H.E. Journal.* 30(10). Retrieved October 30, 2003, from University of Phoenix's ProQuest database.

[23]Moore, M. (1994). *Is there   a cultural problem in international distance education?* Retrieved   October 20, 2203, from http://www1.worldbank.org/disted/Policy/Global/cultural.html.

[24]On Purpose Associates. (2001). *Behaviorism.* Retrieved November 2, 2003, from http://www.funderstanding.com/behaviorism.cfm.

[25]On Purpose Associates. (2001). *Constructivism.* Retrieved November 2, 2003, from http://www.funderstanding.com/constructivism.cfm.

[26]On   Purpose Associates. (2001). *Multiple Intelligences.* Retrieved   November 2, 2003, from http://www.funderstanding.com/constructivism.cfm.

[27]Orde, B., Andrews, J., et al.   (2001). Online Course Development: Summative Reflections. *International   Journal of Instructional Media.* (28) 4. Retrieved October 24, 2003, from University of Phoenix's Library EBSCOhost.

[28]PBS. (n.d.). *A Brief History of Distance Education.* Retrieved October 24, 2003, from http://www.pbs.org/als/dlweek/history/.

[29]Parker, A. (2003). Motivation and incentives for distance faculty. Online Journal of Distance Learning Administration 6(2). Retrieved November 9, 2003, from, http://www.westga.edu/~distance/ojdla/fall63/parker63.htm.

[30]Picciano, A. (2001). Distance learning: Making connections across virtual space and time. In Pearson Custom Publishing (Ed.), E-Education in the Global Environment. 55-67. Boston, MA: Pearson.

[31]Poe, B. (2002). *Interaction in the Asynchronous Learning Environment.* Retrieved July 31, 2002, from news://07-25G.MEED128C-EDTC510.Course-Materials, a University of Phoenix newsgroup.

[32]Potashnik, M. & Capper, J. (2003). Distance education: growth and diversity. Finance *& Development.* 35(1). Retrieved October 23, 2003, from University of Phoenix's Library InfoTrac OneFile.

[33]Roblyer, M. D. (1999). *Is choice important in distance learning? A study of student motives for taking Internet-based courses at the high school and community college levels.* Retrieved August 1, 2002, from http://www.apollolibrary.com/cp/edu/edtc510.html

[34]Rose, A. D. & Leahy, M. A. (1997). Assessment themes and issues. In *Assessing Adult Learning* (p. 100). San Francisco, CA: Jossey-Bass Inc., Publishers.

[35]Shea. T., Motiwalla, L., & Lewis, D. (2001). Internet-based distance education – The administrator's perspective. Journal of Education for Business, 77(2). Retrieved November 6, 2003, from University of Phoenix's ProQuest database.

[36]Simonson, M., et al. (2000). *Teaching   and Learning at a Distance.* In Pearson Custom Publishing   (Ed.), E-Education in the Global Environment. 55-67. Boston, MA: Pearson.

[37]Webopedia. (n.d.). *Internet.* Retrieved November 18, 2003, from http://www.webopedia.com/TERM/I/Internet.html

[38]Willis, B. (1993). *Distance   education: A practical guide.* Englewood Cliffs, NJ: Educational   Technology Publications.

[39]World Bank—Global Distance Education Net. Retrieved October 20,2003 from http://www1.worldbank.org/disted/.

[40]World Bank (2003). Global Distance Education Net. Retrieved October 20, 2003 from http://www1.worldbank.org/disted/Policy/Institutional/allocation.html