by Matthew Mariani

Line time and a place for everything. And so it was with postsecondary education. But things change. The information age has sparked a new trend in education: learning anytime, anyplace.

Students traditionally have gone to a specific classroom, on a specific campus, at specific times in order to take academic courses. Most still do so, but a growing number of students-many of them adult learners-choose distance learning. In this mode of education, the students and the instructor are separated by space or by both space and time.

Many providers of postsecondary education now offer courses, or even complete degree or certificate programs, via distance learning. These courses may be delivered using the World Wide Web, e-mail, standard mail, telephone, prerecorded video, live video, special software, or other means.

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. Even so, older adults don't have a lock on learning in this way. Some younger, more traditional college students also find advantages in taking a course or two via distance learning.

This article explores the what, why, and how of distance learning:

- What it is
- Why someone might choose it
- ◆ How students evaluate course providers.

Internet-based instruction is emphasized because it has grown so rapidly in recent years, but other types of distance learning also are explored. A concluding section suggests

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sources of more information for those who prefer offline resources or who do not have Internet access. The sidebar on page 10 highlights some statistics on distance learning in postsecondary education.

Defining distance learning

The term *distance learning* applies to a variety of learning situations. Sometimes students and instructors in different places interact using live, two-way video. More often, both time and space separate the learners from each other and from the instructor. The vehicles used for learning range from the U.S. Postal Service to the latest Internet-

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means of exchanging information across time and space.

Above all, remember that distance learning has more to do with learning than with distance. As Burks Oakley, associate vice president of academic affairs at the University of Illinois, puts it, "I never use the words 'distance learning' because, really, it's distanceless learning. It's providing new access to edu-

or they may not lecture at all. Examples of these alternatives illustrate some arrangements that fall under the category of distance learning.

Lecture. In some distance learning courses, students see and hear their instructors lecture from afar. This requires a broadcast system of some kind. In other courses, instructors prerecord lectures for later viewing, perhaps using conventional vid-

Janet Taylor took several courses through the television-satellite broadcast system of Utah State University Extension while earning her bachelor's degree in history. These courses relied on one-way video and two-way audio for live lecture and class participation. At a scheduled time, students assembled at multiple university extension sites around the State. The instructors lectured at one site, but the students at the other sites could see and hear instructors on a television monitor. Each stu-

"A whole class might comprise 25 to 80 people," Taylor says. "I took a couple of courses where there were about 10 people at my local site, a couple where there were 2 or 3 people,

> Although separated by distance, the various groups of students could follow the lecture and even ask questions. "When you click on your microphone to talk," Taylor says, "everybody in the classroom system can hear, so you feel like you have a group of students all in the same classroom, even though you can't all see each other."

> > David Goldberg, professor of general engineering at the University of Illinois, teaches two separate sections of a graduate course on genetic algorithms: one in a traditional classroom, the other via distance learning. For the oncampus version of the course, Goldberg gives classroom lectures, which are recorded with a digital camera. In the distance version of the course, students use a common Web browser to view and listen to the previously recorded lectures via streaming video. The video plays in

Welcome to Earth University.

a small window, and a slide show recreating classroom visual aids displays in a larger window. The slides advance in sync with the video lecture.

Lecture notes. Often, instructors who do not lecture provide written information that resembles lecture notes. These notes may include more detail than students might record when taking their own notes in a traditional classroom lecture. Distance learning courses increasingly offer written materials on Web pages to complement textbook readings and other assignments.

Tasha Overton and John Tanner have taken several online distance learning courses without receiving lectures of any kind. In place of lectures, they had access to Web pages with course content. "Basically, you have lecture notes," says Overton, who recently completed a bachelor's degree in computer and information science through the University of Maryland University College. "The course modules are in note form, and the notes go over everything. Then you have your assigned reading, and some teachers add extra notes of their own."

Tanner describes a similar setup for the three courses he has taken online while pursuing an associate of arts degree from Brevard Community College. He sees an advantage in presenting courses this way. "Everything that's covered in an online class is written down, so it's all accessible," Tanner says. "In a regular class, you can always look back at your own notes, but if you didn't take a note on something the teacher said in class, then you're out of luck."



The means of interaction

Any good course offers more than a lecture and some notes. Learning requires students to interact with each other and with the instructor. To enable this interaction, distance learning courses rely on electronic discussion boards, e-mail, chat rooms, the telephone, or some combination of these and other

Students engaged in distance learning rely on electronic discussion boards, e-mail, chat rooms, telephone, and other methods to interact with each other and with the instructor.

methods. Using various technologies allows for discussion, instructor feedback, and group projects.

Discussion. For courses in which both time and space separate students from each other and from the instructor, electronic discussion boards often provide the main forum for class discussion. "It's a place a teacher can post a series of topics for discussion," says Robert Saturn, a candidate for a master's degree in business communication at Jones International University. "At your own leisure, you go to the site and write a response. Your classmates also write responses. You comment on their responses, they comment on yours, and you have a real back-and-forth dialog."

The discussion boards also allow students to seek aid. When Overton had trouble getting her computer programs to compile for a class in data structures, she turned to her school's discussion board and to e-mail. "I posted [a message] to a new discussion group, and people responded, saying they were having the same problems," says Overton. Suggestions were offered in this venue, and some of her classmates followed up with e-mail messages.

In that case, three students helped Overton through the rough spots, but instructors also participate in the discussion groups. The instructors offer explanations, make suggestions, and moderate student discussions.

Goldberg finds the discussion boards most useful to address issues that students have in common. He thinks e-mail works better for specialized problems, but not always. "There are times when students have tough questions," he says, "and there's no substitute for hopping on the phone and talking to



me." For these times, some schools offer students a toll-free number.

Instructor feedback. Instructors give feedback on student work in different ways. The method used depends on the instructor, the assignment, and the school. Sometimes, students turn in papers or other class assignments by first-class mail. The instructor might write comments on the hard copy he or she receives and then mail it back to the student.

More often, this exchange takes place electronically. Students submit assignments via the Internet, and instructors respond in kind. "The best feedback comes from papers we write," says Saturn. "The beauty of doing this by e-mail is that you get back an entire copy of what you wrote with paragraphs inserted, which are the teacher's comments."

Michael Evanchik, adjunct associate professor and the Master of Business Administration Program director at the University of Maryland University College, thinks voice-mail feedback has even more value for the student. "Rather than typing out our comments—which is very labor intensive for the faculty—we can provide detailed feedback by speaking into the phone," he says. Instructors dial a local phone number and record a voice message, which is converted into an audio file and then sent to the e-mail address of one or more students. After logging on, the students simply double-click to hear what the instructor had to say. "It makes the contact more personal," says Evanchik. "You get some of the subtleties like in a physical classroom, where you can listen to the tone of voice."

Group projects. Some distance learning courses require students to work on projects in small groups. Students who coordinate work across great distances use the same tools employed to ease student discussions in general. "You're communicating via e-mail, chat, or any number of different ways when you're putting together a project with people all over the country," says Saturn. "We just did a project with me in Connecticut, one woman in Michigan, and another in the State of Washington. The three of us conducted a survey in our three separate places, put all the results together, and wrote up a conclusion together."

Overton did six group projects in the software engineering class she took online. She found working in a small group online comparable to working in person. "Regardless of whether you're in person or not, you're going to have the participation issues and the work schedules and everything else," Overton says. "As long as you have the participation, it's just the same."

Evaluating student learning

Instructors evaluate students in distance learning courses and traditional oncampus courses in almost the same way. Instructors grade projects, give exams, and gauge student participation—no matter how the class is deliv-

ered. But these evaluations take on a different look for the distance learner.

Students who opt for distance learning courses may have to turn in assignments more often than do their classroom counterparts. This is especially helpful for adult learners who do not attend classes and might otherwise have trouble staying on track. "In an online environment," says Evanchik, "the learning needs to be more continuous. The tendency is for work and family issues to take precedence, so students are forced into a position of trying to catch up in the week or so before an exam, and that's not a very effective way to operate."

Most distance learning courses have exams. Some students take tests or quizzes online, and others take pen and paper tests. Some schools require students to take exams under supervision on campus. If this is not practical, the students might arrange for an approved proctor to supervise the exam. For Cathy Chase, this proved a workable solution. Chase, who earned an associate of science degree in legal assisting at Brevard Community College, asked her work supervisor to serve as a proctor when she took her exams online.

Instructors commonly evaluate class participation by looking at the quality and quantity of a student's messages on the course discussion board. "It was part of your grade to post [something] to the class forum," says Tanner, whose experience is typical. "Everybody had to post on a weekly basis."

Choices and considerations

Distance learning makes education more available in many circumstances. For people who work, have family responsibilities, or live in rural areas, distance learning may offer the best chance for postsecondary education. But this mode of learning has challenges of its own, and it does not suit everyone. The first part of this section uses personal examples to illustrate why people choose distance learning. The second part points out things to consider before making such a choice.

Why distance learning?

Many people choose distance learning out of necessity. "In today's job market, people may travel or work irregular hours, and because of family commitments and other lifestyle choices, they have not been able to enroll in traditional higher education," says Oakley. "They're typically not the 18- to 22-year-olds we've had on our campuses. These are older, adult learners who may want to go back and get a degree, change professions,

or upgrade their skills."

Although many adult learners see distance learning as their only option, many others—some of them traditional-age college students—simply prefer it. Most people choose distance learning to overcome geographic constraints, to fit education

Work and family responsibilities may make regular classroom attendance difficult. Distance learning often solves this problem by allowing students to set their own schedules for study.

into work and family schedules, or to learn in a way that works better for them.

Crossing the miles. Distance learning allows students to attend faraway schools without moving across the country. This broadens educational choices for everyone. Taylor, who lives in a rural area near Vernal, Utah, knows this first hand. "I am very much a proponent of distance education," she says, "because without it, I would not have had an educational opportunity."

Distance learning also drastically expanded Overton's educational options. "Taking courses online allowed me to go to more than one school at a time," says Overton, who lives in Antioch, Tennessee. "For example, in the fall semester of my final year, I went to three different schools."

Traditional, oncampus students find benefits in distance learning as well. If they want to take a course not offered by their school, they might take it for transfer credit through another school via distance learning.

Finding time. For many people, work and family responsibilities or other considerations make regular classroom attendance difficult. Distance learning may solve this problem by allowing students to set their own schedules for educational activity.

In 1996, Saturn became computer services manager for a Kinko's quick printing company in Stanford, Connecticut, after several years of working in graphic design and desktop publishing. Saturn had earned a bachelor's degree in theater and mass communications in 1975, but he wanted additional education for professional growth. "I wanted a master's degree," Saturn says, "but since I'm subject to be called upon to come in to work early and stay late, it was difficult to be committed to sitting in class once or twice a week."

Distance learning allows Saturn to work over 40 hours a week on an unpredictable schedule and still continue his education. "You work at your own pace, at your own time of day," he says, describing his degree program. "You can be online and participate and do your assignments whenever it's convenient, as long as your assignments are turned in on time."

Chase opted for learning online to change careers without losing too much time with her children. She had worked as a secretary in the legal department of Harris Corporation for 2 years when the company decided to upgrade its legal secretary positions by making them paralegal jobs. Chase decided to pursue an associate degree in legal assisting to put herself in line for a promotion.

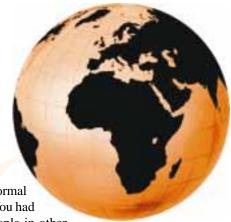
"At the time, I did not have a personal computer," Chase says, "but my employer let me use company computers on my lunch hours and before and after work. It made it affordable because I didn't have to miss any work to accommodate travel time for oncampus classes. It was a perfect fit."

In the evenings, she watched videotaped lectures at home. "I could stay up late if I wanted," says Chase, "and do it on my own time, without taking time away from my children."

Chase had completed a bachelor's degree in English almost 20 years earlier, and the courses she had taken fulfilled the general education requirement for the associate degree. Taking two courses per 2-month term, she finished the degree in just over a year and made a successful transition from legal secretary to paralegal.

Although adults with families and full-time jobs have busier





schedules, traditional students may want the flexible scheduling of distance learning as well. Younger students who take most of their classes on campus may use distance learning to resolve a course scheduling conflict, accommodate a part-time job, or speed their progress toward a degree.

Suiting one's self. People learn in different ways. Some students need the structure and the social interaction of regular classroom meetings. Others find the classroom setting unengaging.

Both Overton and Chase prefer to set their own pace and learn independently. "I learn better on my own," says Overton. "I have a short attention span, and I'll get bored really easily in class."

Chase, like Overton, had previous experience with classroom learning at the college level. "When I was pursuing my bachelor's degree fresh out of high school," says Chase, "I found it tedious to sit in a classroom and have a professor read to me. I don't need to be limited that way. If I want to forge ahead, I'd like to forge ahead."

Cautions to consider

Distance learning bestows benefits, but it makes demands too. Above all, it requires high motivation. The temptation to slack off looms larger for students studying with little supervision. And despite all the technological aids used in distance learning, communicating with coursemates and instructors takes more effort.

"What we were seeing here—and I believe it's a national trend—was that students who liked this method of learning, either out of convenience or necessity, would take a course online," says Katherine Cobb, dean of distance learning at Brevard Community College, "but our retention rates were lower than in a traditional classroom."

Tanner successfully completed all the distance learning courses he enrolled in at Brevard, but he had to make sure he never fell too far behind in his work. "That's the biggest problem I had: actually setting aside the time and not getting behind in my work," he says. "It wasn't really a big problem for me, but I could see it easily could be in online classes."

Students less motivated than Tanner might not fare as well. "If you don't have to show up three times a week and look into the professor's eye," says Cobb, "it might be easier to let things go and get behind and say, 'Oh well, I give up."" This holds true for both online courses and courses offered at a distance through other means.

A student who does stick with it may have to work harder than students on campus to interact with the instructor and with classmates. Even when students like Taylor participate in classes in real time via live broadcast, the interaction has a different quality. "You didn't have the same kind of contact you would with a teacher in a normal classroom," Taylor says. "You had to be aware there were people in other sites and try not to dominate the teacher's attention."

When both time and distance separate the students and the instructor, communication takes even more effort. Discussing complex subjects via e-mail or discussion boards may require lengthy, typewritten messages. While distance learning students labor at the keyboard, traditional students might get the same results with a brief face-to-face conversation.

"When somebody walks up after class and asks a question," says Goldberg, "you can pull out a piece of paper, and maybe a quick sketch will answer it, whereas the same thing can take several paragraphs to explain in words. The tools for sending figures over the Web are getting better, but it is harder to have good interaction."

Evaluating providers

Every student seeking postsecondary education faces the task of choosing a school. Selecting a provider of distance learning courses or programs presents some extra challenges. Students should ask a lot of questions before deciding. Check your local library for books about distance learning programs. (See the "Offline resources for distance learning" section at the end of the article.) Some of these will suggest specific questions to ask. The Western Cooperative for Educational Telecommunications offers a free publication, "Distance Education, A Consumer's Guide: What Distance Learners Need to Know," at http://www.wiche.edu/telecom/resources/publications.

The following three sections discuss areas to consider when evaluating schools: the institution itself; academic courses, programs, and instructors; and support services.

Sizing up the institution

Most providers of distance learning courses are traditional colleges and universities that have expanded beyond the limits of their campuses. Some other providers are virtual institutions, which have no campuses anywhere. Before signing up for courses, find out what kind of institution you're dealing with. Look into its accreditation status. And consider whether its geographic location matters.

Type of institution. Exploring distance learning options may turn up new institutions that do not fit the mold of a traditional college or university. Some for-profit companies now offer bachelor's or master's degree programs. These include some virtual universities offering courses only in cyberspace.

To complicate matters, some other organizations calling

themselves virtual universities do not offer any courses or degrees. These virtual organizations act as gateways to the distance learning courses offered by various traditional colleges and universities of a particular State or group of States. For example, Kentucky Virtual University promotes the distance learning courses of several public and private colleges and universities in Kentucky.

Accreditation. Accredited schools have demonstrated that their institutions meet certain standards. Eight regional accrediting bodies accredit most of the colleges and universities in the



United States. This accreditation applies to the institution as a whole. There is no separate accreditation for distance learning programs, but the accrediting bodies do look at these programs when evaluating an institution.

If a regionally accredited college or university begins offering distance learning courses for the first time, the accrediting body needs to review it again. If this new review has not yet taken place, it should be pending. Many institutions have ventured into distance learning in recent years, so they may be waiting for their next review.

In addition to regional accreditation, there are national and specialized professional accreditations. Nationally accredited institutions often have a special focus, such as computer science, tax preparation, or financial planning. The Distance Education and Training Council accredits many special-focus institutions nationally. Specialized professional accreditation applies to specific professional programs rather than entire educational institutions. For example, a regionally accredited college or university might offer a library science program that has an additional professional accreditation from the American Library Association.

If an institution lacks accreditation, the Western Cooperative for Educational Telecommunications recommends the following steps to evaluate the quality of the programs offered:

- Contact the State Department of Education and ask about the school's reputation.
- Contact alumni of the school and program you are considering, if possible.
- If your goals include licensing or certification, contact the appropriate agencies and question them about the institution, asking if the courses and programs are acceptable.
- Contact the Better Business Bureau and ask about the school's record.
- Read about the school's reputation in published directories on distance learning.
- Visit the school.
- Check with people in the field in which you plan to work and ask their opinions of the institution.
- ♦ Ask the institution: When was the school established? How many students are currently enrolled? How many degrees were awarded last year?

Students should examine claims of accreditation carefully. Disreputable schools may set up a separate organization, give it an impressive name, and say it has accredited them. The Council for Higher Education Accreditation suggests asking questions to guard against this. See its website at http://www.chea.org/About/12-questions.cfm.

Location. Although distance learning allows students to take classes at faraway schools, distance learning through a nearby institution has some advantages. These include increased access to school resources and, in some cases, lower tuition.

Even when students do not attend classes, living near the campus may allow them to use school computer labs or the library. It also makes occasional face-to-face contact with instructors a possibility; if a student has difficulty completing an assignment, meeting with the instructor may prove more helpful than exchanging e-mails.

At public institutions, the rules for in-State and out-of-State tuition rates apply to everyone, distance learners included. Taking courses through a public institution in your home State makes you eligible for lower in-State tuition.

Courses, programs, and instructors

The methods of delivering courses, the programs offered, and the quality and availability of instructors help determine whether students can reach their educational goals through a given school. Schools should make enough information about the content and delivery of courses available to permit prospective students to make informed choices. To get a better idea of what their experience would be like, students can talk to an instructor or an academic dean. For feedback about courses they are interested in, prospective students might also ask the school to put them in touch with students who have taken those courses.

Goldberg stresses the importance of looking at the technologies used to deliver a course. "Right now, there is sort of a Wild West of distance learning," he says, "and there are lots of variations." He points out that many online courses have websites that allow prospective students to get a course preview and try out some of the technologies used. "I recommend people do that," he says.

Students who want to pursue a degree through distance learning should make sure they can do so at a particular school. Look for complete degree programs with clearly defined requirements for distance learners. "You don't want a college or university where you can take only one class here or there," says Cobb. "You want to be able to achieve your degree and not get stuck because they haven't put the next class you need online."

Inquire about the qualifications of the instructors and the amount of interaction you can expect. Are the instructors fulltime faculty at the school? How quickly can they respond to student questions and problems?

Support services

Students must attend to various administrative tasks in support of their academic coursework. Among other things, they must register for courses, buy books, access library services, and obtain financial aid. Many educational institutions provide distance learners with the means to accomplish such tasks without setting foot on campus. Distance learners also have special needs for technical support and financial aid information. Some schools do better than others in providing these services.

Weldon Sleight, associate vice president for university extension and associate dean for continuing education at Utah State University, believes distance learners need easy access to aid when practical difficulties arise. "These students are not around admissions and records offices, financial aid and other student services, or libraries and computer laboratories," he says. "Somebody needs to be there to take them by the hand, figuratively, and help them get the contacts they need at the university."

Schools provide services to distance learners in various ways. Increasingly, distance learners can register for courses and buy books online. They may also have toll-free numbers to call for help with nonacademic problems. Schools may offer library resources online or lend materi-

als from campus libraries by mail. Some schools employ librarians who cater to the needs of distance learners.

Despite the increasing availability of support services from afar, distance learners may have to visit the campus on occasion. And they may find some tasks easier to accomplish in person.

Technical support. Students should understand technology requirements before enrolling in distance learning courses and receive technical support after beginning their studies.

To take a particular course, a distance learner might need access to a computer with a minimum amount of memory, an Internet connection of a minimum speed, and a television and videocassette player. The exact requirements depend on how the course is delivered. When courses require students to use discussion boards or other specialized software, schools typically provide an orientation to explain how to use these tools.

After classes begin, students may benefit from continuing technical support to resolve problems that arise. This becomes more important when the course heavily relies on computers. If

Students should understand technology requirements before enrolling in distance learning courses and receive technical support after beginning their studies.

you take a Web-based course with lectures delivered via streaming video and the required software fails to do its job, your academic progress stops dead. Having someone to call for help in these situations is a plus.

Financial aid. Distance learners may face hurdles when trying to obtain financial aid. Ask a school's financial aid office if you can get Federal aid at that school.

The laws and regulations that currently govern Federal financial aid limit eligibility in many instances of distance learning. For example, schools that offer more than half their courses via distance learning may not be allowed to disburse Federal aid. The same holds true for institutions at which more than half the enrolled students are distance learners. Students of an accredited virtual university thus may not receive aid. In addition,



Trends and statistics

In December 1999, the U.S. Department of Education published results of a survey on distance learning in postsecondary education in Distance Education at Postsecondary Education Institutions: 1997-98. This publication addressed the state of distance learning in the 1997-98 academic year, how this mode of learning has grown recently, and how it might continue to grow. The full report is available at http:// nces.ed.gov/pubs2000/2000013.pdf. Or, obtain a free copy by calling I (877) 4-ED-PUBS (433-7822). A few highlights of the findings appear below. Note that the term college-level refers here to courses above the high-school level offered by any college.

- About one-third of all postsecondary schools offered distance learning courses. Another one-fifth of the schools planned to start offering such courses within 3 years.
- Eight percent of all postsecondary schools offered college-level degree or certificate programs designed to be completed entirely through distance learning.
- Distance learning was much more common at public institutions: 78 percent of public 4-year schools and 62 percent of public 2-year schools offered distance learning courses, compared with 19 percent of private 4-year and 5 percent of private 2-year schools.
- Almost 50,000 college-level courses were offered for credit via distance learning.
- There were over 1.3 million enrollments in collegelevel distance learning courses for credit.
- The top three technologies used to deliver courses involved Internet-based instruction in which students and instructors were separated by both space and time, two-way interactive video, and oneway prerecorded video.
- Among higher education institutions offering distance learning courses, the percentage of institutions using Internet-based instruction in which students and instructors were separated by both space and time nearly tripled, from 22 percent of institutions in 1995-96 to 60 percent of institutions in 1997-98.

the complexity of the regulations makes administering aid difficult in some circumstances.

Offline resources for distance learning

Searching the Web is one way to find more information about distance learning, but there are other avenues. You might contact colleges and universities of interest and ask if they offer distance learning programs. If there are postsecondary educational institutions near you, start there.

You should also check your local library for directories and other printed guidebooks about distance learning. Many books identify institutions offering distance learning courses, degrees, and certificates. Some of these list both accredited and unaccredited schools and may or may not distinguish between the two types. Others only list programs from accredited schools. If you cannot find current editions of distance learning directories, ask a librarian for help. Sometimes, publications can be obtained through interlibrary loan. A few examples of different types of books on distance learning are noted below.

Bears' Guide to Earning Degrees by Distance Learning by John Bear, Ph.D., and Mariah Bear, MA. Ten Speed Press.

Identifies postsecondary schools offering distance learning. Distinguishes between accredited and unaccredited institutions. Indicates the type of accreditation. Also discusses how to evaluate schools, financial aid, accreditation, school licensing, "diploma mills," and alternative means of earning academic credit. Indexed by academic subject and school.

Campus Free College Degrees: Thorson's Guide to Accredited College Degrees Through Distance Learning by Marcie K. Thorson. Thorson Guides, L.L.C.

Identifies accredited postsecondary schools offering distance learning. Lists institutions accredited by the Distance Education and Training Council in a separate chapter. Also covers accreditation and alternative means of earning academic credit. Indexed by academic subject, State, and school.

The Distance Learner's Guide by the Western Cooperative for Educational Telecommunications. Prentice Hall.

Includes chapters on choosing a distance learning provider, understanding the role of computers, obtaining library resources, overcoming personal barriers to success, enhancing performance as a distance learner, and planning one's career.