This discussion of the availability of information sources and resources to students in higher education and continuing education argues that extension education and distance education will become increasingly prevalent because people change jobs more frequently and require additional skills and knowledge for those jobs. Many institutions assume that programs delivered off campus are comparable to those delivered on campus, and that information resources needed to support such programs are also comparable. It is often necessary, however, to make special arrangements, either with the institution's library or with local public libraries, to offer supplemental resources to students. Such resources may include microcomputers connected to computer networks and databases, as well as other library services and instruction on how to access research information. Six recommendations are offered for the provision of library services at off-campus and external degree programs: (1) the institution providing the program should provide the appropriate information resources; (2) students should undertake research projects appropriate to the level of the degree program; (3) students should be able to learn to use libraries and electronic resources; (4) traditional views of library usage must change to acknowledge distance education students; (5) scrutiny must be applied to off campus programs as it is to on campus programs; and (6) students must use available library services whether they are public libraries or the delivering institution library. It is concluded that it may become possible to deliver information resources to students without providing access to the home campus library. (DB)
HOW SHOULD THE NEW TECHNOLOGY AFFECT THE COMMISSION'S EXPECTATIONS FOR THE PROVISION OF LIBRARY SERVICES AT OFF-CAMPUS AND EXTERNAL DEGREE PROGRAMS?

According to The College Board a typical American will work at 10 different jobs during his/her lifetime. Each of these jobs will require "new skills, new knowledge, and new attitudes/values". (Lifelong Education in America: Becoming a "Nation of Students", Nov. 18-19, 1991). The impact of this reality on higher education is only now being felt. Americans have begun the process of entry and reentry to education programs that will last throughout their lives. What this means is clear enough; higher education must be able to offer adequate degree and skill based programs to meet the demand at the undergraduate and graduate levels and, at the same time, ensure the quality of these programs.

In arriving at the changing job picture for Americans, the College Board relied on the demographic changes that are affecting it.

- Sixty percent of our population will be over 30 years of age in the year 2000;
- one of every three will be a minority;
- and the fastest growing jobs in the workforce will require a college education. Given the fact that fewer minorities are completing higher education in recent years, it becomes obvious that a serious effort will have to be made to prepare these people for the jobs that have to be filled. While the need is critical for the minorities, it also impacts the caucasian population.

The situation is even more severe in California.
- By the year 2010 the state's population will increase by 9 million.
- The white population will be less than 50% of that number.
- Relatively few of the minority population in the state completes higher education.

"Between 1980 and 1986 no more than 14.1 per-cent of the transfers to the University of California in any year (from the Community College system) were black or Hispanic." Only 189 black students and 485 Latino students successfully transferred to the UC System in 1986. (Legislative Committee on the California Master Plan, California Faces...California's Future, March 1989). While the transfer rate to the California State System is greater than to the UC System, the number of graduates in the normal five year span is less than 30%.
These figures underscore the incredible need for increased educational opportunity for the adult population in the state of California. What is the state doing about this problem? There are 1,700,000 students in the state's public system of higher education and 200,000 in the private sector. Yet the burden of graduate education falls heavily on the privates. One half of the Master's degrees awarded in the state come from the private sector. 45% of the doctorates and 70% of the professional degrees are awarded by the privates. Only 27.5% of the doctorates offered by the UC system go to Americans, the remaining 27.5% to international students. (Higher Education in California, Organization for Economic Cooperation and Development, Paris, 1990, p. 40).

For the state to attempt to increase the number of graduate degrees offered by the Cal State and UC Systems would severely jeopardize the undergraduate instruction now offered. Given the need to increase the undergraduate population, it does not seem feasible, with today's budget limitations, to take on greater graduate education in the system. Therefore, for the state to meet the demands of both undergraduate and graduate needs it must work cooperatively with the private sector. The WASC Commission has the responsibility of determining the effectiveness and quality of these offerings.

At present, the University of California Extension program, a self-supporting operation, reaches 360,000 students in 11,000 different courses. Almost all of these students are taught by part-time faculty. The CSU and community college systems reach another 250,000 continuing education students. Over 50% of these latter graduates after 10 years of study. (OECD, 1990). 31% of undergraduates in the CSU system last year (1990) were 25 or older compared to 27% 10 years ago. (L. A. Times, Thurs. October 10, 1991). Obviously the need for providing higher education in the state is ongoing and critical. It is also obvious that to reach this vast population, it is necessary to provide access not only on campuses but at many sites throughout the state. This is currently being done by the state's public system and to a lesser degree by the privates. But it must be expanded.

The Commission faces the task of determining how well this education is delivered. Three primary concerns have to be addressed among others: what is the quality of the faculty teaching these programs; what are the available informational resources to support the programs; and how are the programs monitored by the institutions delivering them?

This paper is concerned with the availability of informational resources. The Commission standard assumes that programs delivered off-campus are of comparable kind to those delivered on campus. It is also assumed, therefore, that the informational resources needed to support such programs are comparable. Two options are open to the institution providing off-campus programs: make the home campus resource available to the student attending at the off-campus site or provide comparable resources from other sources. These other
sources have traditionally included bringing books from the home campus to the site, making arrangements with a local library to house support materials in addition to those they have in stock, and providing students with information about various libraries in their vicinity that have collections that would support the program. This latter is particularly effective if the available libraries are of a superior kind than the home library. Some faculty have resorted to bringing selected research materials to the classroom because no other access to sources was available.

The University of La Verne opted to bring the home campus library to the student. It also opted to provide selected materials pertinent to the degree program offered at the site and to work with other neighboring libraries as a backup. In point of fact, the neighboring library, as is the case in Fairbanks, Alaska at the military bases, became the library of first use because it is convenient, the personnel are cooperative, and the collection is the finest in the state. (The University of Alaska at Fairbanks). However, the University of La Verne still provides access to its Wilson Library at that site.

Current technology provides a variety of ways to bring needed resources to the student. Some of these are accessible to the student who owns a computer and subscribes to one or more indexes, for example Knowledge Index or Dialogue. Those who live close to a UC System unit can access the MELVYL catalogue and gain thereby use of the entire UC System collection via interlibrary loan or, through purchase of the local UC guest card (usually $25.00), access in person with take out privileges. But many off-campus sites are not convenient to the UC System or other appropriate libraries and we do not require students to own computers. Consequently, the University made the Wilson collection available to all students by converting the OCLC (On-Line Computer Library Center) tapes of the collection to a CD-ROM.

This system allows the student to bring up on the screen references by subject, title, author, or by one or more word searches. This last feature gives the student access to any word or combination of words that are on the catalogue card. The system also provides "browsing" capabilities by allowing the student to move backwards and forwards on the shelves adjacent to the book they called up.

In addition to the CD-ROM, the University provides the student access to a FAX machine at the CD-ROM site and to an 800 number to the library. Students can go to any of the University's centers in California, to any of the military bases where we have programs, and to our centers in Europe to access these technologies. The University is currently acquiring bids for placing the Wilson collection on a mini computer so that it can be accessed by modem from anywhere in the world. This will allow any student who can access a computer with a modem the option of searching the Wilson collection at his/her convenience.
In order to ensure adequate resources for the student, the Wilson Librarian can access the OCLC data base of over 22 million citations and through Bitnet and Internet, a variety of on-line catalogues including the Claremont Library catalogue, the MELVYL UC and Cal State catalogue and periodical collections, Dialogue, Medline, the UC Irvine catalogue, and the Hospital Library Index. In addition the Library has a variety of indexes including the ERIC, Dissertation Abstracts, and newspaper indexes.

The University system offers the student a number of options. He/she can go directly to the CD-ROM and do a bibliographic search, print out the items, and FAX the list to the Library. If the requests are for articles, the Library will copy the articles and return them to the student via FAX or mail. If the request is for one or more books, the library mails the volumes to the student by first class mail within 24 hours. This we call "Materials Delivery".

The student can also call the Library directly by the 800#. A Librarian will take the call and work with the student to research a topic. This process becomes, in effect, a tutorial with the student focusing his/her thesis under the guidance of the librarian. As the process continues, the student will receive bibliographic lists via FAX or mail from the Librarian. Selections are made and communicated back to the Librarian. In some cases, the Librarian will note that a given article or book is at a library near the student. The student can go directly to that source, read it, and determine if it or material referred to in it is appropriate for the topic he/she is working on. That gets conveyed back to the ULV Librarian and the search continues. Because the Librarian has all of the above resources at hand in the Wilson, there is almost no reason why the student cannot undertake virtually any research topic at the undergraduate or graduate level.

Some will question whether or not the student is performing the search. The fact is that the student is being trained in the use of available information resources by a trained professional. The student is aware of the source of the materials being forwarded to him/her, whether from the Wilson, the OCLC collection, or one of the indexes. Should the student need to go to another library, they will know where the material is located and how to access it.

The method described above for accessing research materials is a copy of the process that many faculty researchers use today where they have available technology. Timothy Weiskel has noted that the ISIS (Integrated Scholarly Information System) software unified research program makes it possible for a researcher to "...merge bibliographic data from any on-line university catalogue with a wide variety of off-campus or commercial sources, thus developing a unified localized database that can serve as the foundation for extended subject-oriented research." (Academe, "The Electronic Library and the Challenge of Information Planning," July-August,
With the librarian serving as intermediary, this type of research process is now available to the student.

It is no longer feasible for all students to access campus libraries. It is also true that the campus library is no longer adequate to house all information sources needed for today's research. This is especially true for degree programs that are applied in nature. Consequently, it will be necessary for the colleges and universities to provide access to needed sources through a variety of technologies and to deliver them to students at significant distances from the home campus. The Wilson Library is an example of this trend. Its own collection serves only as a foundation for information resources. The accessibility of other collections, especially the 22 million OCLC database, makes it a meaningful research library despite its size. To put it another way, it is now possible for scholars and students to sit at their home computers and retrieve documents or knowledge about documents stored on servers across the nation. (Peter Lyman, Change. "The Library of the (Not so Distance) Future," January/February, 1991 p. 39).

Given the reality of the above impact of technology on libraries and on the student, practical problems have to be addressed.

1. Can the library guarantee availability of a document?
2. Can the institution guarantee that the student will understand how to use the library including the use of electronic sources?
3. Can institutions guarantee that presently available resources, like the MELVYL collection, will always be available?
4. Can institutions guarantee that faculty and students will utilize library resources at off-campus sites if made available via technological means?
5. Can the institution guarantee that documents requested by students are available to them in a timely manner?

1. In addressing these problems, it is necessary to keep in mind the reality of what can be guaranteed on campus in a traditional setting. No library can guarantee availability of a document at any moment even if it is part of the regular collection. Interlibrary loan is a fact of academic life and it is used for far more than rare documents. This is especially true for applied degree programs where specialized collections are often needed, for example the Southern California Edison research documents available only through that company's library. But given also the extensive data bases at the Wilson, a document not available at one location, may very well be available at another. That search capability exists and is made available to the student.

2. No library guarantees that every student will know how to use the library. Every visiting accreditation team has to
determine for itself whether or not the institution provides adequate training in library and electronic use. This is accomplished by reviewing course syllabi, talking to students, talking to librarians, and to instructors. The system in place at La Verne does ensure that students who access the technology come into contact with professional librarians who work with them to research a project. That system is guaranteed to the off-campus student and, in fact, not to the student on campus. On campus we rely on the University 100 orientation course to provide the student with library literacy. That is not a tutorial approach.

Obviously, providing this service to the off-campus student requires an investment on the part of the University not only in the technology of delivery, but in the human resource needed to provide the materials. Consequently, the institution has hired more Librarians, more clerical staff, and more student workers than it had prior to the implementation of the program. In the long run, this is less expensive than trying to provide duplicated material at all sites. Indeed, it would be prohibitive for the University to attempt to do that.

This is an important point. If the Commission accepts the responsibility of reviewing program delivery to the adult populations needing this education, than it is necessary to find an acceptable means of providing resource delivery. To expect an institution to house a collection appropriate to the degree program offered at a site, to purchase the necessary duplicate texts, and to purchase and pay for the additional indexes and the site licenses and personnel required is unrealistic. The educational services would simply not be provided. That means that alternative means of providing that education would be found in the form of unaccredited institutions and out of state institutions that carry questionable accreditation.

3. There can be no guarantees that all presently available data bases will always be available via electronic access. However, the technology is moving more rapidly in the direction of providing such access than it is in withholding it. The OCLC announced as recently as this past October that it will make the entire OCLC data base available to scholars and students via a software program called First Search. Users will be able to obtain journal articles through the mail or over facsimile machines. (Chronicle of Higher Education, Oct. 9, 1991, p. A 24). Indeed, there is expectation that national networks will be the future of electronic access thus making even more information available than currently exists. A number of institutions presently provide universal access to their data bases on the Internet network. One does not need a library to do such searches, one can do it from one's own personal computer. Even interlibrary loan can be done from home. Given the reality of our education need, it will be
incumbent upon this nation to provide such access if it is going to compete with those countries that are attempting to give access to distant learners.

4. All institutions face the problem of requiring research in courses. Again, the team evaluators have to determine if the information resources made available by an institution are being used by the faculty and students. In some ways it is easier to determine usage of electronic resources than traditional ones. A library ordinarily has a general count of how many patrons entered a library. In some cases, studies have been done of types of materials checked out. These figures give general impressions of library use. On the electronic system, it is possible to count how many students use the CD-ROM and when they did. It is also possible to keep track of who called the 800# and thus to determine which class is using the system from which site. One can also do a check of the types of materials requested. In this sense, the La Verne system provides more meaningful information to trace library use than the standard method.

5. Finally, the issue of turn around of materials has to be addressed. Students calling the 800# can have a volume(s) mailed directly to them literally within minutes of hanging up the phone. Our library guarantees turn around within 24 hours of such calls. Certain problems exist. The La Verne Post Office is not open 24 hours a day. However, all students have access to a librarian or a reference clerk via phone at all hours when the library is open. This means that they can possibly get to alternative libraries if the book or document will be delayed. Interlibrary loan, obviously, cannot be guaranteed, but that is the case for any student at any institution.

The main problem this University faces in providing swift access to resources is for courses that are accelerated, for example 10 to 12 week sessions. We attempt to deal with this issue by having our faculty and librarians educate the off-campus faculty to the reality of turn-around time. Consequently, faculty are asked to assign projects at the beginning of the term so students can begin the process immediately. Our Librarians also provide instruction at off-campus sites to students and publish handouts that explain the system.

Let’s return to the original question. How should the new technology affect the Commission’s expectations for the provision of library services at off-campus and external degree programs?

1. The Commission should expect that an institution providing off-campus programs also provides the appropriate information resources for that program. This can be done with existing technology and not require duplication of resources at each site. It may be advisable to provide at certain sites basic reference tools for convenience purposes.
2. The Commission should expect that students are undertaking appropriate research projects as determined by the degree program involved. Not all courses in all degree programs require such research. The level of that research should be determined by the level of the degree, graduate or undergraduate.

3. The Commission should expect that the student is capable of using a library and the electronic resources needed to support the degree program he or she is taking. This will vary from program to program. Applied research is often of a different kind than that in traditional study programs. The Commission should also expect that the library literacy understood by the off-campus student may have come by a different method from that available to the traditional student. Much of this learning will come from phone contact directly to a librarian; some will come via E-Mail, Bitnet or Internet, or other electronic sources. How it is obtained is not the issue, but how serviceable it is to the user.

4. The Commission should realize that our traditional view of library usage no longer is the only understanding we should have. It is not necessary for every student to walk through library stacks; it is not necessary to smell the books to appreciate their value; and using a card catalogue is not necessary if the material can be accessed by electronic means. Indeed, the student who does not know how to use electronic access suffers from inadequate research techniques. Browsing and random finding of pertinent works is as possible or more possible using technology than in using standard means.

5. The Commission should also realize that it is necessary to apply the same scrutiny to on-campus programs as to off-campus. Do courses on-campus suffer the same lag time for interlibrary loan as off-campus? Do faculty on-campus require the same kind of research projects as are required off-campus including theoretical versus applied? Do students on-campus know how to use the campus library as well as the electronic sources appropriate to their program of study?

6. The Commission should expect that libraries other than the delivering institutions will be used by students. This is not necessarily bad. In some cases the local library will have greater resources than the home campus library. In some cases, the local library will be used as a supplement to the home library and appropriately so. In any case, the Commission should expect that the institution providing the program has determined that any library used to supplement the home library has adequate materials to do the job; that faculty understand how effective that library is for their purposes; that students know how to use a library sufficiently well that they are not burdens on local librarians, and that the institution has negotiated with the local library regarding potential student use.
7. The Commission should also understand that as technology continues to improve, it will be possible to deliver adequate information resources to students without providing access to the home campus library. This will be particularly true of specialized degree programs. For example, if an institution provides its program in a geographical area approximate to a major information source like the MELVYL, requires that all students in the program have appropriate computers, requires also that they have purchased necessary indexes like Knowledge Index, it is conceivable that they could deliver that degree program adequately. Determining that adequacy will remain the responsibility of the evaluation teams.

All of the above items are possible if the institutions keep the three "i's" in mind that are described in the Background Paper provided by the WASC office. Each institution must intelligently analyze the needs of its programs, invest in the necessary technology to carry it out, and integrate the teaching with the available resources.