FACULTY - LIBRARIAN COLLABORATION:

A MEXICAN EXPERIENCE

"Faculty-Librarian Collaboration: A Mexican Experience."

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by

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ABSTRACT

Collaboration between librarians and faculty is a relative new trend in Mexican academic libraries. Therefore, experiences are scarce and not yet documented. University professors and librarians normally have the usual relationship of patron - information provider. Although librarians have assumed the role of user information educators, their work tends to occur in isolation. Teamwork is needed so that library instruction can become part of the learning process. Mexican information professionals probably face more library instruction challenges than their colleagues from the more advanced economies, because new students come to the library with hardly any library experience. In this article, the outstanding user education experience at Juarez University is described and assessed.

Keywords: User Education, Faculty-Librarian Partnerships, Library Instruction, Academic Libraries, Information Literacy, Mexican Academic Libraries.

INTRODUCTION

Few libraries have two international views and are on the crossroads of three states, flanked by a river that marks library-educational differences unique around the world. The large windows of the University of Juarez Main Library offer a unique transborder view of Mexico and the United States and even a peek view of the tip of three states: Chihuahua (Mexico), Texas and New Mexico; where a brownish desert landscape is dotted by bare gray mountains. The UACJ library is a fairly new addition to this border urban scene. It was built six years ago in Ciudad Juarez, a sister city of El Paso, Texas. The local economy is based on the so-called "maquiladora" (assembly) industry that encourages the migration of hundreds of people from all over Mexico, who come to work and, if possible, go further north in search of the American dream portrayed by the national mass media. The physical and socio-economic characteristics of the region shape the academic community of the University of Juarez (UACJ), where students and professors are representatives of all the Mexican states. The information skills of the diverse UACJ population vary based on their background. Those who come from the cities are better information users than those who come from the countryside, where libraries are scarce, especially school and public libraries.

In this article, the faculty-librarian partnership developed at Juarez University is described; the information needs of the UACJ users are discussed, as are the instructional programs created to empower students to benefit from using information resources. The library infrastructure built to meet the information needs of this learning community is also described.

The University of Juarez, a state funded institution, was created 27 years ago. It has an enrollment of about 10,000 students and over 700 full and part-time professors. It offers undergraduate and graduate programs and participates in research projects with other national and American universities. UACJ provides the manpower to the local industry that demands highly competitive graduates. Companies and other organizations from Juarez, as the rest of the country, have gone through drastic changes since the country started the globalization of the economy.

Most organizations are in the process of remaking themselves and are in search of graduates with appropriate skills to survive in the more competitive local markets that are now part of the world economy. Professional competencies required by the Juarez marketplace are summarized in the new UACJ graduate profile, a set of skills, values and knowledge (SVK), which students need to obtain during their stay at the university. The SVK profile report is based on a major survey of students, professors, employers and the local community (Lau, Mears, Montano and Torres, 2000). It describes the academic goals of the university in providing an integral education to students including information skills. The previous profile of graduate competencies also included proficiency in library use. The information skills competencies demand that librarians play a greater role in the educational process. Therefore, the university decided to create first class library facilities, and support the growth of information collections and services (Cortés, 1999).

FACULTY AND STUDENTS

The challenge for libraries was to introduce the UACJ academic community to the use of information resources. University users, professors, students and university staff, had limited information skills. Professors were mainly graduates of UACJ or from the other state university of Chihuahua, where they learned that attending and taking notes of their mentor lectures was enough to accomplish their knowledge goals, omitting reading and research. A few were lucky enough to have textbooks for their courses, thus excluding the need for libraries. Regular academic libraries did not exist, only small collections of textbooks without librarians or budgets to acquire materials. About 60% of UACJ professors completed only undergraduate work. This meant that their limited education did not enable to develop needed information literacy.

Faculty with postgraduate studies, mainly master's degrees (40%), were usually better prepared in the area of library skills and expected more information services. However, professors with postgraduate degrees are fairly recent. Most of them completed their studies in the last ten years. Faculty who studied abroad came with more realistic expectations regarding library support for their academic work. Professors, in general, did little or no research at all, and some of them had never published a paper.

Students had similar characteristics than their professors. They attended schools with almost no information services at all. Their first encounter with libraries was usually at high school, but here again, these centers were understaffed, and had few books. Their education is based on memorization, with little exposure to building thinking and knowledge skills through reading, writing or doing research. New undergraduate students have, therefore, limited library search skills, because they seldom had to prepare an essay as part of their courses, and when they did it, it became a cut and past procedure. As a result, UACJ libraries face many challenges, particularly, being only the providers of textbooks or the meeting place for students (Lau and Cortés, 2000b).

In 1995 librarians had to figure out how to create a real need for libraries, and how information resources could have an impact on the learning process. This concern coincided with the need to build a new library facility, develop collections and provide new digital information services. These tasks were tackled at the same time using different strategies, summarized in the following sections of the paper (Lau and Cortés, 1997).

LIBRARY FACILITIES

The new support for UACJ libraries started seven years ago, three years after the beginning of a major federal funding program for public universities, called by its acronym FOMES. The fund devoted around 25% of all its grant resources to state university libraries since its inception. The resources were given on a competitive basis, through special projects separate from the regular budget allocation. The first UACJ

funding request was a three-year project to finance the expansion of library facilities and services. It was evaluated as one of seven excellent proposals, among the more than 350 requests of all sorts submitted nationally by all state universities. The project received good marks because of its integral approach that included the physical expansion of collections, and buildings as well as a proposed user instruction plan: the Information Skills Program (ISP). Since then, the funding of the UACJ library project has been among the highest in Mexico, despite the fact that the institution is small by Mexican standards. The library expansion received supplementary funds from the university matching the federal grants. All these resources enabled UACJ to create a first class library system. The three libraries moved to new buildings, and the main library will be expanded even more within five years.

They became the first libraries to be furnished with imported library-tailored furniture in Mexico, a benefit from NAFTA, the North American Free Trade Agreement signed with the USA and Canada. The libraries' print collections increased fivefold. Electronic collections, including serials and reference databases were introduced for the first time and expanded to the largest such access in Northwestern Mexico. The number of librarians increased to the highest number in the region and certainly among the top national ones based on a formula or librarians per students.

UACJ libraries were founding members of the OCLC CORC Project for web sites metacataloguing, and the second Mexican institution to sign up for cooperative cataloguing services with this organization. Public services were expanded and greatly improved. The libraries, compared to other university libraries in Mexico ranked among the best, according to a benchmark study carried out among the top 20 Mexican universities, including public and private institutions.

Table
UACJ AND ITS LIBRARIES

UACJ University	Libraries
- A public funded institution	- 3 libraries, all with new buildings
- 27 years old, founded in 1973	- Largest main library in Northwestern Mexico
- 10,000 students	- 7 librarians, plus 12 other professionals
- 300 full time professors	- OCLC catalog conversion to LC and full MARC
- 400 part time lecturers	- Online OCLC cataloguing
- 34 undergraduate programs	- 175,000 volumes of books
- 11 master's degree programs	- More than 300,000 special collection documents
- 1 Ph.D. Program	- Free access to users of 350 online databases
- One of the two Mexican border	- 2,200 full-text online titles, 300 printed journals
Universities along the USA	

The library infrastructure of UACJ libraries was at first meaningless to the local university community because they were not used to information services. The academic administration was the key factor in the library expansion, professors and students,

however, were not ready to benefit from expanded library services. A comment often made by librarians was that "the information menu was too big for such anorexic customers". Therefore, the challenge was should libraries keep increasing facilities, collections and services. It was decided to keep expanding the library offering by create creating the service/product while working on the information demand. The Information Skills Program (ISP), already mentioned, was set up to train professors and students to access, retrieve, evaluate and use information (Lau and Cortés, 1995).

USER EDUCATION STRATEGIES

The user education program evolved based on the experience and challenges faced by the library staff, the availability of more librarians, the growing awareness of the university authorities of the role of libraries, the faculty recognition that students lacked information skills, and the expansion of information collections and services. Therefore, the instructional strategies were implemented almost one by one. They are described here according to the time when they were created. They are now operated as part of an integral program (Lau and Cortés, 2000b).

Information skills workshops

The first action was to create a set of two-hour workshops to teach students five topics:

- 1. How to use the OPAC catalogue,
- 2. How to use online databases.
- 3. How to use CD-ROM resources,
- 4. How to do Internet navigation,
- 5. How to use selected web sites.

Each workshop is organized at the same time each day of the week. The focus of each session and the type of resources used are different in most cases. For example, the catalogue is demonstrated focusing alternatively on social sciences, biomedical sciences, engineering and the humanities, subjects of four university faculties. Professors are asked to give credit for the workshop attendance, such as a justification for a class absence or give it as homework. Students are given a certificate if more than five different workshops are taken during a year. A program with the scheduled sessions for the semester is distributed ahead of time to students and faculty, so that professors can book the workshops, if they find them relevant to their class.

The program was a success during the first years, until a compulsory full course was created that included a more structured approach to information education. This user education strategy is being phased out but can be used as an optional student-training menu, which professors can request during the term.

Electronic classrooms.

A classroom for user education was with up-to-date technology such as 25 personal computers, Internet, networked CD-ROMs, access to the OPAC, and all the audiovisual gadgets needed for a hands-on information search experience. Even teleconferencing facilities were added to the classroom. Additionally, two rooms were built during the second phase of the Main Library, using the latest computer and telecommunication technology. Both spaces are some of the most heavily used learning areas in the library. Such demand is keeping the library computer staff busy, trying to maintain the equipment.

Faculty training.

To meet the training needs of faculty, a special 36-hour course was designed with the acronym MADRID (Rivera, 1997). The program is offered based on demand from the different academic departments, but it is given at least once every term. It is flexible, and divided into six modules that professors can attend whenever they need them, but if they attend all the sessions, they receive a certificate that contributes to their annual evaluation.

This library training is a faculty requirement within most academic departments of the University. It is a hands-on workshop, where 75% of the time is devoted to practice. During the course, an overview is given of the learning process and the input library services can make to the lecturers' class, stressing the role of faculty participation in the selection, acquisition, and organization of materials. The basic goal is to clarify the important role of professors in collection development and their own information use, as well as their role in encouraging students to include library materials in their learning strategies. (Rivera 2000a, Rivera 2000b).

The course module titles and content include:

- 1) *Information, a Basic Requirement for Learning* discusses the role of information in the learning process, offering faculty information learning strategies, and teaching them how to use and download catalog records. At the same time, they reserve available materials for their class.
- 2) Selection of Bibliographic Materials for your Class, shows the wealth of information available to professors' class, asking them to select the records they consider relevant, so that the library can acquire them.
- 3) *Information Services for UACJ Faculty*, focuses on explaining available information services, including circulation, photocopying, collections and library regulations as procedures to use them.
- 4) Web Navigation and Best Sites, aims to help faculty to learn basic Internet skills and discover web sites important for their class, as well as recommending some sites for library meta-cataloguing.

- 5) *Electronic Media: Databases and other E-Sources*, demonstrates digital media, such as CD-ROMs and its different formats, e-books, online databases, and reference networked titles
- 6) Scientific Journals and Other Periodicals, printed and electronic, are reviewed by participants for availability worldwide in a given subject, in full-text electronic format or in relevant printed journals available at UACJ libraries. Faculty also does an exercise in requesting a document from abroad. To meet this objective \$25 dollars are allocated to each of them, so that they can request the article and see how it arrives to their E-mail account in just a matter of hours (UACJ Library Team, 2000b).

The MADRID course comprises a manual with readings, instructions for exercises, copies of presentation slides, and general instructions for the workshop, including a blank diskette to retrieve all the identified data. A quick general library tour is provided, watching a video, and making a special stop to relevant book and serial stacks. The program has practical homework based on the subject of their choice. As a treat, lunch is offered to them during each day of the course. The workshop evaluation usually gets high marks by the participants. The benefits are great for faculty because they discover what the library has to offer to them, while the librarians' role in the learning process gets strengthened, and professors become library supporters.

Student prerequisite course (CAI). The greatest challenge for the library team was to give basic training to all the new incoming students. To meet this goal a course was developed, along the lines of the MADRID workshop, but shorter in its length and lighter in its subject depth. It includes five basic sessions of two hours during a week. Again, the principle of devoting at least 75% of the time to hands-on practice was followed. Topics include:

- 1) Introduction on How to Use the Online Catalogue
- 2) Public and Reference Services
- 3) Internet Navigation and Recommended Web sites
- 4) Electronic Media: Online and CD-ROM Databases
- 5) Journals (See appendix 1).

The instructors of the course are librarians and professional staff from all library departments. Students spent ten hours attending the course sessions and devote ten additional hours doing independent information homework, which is graded by the instructors. Participants receive their grades according to the quality of their homework assignments. The results are submitted to the department where students belong. The course is now a pre-requisite for all incoming students, they must take it to register for their second term (Rivera, 1999; Rivera, 2000c).

The CAI program demands time from most librarians. They normally facilitate the course to approximately 1,200 students per semester in groups of twenty people. A special academic unit had to be set up and staffed by a librarian and a student assistant to

manage the program at the main library. The unit's staff organizes the sign-in to the CAI courses during the normal university registration, where new entrants choose their semester workload, along with CAI, choosing the week and time to attend the workshop. After doing the course, students receive a card to justify their absence of the regular class that they may have missed, if they could not find a suitable date and time for CAI. Some newcomers are reluctant or forget to take their scheduled course; therefore special ones are offered at the end of the semester. Participants have to pay a fee to take these missed courses. Some banners are hung around the university urging students to take the course with a reminder that they need it, in order to register for the next term. The workshop was declared compulsory by the university academic senate, so it is part of the general curricula of the university. The next goal is to give the workshop academic credits within the general research methods courses, which students take within most undergraduate programs. Thus professors will regard the CAI training as an integral part of their class. (UACJ Library Team, 2000a).

The two electronic classrooms serve mostly the CAI students. There are five courses scheduled per day during most of the term. This means that classrooms are busy almost all day. About 2,000 students attend the courses during the academic year. Thus the classrooms are used by at least 10,000 individuals, plus the use of the daily "non-credit workshop" participants, the MADRID professors, and people who register for especial workshops as requested by faculty to meet information subjects of a particular class.

Library tours.

A complementary strategy to promote library services is the active participation of librarians during the introductory week-length course given to all new incoming students. This means that at least one librarian has to come back from winter or summer holidays a few days ahead of time to coordinate a student assistant team. An average of 1,200 new students come to the main library for an hour visit. Training is provided first to the library tour team, posters describing services and scope of collections are placed in each department of the library; and banners welcoming students are placed on the building entrance doors. Students first watch a video before they go on the guided tour. During the visit, newcomers receive general pamphlets about library services and the Information Skills Program. Finally, the students get a stamp on their induction week card, so that they can register for the rest of the academic courses. This induction is a major effort that has proved to benefit students, because they get a glimpse of the information wealth that is at their disposal, during the first week of their arrival at the university.

Library services promotion.

The user education program is supported marketed and promoted. Librarians publish many materials, certainly more than any other department at the university. This includes flyers and pamphlets promoting collections, services, library regulations, and the organization in general. Four editions of a general video to introduce the libraries and their services have been edited. Two more on the information skills pre-requisite course, and on how to use the library catalogue have just been released. A multimedia CD-ROM was also produced, which includes a virtual interactive tour of the library and the university. Posters and postcards depicting library topics have been printed, and most of

them financed by vendors. A store was opened at the main building that sells different library and university materials, as well as institutional publications. Banners are, as stated, part of the promotion and communication scheme. They are usually hung at the entrance of each campus and the libraries. In addition to this effort library personnel o publish articles, news releases, and short communications for the university news publications. Each librarian has to prepare at least one article per month on a rotating basis. A weekly agenda of events is also provided to the institution's communication department, so that library news is included in the daily university newsletter. This time-consuming task pays great dividends, because libraries are on the forefront of the university media.

Course materials.

The teaching team has received training on instructional materials preparation, classroom communication, coursework evaluation, and use of software, among other teaching techniques. The training is available either at the annual library program or at the faculty-continuing education program provided by university to professors. Materials for the CAI and MADRID courses are initially prepared by a team of librarians at the end of the semester and are assembled into a single manual during a three-day retreat at a winter resort located in New Mexico, USA. All course instructional materials are downloaded on the Intranet for collective use. The cloister-like long session also contributes to the team building of the librarians, because work, meals, and fun are blended and shared by the staff.

ISP, a shared experience.

The UACJ strategies in user education have been actively promoted at other Mexican institutions. The first two national conferences on the subject were organized by UACJ, and a third one is planned for the year 2001. These meetings have provided a forum for the discussion of library instruction in higher education libraries. There is now greater user education awareness in the country. Two books based on the best conference papers have been published, along with two manifestos on the role of library instruction at universities, and the impact of user information literacy on learning-oriented education (Lau and Cortés, 2000c; Lau and Cortés, 2000d).

The manifestos are part of Mexico's arguments to educate students in information use (Aguilar Et al, 1997; Cortés, Et al, 2000). Library staff has produced nearly twenty documents on the subject for national and international conferences. They are listed in the references section of this paper. An additional book is in the press, depicting the best practices adopted by the libraries, where user education activities are well covered. This is a monograph of a case study to help other academic librarians have a faster start in user education matters, and other library duties, because academic information administrators will be able to build up on UACJ's experience (Lau and Cortés, 2000a).

Training the trainers' course.

Another action has been to collaborate with partner libraries from the rest of the country, such as the implementation of a course for user education instructors, mainly reference librarians. The course has a practical approach. Participants are encouraged to develop

their own instruction goals and to create a program, using UACJ strategy as a starting point (Castro, 2000; Castro and Tiscareño, 1999). The program has been held more than eight times at universities spread from the North, in Baja California, to the South in Chiapas. Additionally, librarians from Mexico and some from South America have come to participate in-house training in user education activities for two weeks. Again, a training schedule was created, giving a certificate of attendance to participants.

Benefits for librarians.

The amount of work devoted to the Information Skills Program (ISP) gave benefits to UACJ librarians. The University Administration recognized the ISP classroom work as equivalent to undergraduate teaching. The librarians' class workload is now measured according to the normal length of a regular university subject teaching. Thus a librarian has to lead six workshops (60 hours) to receive the credit of teaching one "normal" term course. The library staff has received faculty-like status a couple of years ago, status that was formalized the following year. This meant greater economic rewards but also meant, that they had to be fully active in academic endeavors. They now have to undergo a term evaluation that includes a three-tier term assessment done by students, the head of the ISP unit, and by their academic peers. In addition, librarians participate in a general annual assessment conducted by an institutional committee that evaluates their teaching, research, management and other services.

The benefit for librarians is the annual faculty bonus program, that awards a stipend distributed monthly during the year to outstanding performance professors. All the participating library staff has won some bonuses, which can go from \$100 to a \$1,000 per month. Obviously, the top awards are for professors from other university departments, who are fully engaged in teaching and research. However, the bonus program helps to keep library personnel motivated to do their best with the ISP program.

Libraries up-grade to academic affairs department.

The greatest gain of the ISP program was the transformation of the Libraries Department into the Academic Affairs Directorate of the University. The university librarian took the position to administer this from the Main Library between 1997-2000. Several factors helped the libraries to climb the organizational ladder of the institution, but a key factor was the user education program. Originally, the common librarian comment was that information could not be part of the learning process, unless information was part of the curriculum, and the UACJ educational model was changed, so that professors could view information as a vital element of students' learning. The message permeated the university management and it was decided to give the academic affairs areas to the libraries. The new organizational body adopted the acronym DIGA to stand for Department of Academic Support. The new department included, besides libraries, faculty assessment, faculty training-continuing education, faculty support (bonus awards, provision of student assistants, etc), academic exchange and international relations. The new expanded department demanded a strategic planning exercise; a process that was done to identify the university needs in all the listed functions.

The academic affairs strategic plan, set the framework to introduce the information use factor as part of the students' evaluation of the professors class performance, among other 20 diverse items. The MADRID user education course also became part of the regular training program for professors. As a consequence, the main library evolved into the center for faculty support, and the academic engine to identify the learning process of the university, a process directed by and from the main library.

Educational model identification process.

A committee was appointed to attempt to define the learning process of the university. The president called for a special committee to conduct such academic exercise. It included the four deans, the directors of planning, postgraduate and research, the secretary general, professors representing each faculty, and the dean of academic affairs as the chief facilitator, with the assistance of DIGA staff, among them two librarians. The committee met for a two-hour breakfast meeting at the main library every Friday during a year and nine months. The goal of the committee was to identify the learning process that the university ought to adopt to meet its educational mission. After the first session, a methodology was agreed upon, namely, to discuss higher education guiding/normative documents and to analyze university cases at international, national, state and institutional level. Literature generated by UNESCO, OECD, United Kingdom Chancellors, USA academic bodies, Latin American organizations, and Mexican government and non-governmental agencies, as well as dissertations written about the UACJ were read and discussed. Each member of the committee reviewed a certain number of documents or cases, and of doing an equivalent number of presentations to the committee.

Once the literature awareness process was finished, the next step was to write the participants' personal perceptions of key educational processes, such as student selection, graduate competencies, professor role and skills, among other factors. Ten papers were written and presented by and to the committee. Then, a research technique was defined to define the so-called educational model. A system approach was adopted and the identification of the UACJ graduate competencies was the first goal. A major survey was completed to get the opinions and ideas from relevant UACJ groups: students, professors, community leaders, education experts and community at large. The questionnaire included items about the knowledge, skills and values (KSV) that graduates ought to develop before leaving the institution. The instrument was:

- a) Given to every student and professor at the university
- b) Published in the local newspapers
- c) Uploaded into the UACJ web page in order to get as much feedback as possible

Replies were received from 6,500 people, mainly from students and professors. Then guided interviews were conducted with 38 community leaders: the bishop, union leaders, key government officials, and business association presidents. Two national conferences were also organized, where speakers from other universities, including some American educators were invited to participate. As part of the meetings, participants took part in a session, where they wrote a general manifesto about higher education learning. Both

manifestos and the proceedings are being printed to distribute them to other Mexican universities. A parallel institutional twenty-year planning effort to identify the 2020 vision of the university was conducted by the General Department of Planning. This exercise included group discussion sessions, where any member from the institution or from the community could participate in two daily meetings conducted at the three UACJ campuses for over a month, using group decision-making software. A question was included asking participants to identify the graduate competencies' profile in regard to KSV. More than 3,500 people participated in this major group consulting process.

The new proposed learning process.

The data gathered from the four different research techniques was statistically analyzed. A four-day meeting was held to identify the KSV elements by a sub-committee that included those with greater writing skills. Once the committee agreed on the graduates' competencies, including information-skills, the learning process was identified. The identified educational process was learning oriented. A lengthy document was written which included graduate's competencies, the learning process, learning strategies, teaching techniques, a generic job description of the desired professors, the academic infra-structure needed, and recommendations for a new faculty tenure track. A summary of each phase was sent to all the students and the faculty to get their feedback. The concluding results are about to come out of the university press, to be distributed to the UACJ academic community, and to other Mexican higher education institutions (Lau Et al, 2000).

The identification of the educational model was a long process that required a lot of work, but it is now the corner stone for the university. The academic community has a good insight of the learning process that is required to develop the professional and personal competencies of UACJ graduates. For the first time, there is a clear conception of the role of professors, librarians, laboratories, computer centers, as well as, the university in general. The report is expected to become a blueprint for the 2020 vision of the university, guiding its institutional efforts for the next twenty years.

After this process was completed, a new function was assigned to libraries to facilitate the accreditation of programs and the institution by national and international external bodies. This means, that the university librarian position has become the general facilitator of the academic and management processes of the entire institution. The scope and methods to achieve this new task are still in the definition stage, but they are expected to give a leading role to the libraries, because gathering and organizing university information are greatly needed by the accreditation processes.

Factors that fostered the ISP Program.

There were several elements that contributed to create and implement the Information Skills Program. The university management played an important role. Most of the leading university officials were new to their posts back in 1995, and they had studied abroad and had research and reading interests. They certainly favored the increased role of the new library department in the academic processes of UACJ. Funding was generous and open to let the libraries to gain a strong presence in most academic

committees. The partnership with faculties was therefore easier. An additional factor was that UACJ was still a fairly new institution with little resistance to change. Unions were flexible and supportive of the university mission. Library management, on the other hand, aggressively took any opportunity to participate and contribute to academic tasks. The library team was also committed to their work and willing to devote greater efforts to position libraries at the heart of the learning process. This meant longer hours of work, changes in the holiday breaks, flexible working times, and an open attitude to do a "little more" than professionals from other university departments. Lobbying was a strategy to sell the library role to the whole organization. Librarians began taking part in institutional committees, being present in academic events, and meeting decision makers. For example, three librarians have facilitated research methods courses for undergraduates since 1995, where information skills are the base of the research inquiry goals. These lectures enable librarians to be part of the "research methods academy", a professors' body that regulates and sets the policies for this course. Therefore, librarians can raise their voice whenever the information services' presence is needed (Cortés, 2000).

CONCLUSIONS

The user instruction challenge posed by the Mexican teaching-oriented education system, that normally lacks library services, lead UACJ libraries to create an aggressive, and integral instruction program for faculty and students. The main strategy was to get the university senate approval to make the user instruction course compulsory to all new students, as well as, for professors. This was coupled with a rapid development of printed and networked information sources, housed on excellent new library facilities, with the latest telecommunication and computer technology. The user education program became an example at national level, sharing UACJ librarians the syllabus, and tools developed with other universities. The partnership between faculty and libraries set the basis for the education of future graduates who will have the information skills needed for life-long learning and for a productive professional career. At the heart of the user instruction changes promoted by libraries was the identification of a learning-oriented education process for the university. Such process gave libraries a prime position in the overall running of university management, and justified their existence at the institution. Future UACJ graduates, many of them part of the migrant families who come to settle in Juarez, are now likely to have the competencies required by the transborder maquiladora industry that expands along the Mexican border with the USA.

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^{*}It is also a bibliography of the documents generated as part of the UACJ Information Skills Program.

APPENDIX 1

THE PREREQUISITE INFORMATION SKILLS COURSE (CAI)

OBJECTIVE: To facilitate the students' learning on how to locate and retrieve electronic and printed information sources; **LENGTH**: 10 hours; **PLACE**: Electronic Classrooms, Main UACJ Library

TOPICS

I. THE OPAC: KEY TO THE INFORMATION WEALTH

- a. Catalog records: how to benefit from them
- b. The classification scheme: how to navigate in the library
- c. How to search in the catalog
- d. Records downloading
- e. Exercises

II. PUBLIC AND REFERENCE SERVICES

- 1. Thinking of you: our service goals
- 2. Lending services for our users
- 3. Reference services to assist you
- 4. The reference collection
- 5. Exercises

III. INTERNET NAVIGATION AND SELECTED WEBSITES

- 1. Basic Internet concepts
- 2. Principles of navigating software
- 3. Internet Explorer.
- 4. How to crop the best sources
- 5. Exercises

IV. ELECTRONIC MEDIA: ONLINE AND CD-ROM DATABASES

- 1. Concepts and structure of the sources
- 2. Advantages and limitations
- 3. The UACJ electronic information stock
- 4. Search strategies
- 5. Exercises

V. SCIENTIFIC JOURNALS

- 1. Basic concepts: the serials topology
- 2. Current UACJ periodicals
- 3. Serial advising services
- 4. Electronic titles available at UACJ and around the globe
- 5. Exercises

APPENDIX 2

THE FACULTY INFORMATION MANAGEMENT COURSE (MADRID)

OBJECTIVE: To introduce faculty on how to benefit from the printed and networked information services available at UACJ Libraries; **LENGTH**: 36 hours; **PREREQUISITE**: Basic computer use skills

TOPICS

MODULE I: Information, A Basic Requirement for Learning

- 1. Information and learning: the knowledge flow
- 2. Information learning strategies for intellectual creativity
- 3. The UACJ Libraries: A tour of UACJ knowledge resources
- 4. The OPAC: your key to the libraries
- 5. Exercises

MODULE II: Selection of Bibliographic Material for your Class

- 1. Acquisitions services
- 2. The national book trade and you
- 3. International books in print catalogs
- 4. Using other library catalogs as shopping guides
- 5. How to order books for your class
- 6. Exercises

MODULE III: Information Services for UACJ Faculty

- 1. General information and advising services
- 2. Reference services for faculty
- 3. Printed UACJ reference sources
- 4. Reference materials on the Internet
- 5. Exercises

MODULE IV: Web Navigation and Best Sites

- 1. Digital technologies and information
- 2. Basic concepts of the Internet
- 3. Internet Explorer Software
- 4. How to use search engines
- 5. Exercises

MODULE V: Digital Media: Databases and Other E-Sources

- 1. Online databases
- 2. How to use CD-ROMs
- 3. Search Strategies and results
- 4. How to quote electronic sources
- 5. UACJ E-books
- 6. Exercises

MODULE VI: Scientific Journals and Other Periodicals

- 1. The serials jargon
- 2. UACJ serials services
- 3. Available online journals
- 4. National electronic titles
- 5. Documents providers
- 6. Exercises