Use and Development of Information Technology at two University Libraries in Costa Rica

Martin Engström
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1. Introduction

1.1 Background

Information technology has been discussed in many areas for many years. Ordinary people use computers at home and can easily search the Internet and find almost any information they want. Today the computer has become a practical and necessary tool for everyone, not just for the experts. But not only good things come with revolutionary technology. In this, what we often call, information society the right of access to information has become a serious problem. The information superhighway is stratifying not only individuals and classes but also nations into information-rich and information-poor groups, those that can pay and those that cannot.¹ The importance of information technology and the latest equipment is clear in many developing countries. Countries that are not able to get all the latest equipment feel themselves outside the world and in one way or another they probably are.

Libraries play a very important role in all this. Public libraries especially have a great responsibility to provide people with the information they need. Academic and research libraries also have a great responsibility, but since they serve a more defined group of people and in most cases also have more money they are not facing the same problems. Collaboration between public and academic libraries seems quite necessary in developing countries because of the lack of money and in many cases of professional library staff. The training of qualified librarians is of vital importance for making a library of any kind work, and information technology has changed the scene radically. There has been great pressure on librarians to become information retrieval experts, and it is therefore important that the training of future librarians is up to date.

This paper is based on a Sida-financed study carried out in Costa Rica from February to April 2000.² My aims are to investigate information technology in two university libraries in Costa Rica. I will describe how the libraries have developed IT and how librarians and users use this technology. To achieve the goals of my field study I carried out practical investigations including participant observation and interviews with library staff.

I chose this subject because information technology is a very important mechanism in today’s development of libraries. Libraries all around the world are aware of the necessity of finding a good IT strategy, but too often the lack of money is a major problem. I wanted to do the study in a foreign country to see how they deal with all the problems that follow the implementation of new technology.

² In Spanish speaking countries the Swedish organisation Sida is called Asdi, Agencia Sueca de Cooperación Internacional para el Desarrollo.
1.2 The arrangement of this thesis

Chapter two gives some general information on Costa Rica. In chapter three I discuss information technology in developing countries, in libraries and in Costa Rica as well as some CD-ROM and online databases. This is meant as an introduction to IT and to show its importance. Chapter four contains information about different libraries in Costa Rica. In chapters five, six, seven and eight I discuss the two libraries that are included in my study, concentrating on the computers, databases, CD-ROMs and other forms of technology in the libraries. The information source for those chapters is mainly interviews with the library staff and conversations with users. Chapter 9 gives information on the two library schools while chapter 10 is concentrated on future plans at the libraries. Chapter 11 is a conclusion and 12 a summary.

1.3 Literature and previous research

Most of the literature about Costa Rica is books and articles dealing with the environment or the nation’s history. I was therefore forced to work in a different way than I first expected. It was difficult to find general information about libraries and information technology and I had to find other sources than books and to talk to people on the subject. Fortunately this turned out to be a positive rather than negative factor because I had to come up with more ideas of my own and do more of the work myself.

The literature I have used can be divided into three separate groups. The first group contains books and articles about Costa Rica, mostly general information concerning history, population, the economy, politics and so on. This literature is mainly used for myself as an introduction to a country I knew almost nothing about before the study. Some of this literature is used in the text to give an introduction to the country, but most of it does not appear in the text. Blomström and Lundahl in their book *Costa Rica en landstudie* (1989) have made a short but useful study of the country’s political situation and social development, which also includes a brief historical summary.3 Wedin writes in *Centralamerika* (1990) about Central America’s history and his book is useful in helping an understanding of the differences between the countries and their development.4 Even though some of the books were written 10 years ago they give good historical flashbacks and complement more recent articles.

The second group of literature focuses on information technology in general and information technology in developing countries in particular. Finding any information on IT in Costa Rica was more or less impossible, but I found quite a lot of material with studies from African countries. This, of course, did not help me very much when collecting facts but it did give me some ideas that helped. An example of a book of this kind is *Information Technology in Selected Countries. Reports from Ireland, Ethiopia, Nigeria and Tanzania* (1994), a collection of reports regarding information technology in four different countries, three of them African. A fairly recent dissertation with examples from Mongolia and South Africa is *Use and design of information technology in third world contexts with a focus on the health sector. Case studies from Mongolia and South Africa* (1997) written by Jorn Braa, which also had a few ideas that I used. Information Technology for Development (1995), published by the United Nations, had many good articles about development trends in information technology, experience with IT applications, and policies and strategies.

The literature in the third group is about libraries. Here again it was difficult to find literature about Costa Rica, but I found a few sources. Apart from some short and not very informative brochures about the libraries I was about to study, I found a good description of a project at the library at Universidad Nacional called MHO project. Documentation, Information and Communication Facilities Improvement at the UNA. Library and Network Project. Phase II: April 1996–December 1999. I also found an old publication about automation at the University of Costa Rica called *Proyecto de automatización del sistema de bibliotecas, documentación e información de la Universidad de Costa Rica*. A few other sources dealing with libraries in Costa Rica were found. To understand the thinking about automation of libraries and development of information technology in Costa Rica I read selected parts of two books dealing with the above-mentioned subjects. IFLA has published some good articles about libraries and information technology in Latin American countries with a few facts on Costa Rica. I also studied literature about libraries in general independent of geographical location.

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6 Braa, Jorn, 1997, *Use and design of information technology in third world contexts with a focus on the health sector. Case studies from Mongolia and South Africa.*


1.4 Purpose

The purpose of this study is to investigate the use and development of information technology at two university libraries in Costa Rica—those at Universidad de Costa Rica (the University of Costa Rica) and Universidad Nacional (the National University). The development of information technology has been quite different at the two universities and their libraries. Both, however, have developed well-functioning and modern libraries and the changes have made them more equal than before. There are, however, still differences between the two and both will also need further development if they want to be up to date.

An important part of the study, which can be described as a second purpose, is to discuss information technology in developing countries, in libraries and in Costa Rica. This is in order to understand the importance of IT and the conditions of implementation of IT in the two biggest and most important Costa Rican university libraries. Apart from the main libraries there are also other smaller libraries and information centres, but those are not fully included in my study because it would take too much time and space and there would be too much repetition.

The main questions I intend to answer are:

- How does information technology at the libraries work today?
- How do librarians and students use this technology?
- What possibilities of development do the libraries have?
- What more substantial changes in the libraries can be observed as a result of developments in information technology?

1.5 Definitions

Some of the terms that appear often in this paper have vague or too broad definitions. I therefore give the definitions I have used, i.e., those that I think are relevant for my study.

The term ‘information technology’ is frequently used but the definition can vary a good deal depending on the occasion. The difficulty is not finding a definition but finding one that is relevant for each study. A definition from the Dictionary of information technology tells us that IT is technology involved in acquiring, storing, processing and distributing information by electronic means (including radio, television, telephone and computers).\(^{12}\) This is a good definition but too wide, at least for my own

In this paper I have limited the definition of information technology to computer-related technology, so as to avoid any mistakes too wide a definition could cause. Sometimes I will use the abbreviation IT, which of course will have the same definition as the one given above.

‘Developing country’ is another term which needs to be defined. The developing countries differ from each other in many ways, culturally, socially, politically and so on. Some countries have huge gaps between rich and poor, while others do not. What the countries have in common is a low average income per person. In most countries a large percentage of the population lives at or below the poverty level, even if that is not always the case. Other ways of defining a developing country include the number of people with access to clean water and the number of persons who can read and write. The gaps between rich and poor in Costa Rica are not as big as in many other Latin American countries, but even so there are some people that have almost nothing and some people that are very rich.

In the text I use the English translations of the names of the two universities. In some places I use the abbreviations UCR for the University of Costa Rica and UNA for the National University.

1.6 Method

The methods used for this study are participant observation, interviews and literature studies. The literature is discussed above. Some of it is mainly used for general facts and to help me with ideas for the practical investigations. The interviews were carried out on location in Heredia and San Pedro, Costa Rica, during February and March 2000.

1.6.1 Choice of interviews

One of the reasons why I chose to do interviews was that I was not able to find enough printed material (books and articles) to work with. However, the most important reason was that I wanted to talk directly to the librarians and in that way get to know what they thought about the libraries and the use of information technology. Each of the six interviews contained about seven questions and took about fifteen minutes. At the beginning of my study I planned to make the interviews longer, but when I came to Costa Rica I found that this really was not possible. The interviews with the librarians were carried out while they were working and it was not possible to make them too long. I also realised that not all librarians could answer some of the questions, so I had to change my plan. The interviews were carried out in Spanish and were recorded; however, I also made notes when there were problems with the machine. The reason why I did the interviews in Spanish was that it always looks better if you try to speak the same language as the person being interviewed, and you also probably get more correct
answers. Most of the librarians in fact did not speak English. On occasions I felt that interviewing in Spanish was a major obstacle for my investigation. The whole process of writing and translating the questions and answers took longer than normal and sometimes it was very difficult to hear words and phrases on the tape because of background noise.

1.6.2. Choice of informants

The purpose of the interviews was to get information on how information technology works at the libraries, how it has changed over the years and what changes need to be made in the future. For this study I thought that three or four persons from each library was enough. When I planned the interviews and prepared the questions I wanted to do interviews with librarians in all sorts of posts, that is, directors, professional librarians and library assistants. I soon realised, however, after discussions with people with various positions in the libraries, that the library assistants and some of the other librarians did not have sufficient knowledge of IT. I therefore had to interview those in senior positions, such as heads of departments and those who have had more training in using information technology. I also interviewed or more correctly talked to other librarians, but those interviews were not recorded. All the recorded interviews were with women.

1.6.3. The questions

Some of the questions used in the interviews had the purpose of providing me with facts about the libraries and the use of information technology while others were concentrated more on the librarians’ ideas about information technology. It was essential to know what the librarians thought about IT in general and how important they thought it was for the library and the society in general. I also wanted to know what they thought about the other librarians’ and the users’ IT skills and then by studying and talking to a number of persons from those groups form my own opinion about this. For the questions see Appendix 2.

1.6.4. Participant observation

When you do a field study you always observe the surroundings and the people there. To observe is not the same thing as seeing, but also includes talking to people, doing practical work and in every way getting to know the area of your study. This method gives material about what people say and do in
specific situations. Feelings and thoughts cannot be observed. In this study I used participant observation as a complement to the interviews. I studied and talked to some of the users and also used information technology myself. I used the databases at the libraries, searched the catalogues, studied the computers, and accessed the Internet to search for information and to send e-mails etc. This was helpful and necessary in order to get a picture of what it is like to be a user in the library as well as to understand the functions. When using the databases I picked some of the databases that were considered very important as well as others that were different from each other. Since I spent a lot of time at the libraries I felt that I knew them in every way. The first time I visited each library I also wrote down what I saw just to see later on what I thought about the library at that time.

2. Costa Rica

2.1 General information

The Republic of Costa Rica is a very small democratic country in Central America, bordered by Panama to the south and Nicaragua to the north. The total population is close to 4 million and almost half the population lives in the cities. The cities are expanding rapidly, and population growth and the trend toward urbanisation are causing the government concern. Today almost two-thirds of all people are crowded into Meseta Central, the area surrounding San José, which occupies only 20% of the country’s land. Too often the farmers move into the cities in the central area because they have problems selling their crops. Big companies import crops from other countries, which is sometimes cheaper than buying from the farmers in Costa Rica. The problem is that when moving to the cities the farmers have great difficulty finding work, and therefore the number of poor people is going to grow. The government is trying to deal with the problem, and strikes and roadblocks lately have speeded up the process.

Ethnically Costa Rica is much more homogeneous than any other Central American country. The settlers who arrived in the 16th century had to work their land alone more or less without slaves, which means there was not the same mixture of races as there is in other countries in the area. Today there are few minorities—about 7% Mestizos (a smaller proportion than in the rest of Central America), 3% blacks (mostly from Jamaica), 2% Asians (mostly from China) and 1% Indians. Almost all black people live in the Limón province in the eastern Caribbean lowlands; most of them are descendants of workers brought from the West Indies to build railroads and cultivate bananas. Although most of the few remaining Indians live in protected reserves they are among the country’s poorest people.

Costa Rica is neither rich nor as poor as many of its neighbours. The country’s wealth is better distributed among all social classes than elsewhere in Central America. One reason for this is probably that Costa Rica was never a traditional colony and that there was a strong equality among the owner-farmers. Today Costa Rica has a reputation as ‘the Switzerland of Central America’ because of its stable democratic political system, free education and health care.

The level of education is good in Costa Rica and a large share of the government’s budget goes to education. Literacy rates exceed 90%, one of the highest in Latin America. Many students from other

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14 Apart from Costa Rica, Central America also includes the countries Guatemala, Belize, El Salvador, Honduras, Nicaragua and Panama, though sometimes the term does not includes Belize and Panama.
17 Länder i fickformat nr 705, Costa Rica & Panama (1998), Utrikespolitiska Institutet, p. 5.
Latin American countries come to Costa Rica to study and a few from the United States and Europe also stay one or two terms to study Spanish or follow other courses. There are several public and private universities in Costa Rica. The biggest public universities are Universidad de Costa Rica and Universidad Nacional. A special public university that offers courses by television is Universidad Estatal a Distancia, sometimes called an “open” university.

Even though most people seem to agree that the four public universities are the best, many who can afford it go to private universities since they offer shorter and sometimes more focused courses. Most private universities lie in San José and towns around the capital, two examples being Universidad Latina and Universidad Interamericana. The public universities are also located in the same area because most people live there.

The country has for some time been the exception to the Central American pattern of a bloody history, and has a tradition of neutrality. Costa Rica has been recognised as the country without an army, the armed forces having been abolished by President José Figueres after the 1948 civil war. At the end of the 1980s wars were going on in El Salvador, Nicaragua and Guatemala, and Costa Rican President Oscar Arias took the lead in promoting the Central American Peace Accord signed in August 1987, for which he received the Nobel Peace Prize. Despite this there was great pressure on Costa Rica from the United States to take sides against the Sandinistas in Nicaragua, a country with which Costa Rica has always had quite a bad relationship. US strategists viewed Costa Rica as a base for operations of the Contras in southern Nicaragua, and had plans to build the same kind of airstrip and roads as in Honduras in order to supply the Contra forces. Since then there have been constant problems in the border area, and many illegal immigrants from Nicaragua are reported to be in Costa Rica.

Even if Costa Rica has no army it is difficult to draw a clear distinction between an army and the country’s security forces, which are heavily armed. During the 1980s the number of police in the country doubled.

3. Information technology

3.1 Information technology in developing countries

There are also a few Costa Ricans who study in other countries. I have heard quite a few students go to Cuba to study medical science since that type of education is better there than in Costa Rica.


The ex-president Oscar Arias who seems to see himself as the saviour of Costa Rica has during the year 2000 tried to convince people to re-elect him president. In Costa Rica a person can only be president once, but during March 2000 an election was held among the Costa Rican people to see if Don Oscar would get another chance. Even though many people seemed to be against him, even in his own party, it looks like he will be able to stand for president next time.


As mentioned in the introduction, information technology is important for both developed and developing countries. The emergence, development and diffusion of information technology have changed the society dramatically, into something which is now sometimes called an information society. We also talk of “information poverty” and of knowledge being power, which clearly show what the information society is all about. The ultimate idea is to locate data, process it into information and then craft this information into knowledge, and it is here that information technology is important.\textsuperscript{25} IT makes it possible to collect, process and transmit information much faster and more cheaply than before. The changes have had effects on the economy, production, services and society as a whole and are used in areas such as education, health care, commerce, publishing, manufacturing, finance, banking and so on.\textsuperscript{26}

Three decades ago, in the 1970 plan for the decade, the United Nations wrote:

> Computers will play an increasingly important role in developing countries which intend to participate in the world economy in ways other than supply of raw materials. Developing countries will find computers a necessary ticket of admission. The next decade should see developing countries even more active in closing the computer gap.\textsuperscript{27}

Even though the use of IT is spreading fast, most of the market remains geographically concentrated in the advanced industrialised countries, notably the United States, Western Europe and Japan. There are great differences between industrial and developing countries: Hanna, Guy and Arnold write that developing countries are poor in the infrastructure that is the key to IT diffusion.\textsuperscript{28} Lack of trained manpower, the high cost of telecommunications and document delivery, and the cost of information itself are other barriers developing countries are struggling with.\textsuperscript{29} To erase the gaps between the rich and the poor countries it is important to integrate the developing countries in a global information infrastructure. IT makes it possible to transfer different kinds of information from rich countries to poor.

The development and diffusion of information technology have already progressed in some developing countries, especially in the newly industrialising economies of Asia and Latin America, but the

\textsuperscript{28} Hanna, Guy & Arnold. 1995, p. 117.
situation varies from country to country.\textsuperscript{30} In many developing countries companies and academic institutions use information technology while ordinary people do not have access to it. Even in countries where the use of IT is widespread, old computers and modems are used. Information technology is especially important in education, where multimedia, CD-ROMs and videoconferences can improve the quality of education in many areas radically. It is considered very important to make a plan for the development of IT, and in April this year the United Nations Secretary-General, Kofi Annan, called a meeting in New York to discuss the future of information technology in the third world. Fifteen experts discussed and created a concrete program on how to spread information technology in the world.\textsuperscript{31} The programme will be further discussed later this year by the members of the United Nations, and Annan said that governments, international organisations and private companies have to work together to spread IT.\textsuperscript{32}

Recently another meeting was held with the purpose of discussing information technology and the use of the Internet in the third world. This time it was the seven richest countries and Russia that wanted to reduce the so-called ‘digital gap’.\textsuperscript{33} The leaders believe that people everywhere should have the right to participate in the global information society. The new agency that was created at the meeting is called Digital Opportunity Taskforce and will among other things support schools and libraries in the third world with information technology. However, some of the organisations invited criticised the meeting and said that the spread of IT is meaningless when too many people in the world do not have enough food and nowhere to live.\textsuperscript{34}

It is important to mention that the transition to the information society could cause problems for some developing countries. The dominance of Western technology threatens many countries of the south with new types of dependence because when adopting Western technological standards they will also accept Western values and thinking.\textsuperscript{35}

### 3.2 Information technology in Costa Rica

Since the army was abolished in 1948, the government has been able to spend more money on important infrastructure such as telecommunications. All telecommunications in Costa Rica are controlled


\textsuperscript{32} Lerner, p. A17.


\textsuperscript{34} Ruin, Pål, 2000, p. A07.

by the state-owned monopoly Instituto Costarricense de Electricidad (ICE), and most IT companies are based in the capital San Jose and the surrounding areas. Because of Costa Rica’s political stability some companies have chosen it for operations and manufacturing. The high literacy rate makes it an attractive country for foreign companies, but it is small, with a small population, and the companies compete for the few highly trained employees. Another disadvantage for Costa Rica where foreign industries are concerned is that salaries are a little higher than in the other Central American countries. Some industries and companies therefore choose other countries where salaries are lower.

The number of Internet users increases every month in Costa Rica, but experts say that the country needs a better plan to make connections cheaper and in that way make the Internet available to more people. The cost of connection is still too high, and the same is true of computer hardware. One of the problems seems to be that the politicians have no experience of this technology and see the use of the Internet as a luxury rather than a necessity. In June 1997 CommerceNet reported that there were 50,000 users accessing the Internet in Costa Rica, which means about 5.78% of the population. No other country in Central or South America had such a high percentage of the total population, although some countries had more people in terms of absolute numbers accessing the Internet. The visitor in Costa Rica sees lots of Internet cafés in the cities, especially in the central area. The users are often foreigners who want to send e-mails home, but more and more Costa Ricans also use this facility. To use the Internet for an hour costs between 2 and 3 US dollars depending on where you go. In San José the number of places where the Internet can be used is tending to increase rapidly, and even in smaller towns new places are opening. In the small town of Heredia there are no less than four places where the Internet can be accessed, and the costs per hour and the Internet connections are more or less the same in all four places. Ironically the place with the fastest connection is the local landmark McDonalds, which has 10 brand-new Macintosh computers for its customers to use. The computers have multimedia equipment and the latest versions of some important programmes. To use the computers, however, you need to buy a meal at the restaurant and then you get about half an hour of time. Internet cafés are being built not only in Costa Rica but in most Latin American countries, and an article from 1998 reported that 330 new Internet or cybercafés were being built in Peru. Those were to be placed in

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36 A debate whether ICE should be privatised or not has been going on for some time. This proposition has received a lot of criticism and all the Costa Rican newspapers have written several articles about the subject. When this is written nothing has yet been decided.
40 Those countries include Argentina (170,000 users), Brazil (1 million users), Chile (200,000 users), Colombia (120,000 users), Mexico (370,000 users) and Peru (65,000 users).
universities, schools and public places and should include 20 computers as well as laser printers and scanners.42

Every year Worldpaper publishes a list of countries and their relation to information and information technology called the Information Society Index (ISI). ISI 2000 presents 55 countries in four different groups which are termed the skaters, striders, sprinters and strollers, skaters being the most advanced group. The two top countries (skaters) are Sweden and the United States, followed by Finland, Norway, Denmark, the Netherlands and Switzerland. The most advanced countries outside Europe (apart from the United States) are Canada, Australia, Japan and Singapore. Of the 55 countries Costa Rica is placed in the third group, sprinters, in 34th place. One-third of the 55 countries reviewed by the ISI every year are sprinters and include most countries in Latin America. These countries are described as short-distance runners. They have the capacity to speed up for a period of time before needing to catch their breath and shift priorities because of economic, social and political pressures. The countries just before Costa Rica in the sprinter group are Poland, Romania, Chile and Argentina, while the countries right after include Malaysia, Bulgaria, Panama, South Africa and Venezuela.43

3.3 Information technology in libraries

It must be remembered that the gaps between information-rich and information-poor countries are not the only problems we are facing in the information society. The gaps between classes within each country could become a severe problem. In many countries there is a rich elite that have access to information technology while most people have little or no access. It is well documented that computers are more common among people with an academic background than among workers. If the not-so-fortunate groups are ever to have access to, for example, the Internet, the spread of new technology is extremely important.44

Libraries have a major responsibility to provide people with the information they need. For many people libraries might be one of the few places where they are able to send e-mails and make use of the information highway. Libraries have to market themselves so they are able to compete with other institutions. If libraries do not take their responsibility some other institution will take over and this could in many ways increase the information gaps between people.

The libraries are in great need of changes, but as always they are struggling with financial problems. Public libraries especially, which are supposed to be every person’s local gateway into the global network, are under great financial pressure. In academic libraries these changes include a move

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away from judging value by size of collection to judging it by the accessibility of the collections, and away from ‘just in case’ acquisition to ‘just in time’ acquisition.\footnote{Harloe, B. and Budd, J.M., 1994, “Collection development and scholarly communication in the era of electronic access”, \textit{Journal of Academic Librarianship}, 20(3), p. 83-95.} The use of information technology has made these changes possible. Today many full-text databases exist which give the researchers direct access to the information they need. A book which cannot be found in the local library can be easily and quickly found in another library. Databases make it possible for the user to find articles and books all over the world, and the introduction of encyclopaedias and other multimedia presentations on CD-ROM has been a big success in many libraries and will certainly be even more important in the future.

The changes in libraries also include changes in the roles of librarians, and these changes are received with mixed feelings. Some observers, such as Hyams, think that librarians should be flexible and update their knowledge and skills continually to take advantage of the changes.\footnote{Hyams, E., 1996, “The information professional in the year 2000”, \textit{New Library World}, 97(1129), p. 31-35.} Walton suggest that libraries should devote 5\% of their time to staff development and training in areas such as network navigation, customer service, management techniques and improvement of their IT skills.\footnote{Walton, G., 1995, “Training needs for staff competencies in a quality library service. Relevance of the IMPEL Project”, \textit{LIBER Quarterly}, 5(4), p. 389-401.} There is also a more critical view—that the traditional values of librarians must not be changed. Wisner is critical of the changes and says that librarians are neither managers nor administrators, and certainly not computer specialists.\footnote{Wisner, W.H., 1994, “Back towards people: a symposium”, \textit{Journal of Academic Librarianship}, 20(3), p. 131-133.} No matter which side you are on, I think everybody agrees that there have to be at least a few changes in the profession to make the libraries of today and the future work. Right now the instructional role—teaching users to find information in different media—seems to be more and more important for librarians when using information technology. For this academic librarians have to develop new teaching information skills.\footnote{Morgan, S., 1996, “Developing academic library skills for the future”, \textit{Library Review}, 45(5), p. 41-53.}

3.4 Information technology and printed material

Even though information technology is essential for any type of library it must not be forgotten that a library also consists of printed material. In this thesis I will not discuss the printed material at the studied libraries extensively, only mention it quickly. What is important to mention, however, is that too many libraries in developing countries lack books and journals that are up to date. To spend money both on expensive information technology and on books is not always possible for those libraries. Interlibrary loans both between libraries in the same country and with libraries in other countries are important for many developing countries. Too often, however, those loans do not work as one could hope. The costs of sending books to libraries in other countries are often too high for many libraries. It has also been a
problem to know which books exist in which library. With the new technologies interlibrary loans will be easier to carry out and hopefully libraries will be able to use them more often. The cost of sending books does not change unless a text is sent by e-mail, for example. With the new technology, libraries can also use full-text databases as a complement to their collections. The next chapter features some general information on different databases.

3.5 General information of CD-ROM and online databases

The principal task of a library is to collect information and documents of various sorts, and in most libraries documents in electronic form have become very common, especially in academic and research libraries. Both online databases and CD-ROM databases are used all around the world and, even if most of them are still of a bibliographical nature, the use of full-text databases is tending to increase. Full-text databases, where the user can get a whole article directly on the screen, are particularly important for libraries in developing countries where, as mentioned above, too many libraries lack good printed sources. These databases, however, are very expensive and many libraries are not able to pay for them. Another problem is that many libraries cannot afford to update their computers, which sometimes makes it impossible to run some of the programmes they need. Another important question is how many users actually use the databases if they exist in a library. Librarians need to educate the users and write guides on doing searches. It is of course also essential to explain what can be found in the different databases.

The use of CD-ROMs (abbreviation of Compact Disc Read Only Memory) in libraries is tending to increase, and many of them are multimedia—voice, video and music are stored together with the usual texts. CD-ROMs are not recordable (as can be seen from the name, “read only”). In the past decade a recordable compact disc (CD-R) as well as a rewritable version (CD-RW) was introduced, and those have been very popular lately. The number of CD-ROM drives is also increasing: in 1996 almost 90% of the PCs sold had such a drive. CD-ROMs are very useful in developing countries, which often lack reliable telecommunications infrastructure. This means that the library does not have to worry about bad connections and once the disc is bought no more charges have to be paid. This makes CD-ROM databases much better than online databases where the library has to pay for the time a user spends accessing the database. On the other hand online databases are more up to date since they are updated continually. Users can in general also make more precise searches. Another problem with CD-ROM’s is that a single CD-ROM does not have enough storage capacity to hold some databases, although CD-

ROM jukeboxes holding multiple discs can get around that problem. Apart from their function as databases, CD-ROMs can also be used as encyclopaedias and dictionaries. They are cheaper than the printed version and the information found can easily be exported into a word processor. The discs also take less space, which is good, since many third world libraries are small.

4. Libraries in Costa Rica

4.1 Introduction

As elsewhere, there exist different kinds of libraries in Costa Rica. Some are modern and well-organised while others need major change if they want to be good and service-oriented libraries. There are at the moment lots of plans to develop the libraries in Costa Rica, but unfortunately there are many obstacles that make the process quite difficult. Lack of interest on the part of the users, low respect for the profession and for the services associated with librarians from the society, and lack of collaboration between the libraries and failure to share human, technical and financial resources are only examples of this. Below I write very briefly about the situation in the libraries of Costa Rica.

4.2 The National Library

The National Library was founded in 1888 as part of a programme of government initiatives to promote culture and education. The library is located in the capital, San José, which is the largest city in the country. The library offers about 101,000 national titles and 183,761 titles from other countries to all people who have a valid library card. Approximately 2000 persons use the library every month. The collection originally came from the university and expanded through legal deposit, exchange, purchase and donations. All books published in the country can be found here as well as a large collection of literature about Costa Rica and neighbouring areas written and published in other countries. The library also has books from the 18th and 19th centuries that can only be borrowed for very special research. It has no textbooks because it is the school libraries’ responsibility to have those. Apart from books,
encyclopaedias and dictionaries the library also has a large collection of magazines, newspapers and maps and a complete collection of all dissertations written at the public universities. There is also an archive of articles covering important areas as well as complete newspapers on microfilm. The original papers can be viewed in special cases. A database with material from 1985 until the present day is available and there is a manual catalogue of older material. In Sala España the library organises conferences, book presentations and other cultural events. There are also rooms for reading and study, individual or in groups.  

At the moment the National Library is working on numerous important projects. Some include modernisation and computerisation of the National Library and the public libraries, courses for different Internet users, digitisation of the special collection and duplication of newspapers on microfilm.

4.3 Research and academic libraries

Research and academic libraries are among the most developed information centres in Latin America, although different countries and different libraries are at very different stages of development. Jesus Lau writes that where research and academic libraries are concerned the Latin American nations can be divided in four groups. In the first group we find the big countries Brazil and Mexico, which have big libraries that hold around 60% of the collections in the region. In the second group Lau places the medium-sized countries Argentina, Chile, Colombia and Venezuela, which have in general the same degree of library developments as Mexico and Brazil. In the next two groups we find the smaller countries, first those with good economies like Costa Rica and Uruguay, which have well-developed libraries. At the bottom end Lau places countries like Nicaragua, Honduras and El Salvador where the academic libraries are poorly developed or barely exist. Apart from the countries mentioned above, Cuba is among the countries with a better overall library development.

Among the small countries Costa Rica is considered to have the best developed libraries, although the libraries are quite small even if compared to average Brazilian and Mexican ones. Still, research and academic libraries in Costa Rica are very good and they continue to explore and develop information technology very fast. Costa Rica is one of the countries that have taken the importance of information


\[59\] Information taken from a conference about the current situation of the National libraries in Central America I took part in on March 29, 2000 in San José, Costa Rica. People from all seven Central American countries where present and each of them talked about their National Library as well as other libraries. The subject that day was “Situacion actual de las Bibliotecas Nacionales de Centroamerica”.


\[61\] The libraries of Argentina probably fit into this second group, however it is a mystery to me why the author calls Argentina a mediumsized country since it is bigger than Mexico.

\[62\] Lau.

\[63\] Lau.
seriously. Action has been taken to develop a national informatics policy that includes introducing children to the use of information technology in both public and university libraries. At present it seems that this action is only taking place in university libraries.

4.4 Public libraries

The public library movement in Costa Rica dates back to the last decade of the 19th century. In 1890 Miguel Obregon Lizano made a proposal that libraries be organised and supported by the government. He is therefore considered the founder of public libraries in Costa Rica. The public libraries in Cartago, Heredia and San Ramon were founded in the same year. New libraries were formed and in 1974 there were 15 public libraries in Costa Rica.66

The public libraries of today are badly organised and lack the technology that is necessary in a modern library organisation. Good and well-functioning libraries are essential to people from all social classes, and it seems that Costa Rica has started to deal with its library problems. To change the public library situation, a committee (comision nacional de bibliotecas) consisting of people from the library schools, the national library, public libraries and others has started a project that will change the library organisation radically. The committee is divided in subgroups that are specialised in finding solutions for different problems. A report with a description of the public library project has been written, and even though most things are very clear one thing is a little confusing. The number of public libraries in the country varies from 56 to 61 in different parts of the project description.

There are two kinds of public libraries, bibliotecas oficiales and bibliotecas semi-oficiales. The semi-official libraries that were established in 1981 are part of the Public Library System but receive most of their support from local agencies and not from the government.67 The biggest public libraries lie in the central area of Costa Rica, which means that an interlibrary loan network is needed to give people in other areas access to more literature. Communications between the libraries are sadly not very good and interlibrary loans must be coordinated by a central administration.68 The library collections vary between 2000 and 20 000 books. In a survey from January 1992 it is said that 55% of all libraries had less than 5000 volumes. The number of librarians working in each library (numbers are only given for bibliotecas oficiales) vary from one to 10, with most librarians in the public libraries of Heredia (10), Hitillo (10), Desamparados (9), Cartago (7) and Alajuela (6).69 The number of users varies, but many of the users tend to be students of all kinds. In all public libraries there are small children’s sections with books for the youngest.70

One important part of the public library project is to introduce information technology to the libraries, something that will probably take some time. At the moment the public libraries have very little

67 Thompson, 1993, p. 175.
69 The information above is taken from an interview with Lucia Chacon Alvarado at the library school at the National University and a public library project description, which unfortunately did not have a name.
70 Miranda Arguedas, Alice, 1995, p. 34.
or no experience of this technology and the libraries are at different stages of development. As can be seen above the libraries are in most cases very small with few employees, even though they serve a quite large number of people. Information technology could make daily work much easier for the librarians and improve the public libraries’ status. Right now they are far behind university and special libraries where IT developments are concerned.

4.5 School libraries

The school librarianship movement began in Latin America during the 1960s. However, in an article from 1997 it was said that only Costa Rica, Puerto Rico and Venezuela had developed a school library system at the national level. The school libraries belong to Departamento de Bibliotecas Escolares y Centros de Recursos and this system consists of 190 school libraries and 200 libraries in the colleges. The average number of books in these libraries is between 1000 and 10 000 volumes. Some also have a number of journals and newspapers. The potential number of users is about 600 000, of which 75% actually use the libraries. However, far from all schools have a library. Thanks to donations from different organisations and companies a lot of schools have computers with various useful programs. Hopefully the librarians will become more important as information retrieval advisers and the school library will become a place where the pupils learn about the importance of information and knowledge. Most school libraries do not have enough money to buy the books they need, and CD-ROMs and full-text databases can therefore be a solution if librarians and teachers can demonstrate that they are necessary. New library projects in Costa Rica will probably include the development of information technology in school libraries and in that way teach the children early how to use computers and so on. In this field a great deal can be done.

There are also about 198 private school libraries which possess quite a large number of volumes. Many of those have also worked with computers for some time. The librarians working in private school libraries are in general not professional librarians since the most important criterion is that they are bilingual.

4.6 Children libraries

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71 Interview with Lucia Chacon, February 14 2000.
72 Figueres, C, “Library Services to Youth in some Latin American Countries”, School Libraries Worldwide 3(1) Jan 97, p. 61-70.
73 Miranda Arguedas, 1995, p. 33.
74 Miranda Arguedas, 1995, p. 33.
75 Miranda Arguedas, 1995, p. 33.
In the capital San José no less than six libraries are geared to activities for children. The number of users every month reaches 8000. Those libraries are located in the poorer areas of the capital and 15 years of experience has had a positive effect on the children. Apart from books and magazines the libraries also have toys, videos and cassettes. Three professional and three non-professional librarians work in each of the libraries.

4.7 Other libraries

Even if other types of libraries exist it is not easy to find information about them. Big companies and other institutions often have information centres or specialised libraries. Some of those give services to all citizens while others limit their services to the employees. Since the libraries are specialised in different areas the collections are often very good.

76 Miranda Arguedas, 1995, p. 33.
77 Miranda Arguedas, 1995, p. 33
5. The library at the University of Costa Rica

5.1 The university

The University of Costa Rica (UCR) is the largest and oldest university in the country. The first stage in the development of the university came in 1814 with the foundation of la Casa de Enseñanza de Santo Tomás, which later in 1843 became la Universidad de Santo Tomás. In 1888 the whole university was closed for political and financial reasons except for the faculties of Law, Agronomy, Fine Arts and Pharmacy which continued to function independently. In 1940 the president, Rafael Calderon Guardia, created or reopened the university after his social reforms. The university has always had a higher status than the rest of the universities in the country and according to many people I spoke to it still looks better if you have studied at this university rather than another. Today the university has about 35 000 to 40 000 students and a large number of faculties that teach all sorts of courses and programmes. It is located in San Pedro, a pleasant suburb east of San José. The university also has campuses and centres in other parts of Costa Rica, for example, in Puntarenas, Limón and Guanacaste province in the northwest.

5.2 The libraries

At the University of Costa Rica two libraries can be considered to be central libraries. Those two, Carlos Monge Alfaro and Luis Demetrio Tinoco, are located on the big university campus Rodrigo Facio in San Pedro. The campus is pleasant and well-planned, although the proximity of the main library buildings to busy roads can be distracting sometimes. Walking into the real campus area the visitor finds a green park where some of the university departments are located.

The libraries at the University of Costa Rica are all parts of SIBDI, Sistema de Bibliotecas, Documentación e Información. The libraries in SIBDI currently include four libraries apart from the two main libraries—the Biblioteca de Derecho, where all books on criminology and law are kept, the Biblioteca de Farmacia (all sorts of material about pharmacy), the Biblioteca de Ciencias de la Salud (health care material) and the Biblioteca del Programa Centroamericano de Población, for material about Central America. The different regional centres that belong to the University of Costa Rica are responsible for their own libraries and are all part of SIBDI:net, which offers services through the catalogue on the Internet. The first library at the University of Costa Rica was constructed at the end of
When I compare the central library at the National University and the two main libraries, Carlos Monge Alfaro and Luis Demetrio Tinoco, at the University of Costa Rica I will talk about the latter two as one because they share collections and more or less work as one unit. This is also the case in chapter 6, which deals with IT in the libraries.

5.2.1 The Biblioteca Carlos Monge Alfaro

The Biblioteca Carlos Monge Alfaro is one of the two central libraries at the University of Costa Rica that this study concentrates on. The library was constructed in 1970 and is in a large building on the university campus. The library material and the departments are located on the three floors of the library building. There are also ample study places for students on two of the floors. At the exit the library has a security system and a guard searching through the students’ bags every time they leave the library. The material to be found here is: philosophy, psychology, religion, sociology, politics, education, folklore, languages, chemistry, biology, botany, zoology, agronomy, fine arts, music, sports, literature, history and geography. The library’s collection also includes a collection of maps and atlases and various documents written at the university.

5.2.2 The Biblioteca Luis Demetrio Tinoco

Constructed in 1984, the other central library, the Biblioteca Luis Demetrio Tinoco, has the rest of the general collection and concentrates on economics, engineering, architecture, informatics, physics, mathematics and geology. In the library the students also find a collection of theses, dissertations and other publications made at the University of Costa Rica as well as national newspapers from the latest three years. There is also a large collection of journals. This library also has a security system with the usual guard that seems to be so common all over Central America.

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78 Sistema de Bibliotecas, Documentación e Información, 1996 50 aniversario SIBDI, p. 3.
79 Sistema de Bibliotecas, Documentación e Información, 1996 50 aniversario SIBDI, p. 3.
5.3 The WebPage

The WebPage for the libraries at the University of Costa Rica are very seriously unsatisfactory. There are too many links to pages with information about the different libraries, general goals and other important information which do not work. If the pages exist at all remains a mystery. This is also the case with links leading to pages outside the university such as other libraries and important organisations. If the library staff want people to visit the homepage of the libraries without getting angry they should update the links immediately. Much valuable information is lost just because there are too many ‘dead’ links. The pages that actually work are in general quite bad, with poor information and too many flashing details, which makes the main page look very confusing and to my eyes rather unprofessional.

6. Information technology at the libraries

6.1 Introduction

This chapter deals with the use of information technology at the two main libraries, Carlos Monge Alfaro and Luis Demetrio Tinoco. The users, the librarians and their adaptation of information technology at the library are discussed first. The use of information technology in all departments is then considered.

6.2 The users

‘Users’ in this thesis mainly refers to the students at the university since they are the most visible users and also those that it has been possible to study. From the information received from the librarians and discussions with various students, they know quite a good deal about how to use information technology, and they use the catalogues frequently and some of the databases more or less frequently. One informant, Ligia Montero in the cataloguing department, thinks that growing up with games such as Nintendo and using computers in school, as most of them have, have made the students familiar with different kinds of technology.\(^{81}\) One notable fact, however, is that the students still use the manual catalogue a good deal.\(^{82}\) On the short courses the libraries offer, the users learn how to search the catalogues and use the Internet, and they also get general information about the services at the libraries. The courses are taught in small classes, sometimes with only a few persons. When I went on one of

\(^{81}\) Interview with Ligia Montero, February 21 2000.

\(^{82}\) Interview with Sonia Gutierrez, March 15 2000.
these courses there was only one other student besides myself, which made the lectures much more personal than they usually are. The best thing with those smaller groups is that every student is able to make searches together with the teaching librarian. The librarian first does searches on a computer and then lets the students do the same kind of searches for themselves. There is generally no hurry and you can take the time you need with the searches.

6.3 The librarians

All librarians I spoke to think that the use of computers and other machines is not only important but also necessary for a good library. The librarians are said to belong to a generation that has adapted the use of information technology very well. In 1985 when the library took the first steps towards an automated library most librarians knew nothing about automation and computer programs. Sonia Gutierrez says that this was the case in the catalogue department where she works, and now, fifteen years later, the same people who worked in the department in 1985 now work with computers and databases every day.\(^{83}\) Most of the librarians are positive towards technology in general and find the use of information technology necessary in their work nowadays. It is an essential part not only of their work, but also of the education for the students. The librarians see themselves as a bridge between information technology and the users.\(^{84}\) As always not all librarians have had the opportunity to learn everything about IT at the library but all have basic knowledge. There are different levels of librarians and in general it appears that most of the librarians on the senior levels have a better knowledge of information technology than others.

6.4 Present use of information technology

Studies to establish the basic requirements of the library system and select hardware and software began in 1983, but it took some years before the computerisation and automation of the library became a reality.\(^{85}\) The first Internet node in Central America was operated at the University of Costa Rica in January 1993, which clearly shows that the university and the library have worked with information technology and the Internet quite a long time.\(^{86}\) Even though the library has great financial problems, the use of information technology can be seen all over the library. In all the different library departments the librarians use computers every day in their daily work, which these days is dependent on the machines. As mentioned above, the library started the automation of the library in 1980s and now, apart from the

\(^{83}\) Interview with Sonia Gutierrez, March 15 2000.

\(^{84}\) Interview with Ligia Montero, February 21 2000.

\(^{85}\) Marin, 1988, p. 157-175.

fact that the library is in constant need of more money, everything functions very well. Over the years different software programs have been used and the latest change in software was about five years ago. This year there will be yet another change and the new program will be ORACLE Libraries. Because of this, the libraries are in great need of new computers that can run the programs, but as always not all computers can be bought at the same time. The first computers to be replaced are those in the reference department and those for the users. At the moment, this is the biggest problem for the library.

6.5. The library system and the catalogue

The new library system ORACLE Libraries, developed in the United Kingdom, will be installed this year. It was chosen after comparison of 15 different systems. When I interviewed the librarians no one really knew anything concrete about the new system and they had no written material about it. I was therefore not able to investigate this very far, but the new system is said to function much better than the previous system. Another reason for choosing ORACLE Libraries was that it was a little cheaper than some of the others. The user can do better searches and the system is more adapted for modern libraries. The ordinary searches such as title, author, words in the title, subject and so on can be made. It is possible to search for documents in a specific library as well as to do searches with Boolean operators. The system includes automatic truncation and word stemming, and also relevance ranking, which means that the most relevant hits are displayed first. All students will have a code and when pressing a certain key and putting in their code they can see what books they have at home and when they have to return them. I worked with a Web version of the new system in Netscape called OLIB WEBVIEW 7 and was able to make various searches by myself and with a librarian helping. To search for documents in the catalogue is very easy and the users can access the catalogue via the Internet at home if they are connected.

6.6 The catalogue rooms

The OPAC (online public-access catalogue) with all material that can be found at the SIBDI libraries are located in both central libraries. In the Carlos Monge Alfaro library three computers with the catalogue are available for the students and at Luis Tinoco Demetrio the students can use at least eight computers.

87 Interview with Sonia Gutierrez, March 15 2000.
88 Interview with Sonia Gutierrez, March 15 2000.
89 Interview with Sonia Gambronero, March 15 2000.
90 Interview with Sonia Gambronero, March 15 2000.
91 Lecture at Luis Demetrio Tinoco, March 28 2000.
Some of the computers are quite old, but when I was there new computers were on the way. The students at the university use the catalogue frequently and always have to wait a few minutes before they can begin searching. There are always librarians at hand to provide help and they are all very willing to help.

6.7 The reference department

At both libraries there are quite small reference departments, with only a few computers for the librarians to work with. In the Luis Demetrio Tinoco library the librarians share some of the database computers with the users. This is a problem both for the librarians and for the users, but for the time being this is the only solution. The reason for this is of course the lack of money to buy computers. When the users will have their own computers with databases is uncertain. There are, however, three computers close to the catalogues that are connected to the Internet. Those are for the students and have to be booked in advance. Since the University has about 40 000 students the number of Internet computers is definitely too low. Most students do not have access to the Internet at home and it is therefore very important that the university can offer this service.

6.7.1 The databases

Despite the lack of computers at the reference departments, the libraries possess some very good databases and the number of databases is very impressive. There are about 45 databases of different kinds and the themes they cover correspond to the subjects offered at the university. The University of Uppsala in Sweden, which has the same number of students as UCR, has 269 databases in the main library and in the different departments. Nevertheless I think that the University of Costa Rica has a quite large number of databases. The university has a quite long tradition of using information technology and this can be seen in the choice and number of databases. Some of the databases are created by SIBDI, which is another example of the quality of IT usage. At least 16 databases contain full-text documents. Some of those include both bibliographical and full-text documents while some feature full-text articles exclusively. Most non-full text databases have summaries. Searches in the databases can be made at both central libraries Monday–Friday 7 a.m.–8 p.m. and Saturday 8 a.m.–5 p.m. However, not all databases are available at both central libraries so the students have to check this in advance. A very good database guide is available free at the libraries.
One of the useful full-text databases is the Annual Review of Phytopathology, which contains 246 complete articles in the fields of biology, ecology, entomology, biochemistry and more.92 Another excellent database with full-text articles is the Journal of Applied Physics. The Computer Select (formerly the Computer Library) computer-oriented database, which will probably be even more important in the future than it already is, contains bibliographical references as well as full-text documents.93 Periodical Abstracts, which offers 350 titles of journals in full text and with bibliographical references, is one of the better databases. The areas featured in the database are among others social science (39%) and arts subjects (20%).94

6.8 The cataloguing and classification department

This department takes care of all material at the SIBDI libraries and the librarians working there classify and catalogue everything and make it searchable in the local catalogue. Computers have always been important and now when the library is changing software the department will have to buy new ones. When I did my study there were 13 computers at the cataloguing department at Carlos Monge Alfaro, but because of the changes in program only two could be used for cataloguing and classification. Those were the only ones that had the capacity of running all the programs. The rest were too old and were only used to access the Internet.95 This meant that not all librarians at the department could work at the same time. Some had to work in the morning and some in the afternoon.96 Just before I went back to Sweden I heard that some of the old computers had been replaced by new ones.97

The librarians here use computers everyday and are therefore familiar with IT. There are three levels of library management and ten additional professional librarians simply called profesionales 1, who work with the cataloguing of documents. All the professional librarians are responsible for a certain group of literature. This does not, however, mean that one librarian has to be responsible for literature of the same kind, for example, humanities or natural science. One can catalogue both religion and engineering while another do the same thing with statistics and folklore.

6.9 The department of audiovisuals

92 Catálogo de bases de datos y obras de consulta automatizadas existentes en el SIBDI, Unidad de Referencia y Documentación (REDOC), 1997, database paper number 4.
93 Catálogo de bases de datos y obras de consulta automatizadas existentes en el SIBDI, Unidad de Referencia y Documentación (REDOC), 1997, database paper number 17.
94 Catálogo de bases de datos y obras de consulta automatizadas existentes en el SIBDI, Unidad de Referencia y Documentación (REDOC), 1997, database paper number 38.
95 Interview with Ligia Montero, February 21 2000.
96 Interview with Sonia Gutierrez, March 15 2000.
97 Interview with Sonia Gutierrez, March 15 2000.
Like the other departments, the department of audiovisuals offers services in both central libraries. In this department courses like the ones I described in section 6.2 on the users take place and it is also possible to arrange conferences and other activities. The department has a separate entrance and is quite closed and hidden from the rest of the library. This means that it can be quite difficult to find it the first time. Most of the usual equipment, such as televisions, videocassettes, 16-mm films, microfilms, sound cassettes, compact discs and a few computers with multimedia equipment, can be found here. Material can be borrowed for use in the classrooms of the university.
7. The library at the National University

7.1 The university

The National University (UNA) is the second-largest public university and is located in Heredia (pop. about 75,000), an historic town 11 km north of San José. The university was set up in 1973 and its purpose was to cover social groups that were not reached by other universities at that time. Many students still come from rural and rather poor areas and mainly from the middle and lower middle classes. Today about 14,000 students take part in the courses and programs that are taught at the eight faculties. The university also has campuses in Liberia, San Ramón and Pérez Zeldón and offers scholarships to students who cannot afford the fees.

The National University has never had the same status as the University of Costa Rica. In discussions, when I said that I was studying the libraries at the two universities some people could not believe why I was studying the National University. This made me think a lot about what people thought about the two universities, and as I mentioned in the introduction, that was very important for this study.

7.2 The libraries

The central library, called Joaquín García Monge, is situated in the Omar Dengo campus not far from central Heredia. The peaceful campus includes classrooms, different university faculties, a cafeteria and a small shop, all surrounded by green grass and trees. The library is always filled with students searching for books and articles, reading newspapers or magazines, accessing the Internet to send e-mails or to find information and so on. The opening hours for the central library are Monday–Friday 8:00 a.m.–9:30 p.m. and Saturday 8:00 a.m.–5:00 p.m. During the holiday season the library is open Monday–Friday 8:00 a.m.–6:00 p.m.

Most parts of the central library are very bright and there are lots of places to study, both individually and in groups. Even though there are always lots of students you can always find a place to sit. Changes in the library organisation have made the library more open. A few years ago the books were stored in closed shelves, while now the students can search for books themselves and then go to the lending desk to borrow them. A security system with detectors reminiscent of those at the UCR libraries has been installed at the main entrance and a guard is always present to search through the bags just in case.
There are also other libraries which are intended to serve the students and others at the National University. In 1995 the university had a great many different libraries and documentation centres, altogether about 30.\(^98\) Seven of these, together with the central library, belonged to SIBUNA, Sistema Bibliotecario de la Universidad Nacional. The other so-called bibliotecas desconcentradas were often very small and badly organised, which in many cases made it impossible to know what books were available. Many of these smaller libraries had developed to serve specific information needs, were not included in the university budget and had no relations with the main library. After the reorganisation in 1998 and 1999 the number of libraries and documentation centres was reduced to 19.\(^99\) These were much more specialised and the organisation was better defined than before, but still in some faculties there were too many libraries. A project started early this year will result in the creation of one library per faculty only. This project will be discussed later in this thesis since it includes new plans for the development of information technology at the university and its libraries.

7.3. The WebPage

Even if most of the information found on the library’s WebPage is very short, it is easy to navigate and the user will find all relevant information about the library he needs. The links to various national and international libraries, WebPages as well as other sites work well. Four librarians have been trained in the program FrontPage so that constructing and updating of WebPages can be done.

8. Information technology at the library

8.1 Introduction

This chapter examines information technology at the Joaquin García Monge central library. The users and librarians are important and will be discussed first. I will then concentrate on a library and network project that was made at the library last decade as well as the present use of IT. As in chapter 6 on information technology in the University of Costa Rica, I will discuss the library departments separately.

8.2 The users


As could be seen in the general objectives, the users of the library are all active students at the university, teachers, staff, researchers, national and international temporary students and others with authorised access to the collections. Here, however, I will mainly write about the students at the university.

The students at the university are of course very different from each other and so is their knowledge of information technology. Many students have good knowledge of how to use the Internet and send e-mail, while others have no or very little knowledge.\(^{100}\) In general most students seem to have at least basic knowledge of how to search the Internet and the local catalogues and how to use a word-processing program. There is one IT course at the library for the students and it deals with finding information on the Net.\(^{101}\) At the moment no other courses are taught, although in the future there may be more. All new students at the university go to a lecture that takes place in La sala de ex-rectores at the central library. The lecture aims to give the students general information about the library including the regulations, where to find the books and journals, services at the different sections and so on. In the lecture the students also learn how to search the catalogues that are available at the library and very briefly about the Internet and e-mail. All students are given a small brochure with information on the catalogue to read afterwards when they are about to make searches.\(^{102}\) When carrying out this study I attended the lecture and it does give the students information about everything at the library in a very pleasant way. The lecture is built up as a PowerPoint demonstration, which makes it very clear and easy to understand. I think that more IT-oriented lectures will appear at the library quite soon, and these may be voluntary and not compulsory, like the one above.

8.3 The librarians

The librarians seem to have adapted to the use of information technology very well. Most of them are interested and very willing to learn about all forms of IT. One problem is that the librarians have so far only learned to use the things they work with and have never been able to learn the use of IT as a whole. Alba Vargas, librarian at the reference department, thinks that the librarians need more training, not only in the field of their work but also in the use of such things as scanners and other machines that only a few have been able to learn.\(^{103}\) Some of the librarians, like her, have been more specialised in IT than others. Most of the library staff have some knowledge of the Internet, which is quite an easy thing to use, but Vargas say that this is not enough.\(^{104}\) To teach everyone at the library will certainly take a long time, but

\(^{100}\) Interview with Alba Vargas, February 18 2000.
\(^{101}\) Interview with Alba Vargas, February 18 2000.
\(^{102}\) Lecture at Joaquín García Monge, February 21 2000.
\(^{103}\) Interview with Alba Vargas, February 18 2000.
\(^{104}\) Interview with Alba Vargas, February 18 2000.
most people seem to agree that it is worth it. No special IT training courses for the librarians exist at the moment. With the changes into a more modern library the librarians also have to be more modern. Apart from these a large number of library staff have received courses in English and some still attend these courses.105

Information technology has, no doubt, changed the roles of the librarians at the library. According to Oledys Ramirez at the cataloguing department, the use of IT has made the librarians feel more professional and their work much more service-oriented, easier and faster.106 As we will see some of the departments use IT more than others and in those the librarians often have more IT knowledge.

8.4 An information technology project at the central library

At the beginning of the 1990s the libraries at the National University were still lacking the necessary and important information technology they needed. A proposal to improve the functions of the library system had been made, but the lack of technical expertise, of a clear and well-laid plan and of enough money made this very difficult. Another problem was that a number of installations of local networks had been made all over the university, many of them with different specifications. Most were not equipped to function within a system of integrated desktops.107 The National University later developed a plan to improve the library system and it was clear that such a system should be based on adequate information technology.108 Outside assistance was necessary and Tilburg University in the Netherlands became the partner in constructing the new library. This university has good experience in creating a good library structure and its library is considered to be one of the most modern in Europe.109

With this project the National University was striving for a role as a pioneer in the use of modern information technology in the country. In this it is thought to have had an impact not only on Costa Rica, but also in the other Central American countries, since the university is collaborating in different university networks such as the CSUCA (Consejo Superior de Universidades Centro Americanas) network of the Central American state universities.110

8.4.1 Before the project

105 Interview with José Solano, March 1 2000.
106 Interview with Oledys Ramirez, February 15 2000.
107 MHO Project, p. 10.
108 MHO Project, p. 4.
109 MHO Project, p. 4.
110 MHO Project, p. 5.
Studies pointed to major deficiencies resulting from the lack of an integrated library concept and organisational model in the university libraries. For instance,

- a variety of systems were used for cataloguing—everything from hand-written cards to computerised catalogues existed;
- there were no common standards for cataloguing, classification and so on;
- the catalogues in the different libraries were only accessible locally and there was no catalogue available that included all the collections;
- there were no precise statistics of the number of volumes in the collections, and a substantial number of titles in the library catalogues were misplaced, stolen or in another way missing;
- there were overlaps in acquisitions made by the separate libraries;
- there was no common policy for collection development, acceptance of donations and exchange of publications; and
- there were no adequate facilities for automation.\textsuperscript{111}

The libraries at the National University therefore had major problems and could not give the users the service to be expected from a university library. Many users were dissatisfied with the libraries and their limited services. It was difficult to know what books and magazines were available and in which library they were to be found. Many documents were also very old and outdated.

### 8.4.2 The project

The first four years of the project were separated in two sub-phases, the first phase lasting about one year and the second three years. The first phase included the creation of the technical, organisational and social basis for the project. A working group of librarians started to plan the ways in which the library could be developed, and several other working groups prepared standards for cataloguing, classification and working procedures.\textsuperscript{112} The second phase aimed for well-functioning information, documentation and communication facilities and the activities could be divided in five groups working on:

1. Improving services to users.
2. A clear and efficient integrated library organisation.
3. Relocation and rationalisation of the present numerous library sites and buildings.
4. The selection, purchase and implementation of a network and of hardware and software.

\textsuperscript{111} MHO Project, p. 9. Here I only list some of the inefficiencies in the libraries.
\textsuperscript{112} MHO Project, p. 11.
5. A training and human resource management programme.\textsuperscript{113}

8.5 Present use of information technology

The improvements in documentation, information and communication at the SIBUNA libraries were very successful and the library can now be considered a very modern one in terms of information technology. The books, however, are very old and too many are duplicates. A library needs not only good technology but also, and more importantly, good information sources that are up to date. My own information searches produced books that were too old and did not help me at all. With the new library organisation and acquisition plan these problems at the central library and the faculty libraries will probably disappear. The SIBUNA libraries can now see what books are available in each library so excessive duplication can be avoided.

The IT developments have been mainly in the central library, but it is likely that all other libraries in the SIBUNA network will be included in the development programme as soon as possible. The process of turning a library into a big and important information centre also means a lot of problems that the librarians have to deal with. Apart from the usual technical problems with all machines, the library has to provide training in computer programs and courses for users. Even if those things are not real problems, planning and organising them requires a great deal of the librarians’ time.

8.6 LIBSYS

After comparing 38 different library systems a group of library professionals at the university library chose LIBSYS in March 1995 and installed it in October the same year.\textsuperscript{114} The system, which can be described as an integrated multi-user library management system, was developed in India and is currently used in many universities, especially in Asian countries. LIBSYS runs on various platforms such as UNIX, NOVELL LAN, Windows NT and others.\textsuperscript{115} It consists of six different systems—an acquisition system, a cataloguing system, a circulation system, a serial system, article indexing and abstracting, and an OPAC.

An intensive training programme for 10 librarians began at the end of 1995 and despite some problems with the hardware, which delayed the installation of the system, the library got its system to work. The librarians are extremely pleased with it and there have been no major problems so far.

\textsuperscript{113} MHO Project, p. 12.
\textsuperscript{114} MHO Project, p. 11.
8.7 The catalogue room

On entering the central library the user walks straight into a big, bright room with newspapers and a few magazines to the right, the lending desk in the middle and computers with the local library catalogue to the left. There are 10 computers in the catalogue part, but not all of them are used for searching the catalogue: sometimes it is possible to access the Internet on some of them, while sometimes they are not working. There are almost always students searching the catalogue and occasionally there may be a queue, but usually the wait to get a computer is not longer than five minutes. The students I talked to said that they were all very satisfied with the catalogue and that there had been few problems with it apart from the two catalogue computers downstairs that had been out of order a few times. The round lending desk is right in front of the entrance. This desk also functions as a kind of information desk and usually there were about three librarians working there. Three computers exist in the area which are used to register loans and are also connected to the Internet in case the librarians need some information there.

8.7.1 The catalogue

The new LIBSYS catalogue is easy to use and, according to the librarians, the students are very pleased with it. The catalogue contains bibliographical sources to everything that can be found in the central library and the other SIBUNA libraries. In the main menu the user can choose from six different functions, which are divided in two groups. One group contains two lists of new acquisitions at the SIBUNA libraries, the first including books and other documents, and the second magazines. This is a perfect way for the students to see what new documents the library has recently bought. The lists are updated at intervals. The second and more important group, searches (busquedas), is of course the main reason for having a catalogue. When searching for a certain document the user can choose from four approaches to searching:

1. Books and other documents
The materials here are books, theses, dictionaries, encyclopaedias, audiovisual material and other special information sources that can be found in the libraries. The user can search for author, title, classification

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116 Interview with Oledys Ramirez, February 15 2000.
117 Catálogo público de acceso en línea (OPAC), Guía para el usuario.
118 Catálogo público de acceso en línea (OPAC), Guía para el usuario.
code, subject and words in title. It is also possible to do combined searches using various Boolean operators, truncation and parenthesis.

2. Articles
The contents here are articles in Spanish from various journals that can be found in one of the library’s departments.

3. Journals
This category includes the titles of all journals with full information about the volumes, numbers and years that are available. The user can search by classification code, journal title and ISSN. It is also possible to get a list of all journals in alphabetical order. From this list you can get all information given above.

4. Journals by subject
The user can search for journals by subject by writing in a subject and pressing ‘enter’. All journals which correspond to that subject will be given in a list.

8.8 The reference department

The reference department is one of the departments in the library where service to the users is the most important, and good IT equipment is therefore necessary. Here the students find all databases available at the library and also computers connected to the Internet. The librarians help the students and give instructions on how to do searches and use the local catalogue, the databases and the Internet and where to find a certain kind of information. They also explain the importance of printed sources—the reference books that are still an important part of the library.

8.8.1 The databases

The development of information technology has made it possible for the library to use various encyclopaedias and databases, mostly on CD-ROM. In the Sala de Multimedia, in the reference department, there are four computers at the students’ disposal. The computers are for the use of databases only: no Internet or other computer activity is allowed. There are about 17 databases and encyclopaedias, most of them bibliographical but also a few full-text databases. Because the library has too many old books the full-text databases are very useful and often cheaper than many printed sources, but despite this I did not see many students using the databases at any time. Every time I used the databases I was completely alone except for one occasion, when two librarians were carrying out a few searches. When I spoke to a few assistant librarians they said that some of the students were very
pleased with the databases and used them a lot, while many of them have not really discovered what a good thing they are.

One of the full-text databases is Academic Abstracts, produced by EBSCO. This database contains articles from 887 journals, 155 of those in full text and the rest with a summary. There are many ways of searching and it is very easy to use. The themes it covers include education, psychology, history, anthropology and mathematics. Another very useful database is EMERALD, which covers administration in different areas. More than 15 000 articles from 80 respected journals are found here. It is available in a printed version, on CD-ROM and on the Internet. The library has a few volumes of the printed version as well as on CD-ROM. Two important databases with information about Latin America and the Caribbean are Bases de datos Agrícolas de América Latina y el Caribe I y II and Bancos Bibliográficos Latinoamericanos y del Caribe II. The first includes 38 bibliographical databases concentrated on agriculture and economy in Latin America and the Caribbean. The second is produced by UNESCO and includes 83 different databases from 79 institutions in 16 countries in Latin America, the Caribbean, the United States and Spain. The countries’ databases cover different subjects, for example, the Argentinean databases cover technology applied to industries; those from Bolivia population and development; those from Mexico economics; those from Uruguay social science; those from Venezuela political science, information science and administration; and those from Costa Rica science and technology.

Two very good multimedia encyclopaedias that can be found at the library on CD-ROM are Grolier and Compton’s Encyclopedia. Both are in English and contain general information, long articles, very good maps, pictures and so on. Both are also very easy to use. Enciclopedia Encarta 2000, produced by Microsoft, is another useful encyclopaedia. The version at the university is in Spanish.

8.8.2 Computer laboratories

Closely connected to the reference department are two computer laboratories with 17 and 16 computers, respectively. One of them is for ordinary students and all the computers are quite new and connected to the Internet. Information searches on the Internet and use of the computers to send e-mails are free. To use a computer you have to have a valid student card and write your name and what you are studying in a book at the entrance to the computer room. These computers are always in use and

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119 Catálogo de bases de datos y obras de consulta automatizadas existentes en el SIBUNA. Preparado por Seccion de servicios, Biblioteca Joaquín García Monge 1997, p. 17
120 Catálogo de bases de datos y obras de consulta automatizadas existentes en el SIBUNA, p. 15.
121 Catálogo de bases de datos y obras de consulta automatizadas existentes en el SIBUNA, p. 25.
122 Catálogo de bases de datos y obras de consulta automatizadas existentes en el SIBUNA, p. 26.
123 Catálogo de bases de datos y obras de consulta automatizadas existentes en el SIBUNA, p. 26-27.
users often have to wait for a long time before one is free. Most students seem to be familiar with these services and use them frequently. Because of this I only used them on a few occasions myself. The other laboratory is for university and administration staff and also provides access to the Internet.

8.9 The cataloguing and classification department

The cataloguing and classification department is located on the top floor at the central library in a relatively large room. Before the library and network project only a few computers existed at the department and they were all very old. It was not possible to access the Internet and there were in general many limitations. After the project the use of information technology at this department has changed the librarians’ work in many ways. Cataloguing and classification can now be made more precise and much faster. Until a few years ago there were few computers and those that were available were very old and did not have all the necessary functions. At that time the librarians were not able to access the Internet. With the new computers and Internet connections the whole process is much more professional. Today the computers are the most obvious and important tools at the department. The use of the Internet has turned out to be very important for the cataloguing and classification department. With the Internet they are able to access the Library of Congress in the United States to get the classification codes and other useful information on the books the librarians are about to catalogue. This has simplified the work enormously. The Library of Congress is also a valuable source when it comes to finding thesauri. New thesauri are constantly being developed, especially in the field of information science, and the Library of Congress has very good updated lists of those. The librarians at the department use those and translate them into Spanish to make them understandable and useful to the users. The system used for cataloguing is LIBSYS, the system described above.

8.10 The department of audiovisuals

This department was not included in the library and network project, and is therefore not fully automated like the rest of the library. The department takes care of all sorts of important audiovisual material. It has a big collection of films on video which the students could easily borrow to watch at home. However, there seems to be a problem. Apparently some staff want the material to be reference material only, and the videos are not searchable in the local catalogue among the rest of the library’s material. Moreover,

124 Interview with Oledys Ramirez, February 15 2000.
125 Interview with Oledys Ramirez, February 15 2000.
126 Interview with Oledys Ramirez, February 15 2000.
some faculties buy videos and keep them in their buildings, and in that way no one knows they exist. There is probably some duplication of which no one is aware. The best solution would be to keep all this material in the audiovisual department and put it in the catalogue so everyone can find it. Some staff want to rearrange the department so that all films can be borrowed and watched at home. Right now, there are copies of some of the films that can be borrowed, but this is not official.

The department is also responsible for other material such as televisions and projectors. There are several rooms used for teaching, meetings and conferences. The Sala de ex-rectores, which can take 160 persons (or about 80 if it is divided into two parts), is used for conferences as well as information lectures for the students. The Sala de Proyecciones is another big hall which can take up to 80 persons at a time and includes televisions, projectors and other machines. To use the rooms at the department you have to use at least one of the audiovisual machines, otherwise any hall at the university or the library is available. The staff at the department repair all broken equipment and control the bookings of the different halls. There is one other room in the department which belongs to a special institution and contains 16 new computers and other equipment. This is only used on special occasions. Every time I was there it turned out to be completely empty.

9. Library schools

There are two library schools in Costa Rica—one at the National University, the Escuela de Bibliotecología, Documentación e Información, which comes under the Facultad de Filosofía y Letras; and one at the University of Costa Rica, the Escuela de Bibliotecología y Ciencias de la Información, which comes under the Facultad de Educación. The school at UCR was the first library school and was opened in 1968 as a result of action by the Costa Rica Librarians Associations with support from UNESCO among others. The library school at the National University started in 1977.

Like the libraries at the two universities, the library schools have gone through a great many changes, which include the use of and training in modern information technology. Courses are taught in networks and information systems, automation of libraries, the use of databases and the Internet in libraries and documentation centres, and so on. The changes in the education plan have forced the library schools to acquire new technology equipment. In the library school at the National University a computer laboratory with at least 10 computers, a server for the local network and connections to the Internet exist. The connection is very slow and loading a page can be extremely slow, but most things

127 Interview with José Solano, March 1 2000.
128 Interview with José Solano, March 1 2000.
129 Galvez, V.M., “Historical Development of the School of Library and Information Science at the University of Costa Rica”, Revista AIBDA 16 (2) jul-Dec 96 p. 184-96. This is actually a summary of the dissertation Desarrollo historico de la Escuela de Bibliotecología y Ciencias de la Información de la Universidad de Costa Rica.
work perfectly well. This is unfortunately not the case at the library school at the University of Costa Rica, which lacks a lot of the information technology that is essential for a modern library school. It has no computer laboratory where the students can practise and classes have to take place elsewhere. This is already a problem for the library school and it will definitely get worse in the future. If the institution is to maintain its status as a good school things will have to change.

Some differences between the two schools can be observed. At the National University the training is more focused on documentation and on teaching future librarians who want to work in special libraries and information and documentation centres. At the University of Costa Rica the librarians are thought to intend to work in other types of libraries, such as primary and secondary school libraries. Although there is a difference, the students can work in all sorts of libraries no matter which school they go to.¹³⁰

Both library schools have WebPages, but only the page for the library school at the National University can actually be found. It is a very good and informative page with links that work well. The page to the school at the University of Costa Rica that is said to exist is impossible to access from the university’s homepage or elsewhere. The library school that claims to teach information science should definitely update the links. If the librarians are ever to be recognised as information specialists it is important that the school that teaches them also shows that it has the knowledge.

The two library schools have very little collaboration with each other, and the reasons for this are open to debate. The University of Costa Rica has always had a higher status and this can be one reason for it not collaborating with the other library school. This kind of attitude crops up again and again in discussion, and even if such prejudice is not unique to Costa Rica but will be found in most countries it is important to mention it in a study like this one. In spite of all this, a few librarians from the University of Costa Rica do teach at the library school at the National University. There were plans to start a library school at a private university, but this does not seem to be happening at the moment.

Nicaragua, El Salvador, Belize and Honduras are the four Central America countries which have no library schools. This is becoming a big problem.¹³¹ These countries are of course in serious need of trained librarians, especially with the introduction of information technology in their libraries. At the moment librarians from these countries as well as many from Guatemala are trained in other Latin American countries such as Costa Rica and in the United States.¹³² There is a project for the creation of a distance library school for those countries in Central America that do not have one.¹³³ The library schools in Costa Rica are participating in this. The plan is, however, not finalized and it is not known when the first students can be admitted. An essential part of the training to be offered should be

¹³⁰ Interview with Lucia Chacon, February 14 2000.
¹³³ Interview with Lucia Chacon, February 14 2000.
information retrieval instructions to the students, and therefore a number of librarians are needed. The students will also need access to various information sources such as databases and the Internet.
10. Future plans

10.1.1 The University of Costa Rica

Future plans regarding information technology always depend on money, and that is something libraries all around the world are struggling with. New equipment such as computers, computer programs and databases have to be bought if the library wants to be up to date. The Costa Rican libraries also have this problem. The libraries at the University of Costa Rica have to take one step at the time with obtaining new technology equipment. New computers were installed when I was there and a few more were on the way, but even when they are in place where they are needed most more computers are needed at some departments. The libraries replace the computers as soon as they can afford it, but since they also have to pay for expensive journals, books and other important things it could take some time before all old computers have been replaced by new ones. As matters stand now some computers are too old and the library needs new ones quickly. Access to the Internet for all libraries in the SIBDI network is another aspect on which the library will work more, as well as the development of automation in general. What the libraries in my view really need is more computers for the databases. With so many good databases it is a pity that the students have to share the computers with the librarians.

Despite financial problems, the librarians are optimistic about the future and say that the SIBDI libraries will remain modern libraries and that the services to the users will be even better than they already are. They lack money to develop their libraries but they certainly do not lack the will to create service-oriented libraries where the students are able to find what they need.

10.1.2 The National University

The libraries at the National University still receive money from the Netherlands, and a new phase was planned in 1999 which began in 2000. It is not only concentrated on the development of information technology, but IT is one very important part of it. The idea of the project is to have one library per faculty, which means that students, university staff and librarians get a better overview of where to find a certain book or journal.

As mentioned above, in 1995 there were about 30 faculty libraries and documentation centres, and after reorganisation 19 libraries remained. This was still too many. For example, in the Faculty of Social Science (Facultad de Ciencias Sociales) the number of libraries had only been reduced from 10
to 6. In the first part of the new project all faculties will make a plan for organising their libraries into one. It is important that all faculties have the same goal so that catalogues, computers and so on function correctly in the network. One problem is that many faculties seem not to have enough knowledge of this subject. This will without doubt slow down the project and its results. Not very surprisingly, the first faculty to make a library organisation plan was the Faculty of Philosophy, which includes the Library School. A report from the faculty explains the need for organised faculty libraries and information technology and the faculty’s objectives in and expectations of the project. Hopefully this report will have a guiding effect for the other faculties and their creation of new and well-organised libraries.

Strangely, the librarians at the central library seem to know surprisingly little about this project, even though it is in many ways a continuation of the project carried out at the central library. Even if those librarians are not working on the planning of this new part of the project it would probably be better if they at least knew what was going on. They would probably be valuable as advisers since the same kind of problems as they had in their library will most likely come up. Many librarians now have good knowledge of working with IT planning, and all those involved should take advantage of these skills. At the same time new librarians could be introduced to this kind of work so that they also are able to work with information technology planning and developments in the future. Librarians often have a very central role in assisting faculty with developing skills with the constantly changing technologies.

Whether there is an interest in this at the National University or not I do not know, but it certainly seems that no one at the main library is interested in being involved. One reason for this could be that they do not have enough time to work with the faculties since they still have a great deal of work to do on IT developments at the central library. The use of IT is quite new for them and many librarians have to be trained. All this takes time. However, when the faculty development project is finished we will without any doubt see an even more service-oriented and well-functioning library structure at the university. The faculty libraries will have the same kind of security system as the main library, which means a better overview of what is available at the library because the literature will be on open shelves.

The developments at the main library will continue and the director of the library, Elisabeth Delgado, says that they always need to improve the services to the users and update the equipment. For the time being they have all basic equipment, but with technology constantly changing they will probably have to buy new equipment in the near future. Elisabeth Delgado also says that it is important

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134 Proyecto: Mejoramiento Bibliotecario, p. 2.
135 Interview with Lucia Chacon, February 14 2000.
136 Biblioteca especializada y centro de información documental de la facultad de Filosofía y Letras, Universidad Nacional, Facultad de Filosofía y Letras, Heredia, October 1999.
for the librarians to be familiar with the present technology and that training and education for librarians is something the library will start working with more.\footnote{Interview with Elisabeth Delgado, March 14 2000.}

The IT developments in the main library have changed the university and its library in many ways, so far only for the better. However, many librarians have expressed worries about the future and what will happen the day the financial help from the Netherlands stops. Some librarians fear that the university will have severe problems when new IT equipment has to be bought.

11. Conclusion

Until a few years ago the automation of libraries was a great dream for many libraries in the third world.\footnote{Conceicão, Maria da, 1997, p. 2.} Now more and more libraries in developing countries, especially in Latin America and Asia, are working with online and/or CD-ROM databases, the Internet and OPACs. Libraries can collaborate with each other more than before and can exchange information much more easily and faster. In Costa Rica many projects, like the one that is concentrated on public libraries, aim to turn technology-poor libraries into modern ones. Library projects are also directed at the two biggest university libraries that have been studied here.

Even if the questions that have had a central role in this thesis (see section 1.4. ‘Purpose’) have been answered in the different chapters I will review them very briefly once again.

As we have seen, the libraries at UNA and UCR are well equipped where information technology is concerned and the librarians, at least many of them, have good knowledge of IT. Information technology has improved the librarians’ daily work and made them feel more professional. Classification and cataloguing are done much more easily and more precisely than before and it has become easier to find any kind of information because of the many databases and the use of the Internet. The databases at both universities are mainly stored on CD-ROMs, which is sensible since the libraries do not have to pay for every minute of connection time, as they do with online databases. A few online databases are used, however. The libraries at the University of Costa Rica have more experience in working with information technology, but in the last five years the students at the National University have seen their old library transformed into a brand-new modern library. This has also meant that the librarians have become more modern, and intensive IT courses for the librarians were held at the beginning of the IT development projects. The only problem seems to be the out-of-date printed material at the National University. The University of Costa Rica has a collection of books and journals that is not only bigger than that of the National University but also more up to date. Now that information technology has been developed at UNA the library has to update its collection in one way or another.
Most students have understood the importance of IT, and even if the use of some databases is still minimal it seems that this is about to change. More and more students find that the full-text databases are valuable sources, especially in areas where the libraries lack good and new printed material. In my view the librarians should market the databases more and show the students that many good articles and references to books and articles can be found in the databases. The OPAC, which is an important part of the libraries, is frequently used at both universities. All students I talked to were very pleased with it, and I found it very useful. Good and precise searches could be carried out. Further development of the faculty and special libraries will make the OPACs even more useful.

Internet usage has grown in the whole country, and at the university libraries students are able to use the Internet whenever they please. At the National University there are plenty of computers for them to use, while at the University of Costa Rica the libraries have far too few. More computers for the students are needed at the latter and they should be placed in a special room, like the laboratories at UNA, which seem to work perfectly. Here the students can check their e-mails, find information on the Internet and use the computers in other ways. More courses on the use of databases, the Internet and the catalogues would be a good idea even if some shorter introduction courses already exist.

11.1 Developments and status

11.1.1 Status and collaboration

The developments in information technology have had a great impact on the libraries studied, with better quality in services to users and more professional assignments for the librarians. All this has also had an important impact on the universities as a whole. This chapter examines some of the changes that followed the development of IT and the ways in which IT has made the two libraries more equal.

The status of the two university libraries and the perceptions of students, teachers, librarians and other persons in Costa Rica have been mentioned several times above. This concluding chapter tries to develop these views further.

The University of Costa Rica is the oldest university in the country and its libraries have had more time to develop a well-functioning IT infrastructure than any other library in the country. The university was the first institution in the whole of Central America to operate an Internet node, which clearly shows how important it has been to Costa Rica. It also has the main public budget. The university has therefore always had a higher status than the National University, and collaboration between the two universities has been almost non-existent. The existing collaboration has been intermittent and has only involved interlibrary loans. This is a pity, since strong collaboration between libraries in and outside their own country is always positive, especially in countries with limited resources. In an article from 1993 about
searches and material in Latin American databases, Rodriguez writes that “even when experts from the third world countries need information on their own countries the chances are that they will find it easier by consulting the databases available in the developed world about the third world”.\textsuperscript{141} This could perhaps be avoided if there were stronger relations with and more interest in the collections and developments in other universities’ libraries. As I wrote before, the two libraries in Costa Rica seem to know very little of what is going on at the other library. I experienced this on a few occasions. Some librarians simply said that it was because we were talking about two different libraries and that it is not very important to know what the other library is doing. I believe there are other reasons for this. Its status is unfortunately still very important for the University of Costa Rica. Even if it gets the main public budget it never shares its resources with any other university. There was a proposition from different libraries to create a national journal deposit, but the UCR did not think this was such a good idea.\textsuperscript{142} This means that the journals are spread among the libraries, which makes it harder for professors and students to get hold of them. This of course is extremely strange. In a country where all the biggest libraries lie at short distance from each other and researchers can be at either of them within about an hour it is certainly a waste of resources. Even though the librarians at UCR have hardly any contact with the UNA library, some of them work as teachers at the library school at UNA which is only about 100 metres from the main library. The contact with the library school seems to work perfectly and is well established.


\textsuperscript{142} E-mail from Lucia Chacon Alvarado July 17 2000.
11.1.2 Changes in status

With the radical changes in the use of information technology in the main library at the National University, we will also see changes in status. UCR’s libraries will always be considered good libraries with a respected history, but I am sure that the gaps between the two universities and the sometimes negative opinions and views that surround the National University will in many ways disappear. Students, teachers and researchers are more and more beginning to look at the National University as a good university with a modern library organisation. Students have free access to quite a large number of computers at the library and all the changes have made people more interested in the university than before. However, many people outside the university who have not visited the library in recent years show their ignorance by saying that the library has no technological equipment. Some people, when told that I was doing a study of IT in the main library of the National University, said that there was nothing to study since the library was small and old-fashioned and had only a few computers. They had obviously not been to the library for a long time, and when I explained to them that because of the radical changes in the use of information technology I thought it was a modern library they could hardly believe me. Even my host family, who lives only five minutes from the university campus, did not know about the changes.

The library schools are also an important part in all this. As I wrote before, the library school at the National University is more modern and better equipped with computers than the school at the University of Costa Rica. The homepage is informative and works well, while the library school at the University of Costa Rica has a homepage that is impossible to reach. The library school at UNA is in a much better position to educate the students in the use of databases, computers and so on, and this has a positive effect on the university.

The changes in status probably come with mixed feelings. It sometimes seems that some people from UCR are a little jealous of the other university library and its donations of money to improve the library and its organisation. In a country with quite limited resources this does not make sense. The universities should cooperate more and share resources more than they do at the moment. Despite all this, the changes at the National University can perhaps in the future bring the universities and their libraries closer together. After all, strong library collaborations are needed not only for Costa Rica but also for the rest of Central America, where most libraries are smaller and not as well equipped as those in Costa Rica. How can the Central American countries with their old conflicts and their libraries collaborate with each other when not even two university libraries at one hour’s distance from each other are able to work together?
12. Summary

The investigation that this thesis is based upon was carried out as a field study in Heredia and San Pedro, both in Costa Rica. The purpose was to investigate the use and development of information technology at two of the most important university libraries in the country. The developments have been quite different. One of the libraries has developed over a quite long period of time, while the other has developed the use of IT very fast. The conditions for developments have also been different between the two universities. The University of Costa Rica in San Pedro is the oldest and most respected university and began the automation of its main libraries in 1985. It also operated the first Internet node in Central America in 1993. The National University in Heredia worked with information technology in the early 1990s, but it was not until the library started an important project together with a Dutch university that automation truly began. Now both libraries have well-functioning libraries with a good level of development of information technology. Databases, OPACs and the Internet are used and both the librarians and the students have adapted to the use of IT very well. Financial difficulties are, however, a big problem, especially for the University of Costa Rica. The library is in constant need of more computers and other equipment. The National University is continuing to work with the Netherlands and is receiving money for a second project, but the librarians are worried about what is going to happen when the contributions stop. The sometimes troubled relations that exist between the libraries might come to an end now that the libraries are becoming more equal.
13. List of references

Non-printed material

*Recorded interviews*
Oledys Ramirez (2000-02-15), Universidad Nacional.
Alba Vargas (2000-02-18), Universidad Nacional.
Elisabeth Delgado (2000-03-14), Universidad Nacional.

*Non-recorded interviews*
Interview with José Solano (2000-03-01), Universidad Nacional
Interview with Lucia Chacon (2000-02-14), Universidad Nacional

*E-mail*
E-mail from Lucia Chacon (2000-07-17), Universidad Nacional

*Other references*
Lecture at Biblioteca Joaquín García Monge, Universidad Nacional (2000-02-21).
Printed material


Astbury, R (1994), ”The Public Library of the twenty-first Century: the Key Information and Learning Centre of the Community?” Libri 44(20), p. 130-144.


Biblioteca especializada y centro de información documental de la facultad de Filosofía y Letras (1999), Universidad Nacional, Facultad de Filosofía y Letras.


Catálogo de bases de datos y obras de consulta automatizadas existentes en el SIBDI, Unidad de Referencia y Documentación (REDOC), 1997.

Catálogo público de acceso en línea (OPAC), Guía para el usuario.


Creth, Sheila (1996), ”The Electronic Library, Slouching Toward the Future or Creating a New Information Environment”, http://www.ukoln.ac.uk/services/papers/follett/creth/paper.html (15/1-2001)


Galvez, V.M., “Historical Development of the School of Library and Information Science at the University of Costa Rica”, Revista ALBDA 16 (2) Jul-Dec 96 p. 184-96.


Lau, Jesus, "Resource Sharing in the Research Libraries of Latin America”,
http://www.oclc.org/oclc/man/9166rdir/lauocl.html (15/1-2001)


Länder i fickformat nr 705 Costa Rica och Panama (1998), Utrikespolitiska Institutet, Stockholm.


Sistema de Bibliotecas, Documentación e Información, 50 aniversario SIBDI, (1996).


[www.commerce.net/research/stats/samerica.html](http://www.commerce.net/research/stats/samerica.html) (15/1-2001)
Appendix 1. Costa Rica Map
Appendix 2. Questions for the library staff.

¿Qué piensa de la tecnología de la información en general?
¿Qué piensa de la tecnología de la información en esta biblioteca?
¿Cómo usa la tecnología en su trabajo?
¿Tienen los bibliotecarios destreza o habilidad con la tecnología de la información?
¿Tienen los estudiantes destreza o habilidad con la tecnología?
¿Cómo ha cambiando el uso de la tecnología de la información después del proyecto holandesa de red de la biblioteca?
¿Cuáles bibliotecas se incluyen en el SIBUNA/SIBDI?
¿Cuántos bibliotecólogos trabajan en la biblioteca central y en el SIBUNA/SIBDI?
¿Por qué escogió este sistema de automatización?
¿Cuándo fue la última vez que se compraron computadoras y otro equipo de tecnología de información?
¿Cuánto equipo necesitan comprar?
¿Cuáles son los planes futuros para su biblioteca?

What do you think of information technology in general?
What do you think of information technology at this library?
How do you use this technology in your work?
Do the librarians have good IT-skills?
Do the students have good IT-skills?
How has the use of information technology changed after the project with the Netherlands?
What libraries are included in SIBUNA/SIBDI?
How many librarians work at the main library and at SIBUNA/SIBDI?
Why did you choose this library system?
When was the last time you bought computers and other IT-equipment?
When do you plan to buy new equipment?
How much equipment do you need to buy?
What future plans do you have for your library?