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### First Steps of E-learning: The Experience of Chilean Public Libraries

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#### **Abstract:**

*Libraries are taking on an important and active role in the area of continuing education for their staff and the communities they serve. However, education is also changing as new procedures, methodologies and models become available, especially through the web. Distance learning, defined as an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner, has undergone a major transformation with the inclusion of technology, thus, giving way to an innovative form of education: e-learning.*

*Chile's Public Library system is in the process of facing the challenge of e-learning through the BiblioRedes: Abre tu Mundo Project. 368 public libraries and 17 regional computer laboratories, located in library buildings, offer public access to computers and Internet as well as training for the community thanks to a grant from the Bill & Melinda Gates Foundation awarded in October 2001. The inclusion of TICs in public libraries meant, first of all, providing computer literacy training to library staff, many of whom had never seen nor used computers. The training process used by BiblioRedes involves extensive and continuous training for the staff in the regional labs and in each library, a process that is time consuming and expensive. One way in which the BiblioRedes Trainers in charge of training library staff constantly support their libraries is through the use of the MSN Messenger, which has become an important and widely used tool for all library staff not only to access a BiblioRedes Trainer but also to contact each other.*

*However, in order to meet the needs and the different competency levels of library staff throughout the country, we needed to provide and implement an e-learning methodology. This decision was thoroughly discussed in the BiblioRedes Project Training Department as incorporating such a system involves altering the traditional view of education instilled in our culture. However, the possibility of using e-learning for staff development and its benefits overshadow the problems we can face; for in a country which such diverse geography as ours, this system proves to be beneficial to anyone who has access to a computer in one of the 368 libraries.*

*The first part of the our e-learning program was implemented within the BiblioRedes Training Team as part of a tutoring program where one trainer tutors a group of trainers in an application, for example word processor, spreadsheet, web page development. At the end of a four-month period, the trainers will have similar competencies on the applications. The tutor's responsibility is to promote learning, communication and information exchange among the trainees, using the technology available to them and breaking time and space barriers; thus, the trainer becomes a facilitator and mentor rather than a teacher.*

*This innovative experience in the Chilean Public Libraries is only the beginning in the long chain of programs and changes that libraries throughout the world are undergoing.*

## **Introduction**

It is neither news nor surprise to hear that public libraries are uprising (hypothetically speaking, that is), and that this rebellion is directly related to and being led by library staffs! They are demanding new and more opportunities for professional development as the rapid changes taking place in today's society also involve libraries and the services offered to the communities they serve. Let us not be alarmed, thus, as this peaceful revolt has made public library systems' authorities worldwide even more aware of the needs of library staff, as they work on implementing different and contemporary solutions in order to meet this challenge. One way library systems are responding to the demands made by library staff is by providing lifelong learning opportunities. As a result, the Chilean Public Libraries have not been exempt from having to make additional efforts in order to respond to these demands.

In October 2001, the Directorate of Libraries, Archives and Museums (DIBAM)<sup>1</sup> received an important grant from the Bill & Melinda Gates Foundation in order to implement a project in public libraries so that they could have computers and provide public access to computers and Internet as well as training in information and communication technologies (ICTs) for the community. However, the inclusion of state-of-the-arts equipment and information and (ICTs) in our public libraries presented us with one of our biggest challenges, provide computer literacy training to library staffs, many of whom had never seen nor used computers. Therefore, the questions we had in before us were many: How would our library staff welcome this technology? Would the training program we had set up be enough to meet their training needs? After they were trained, would they indeed use skills learned and the new technology available at their libraries? Would they feel overwhelmed by it? How would the BiblioRedes training team be able to handle and answer all of their questions and demands for ongoing support?

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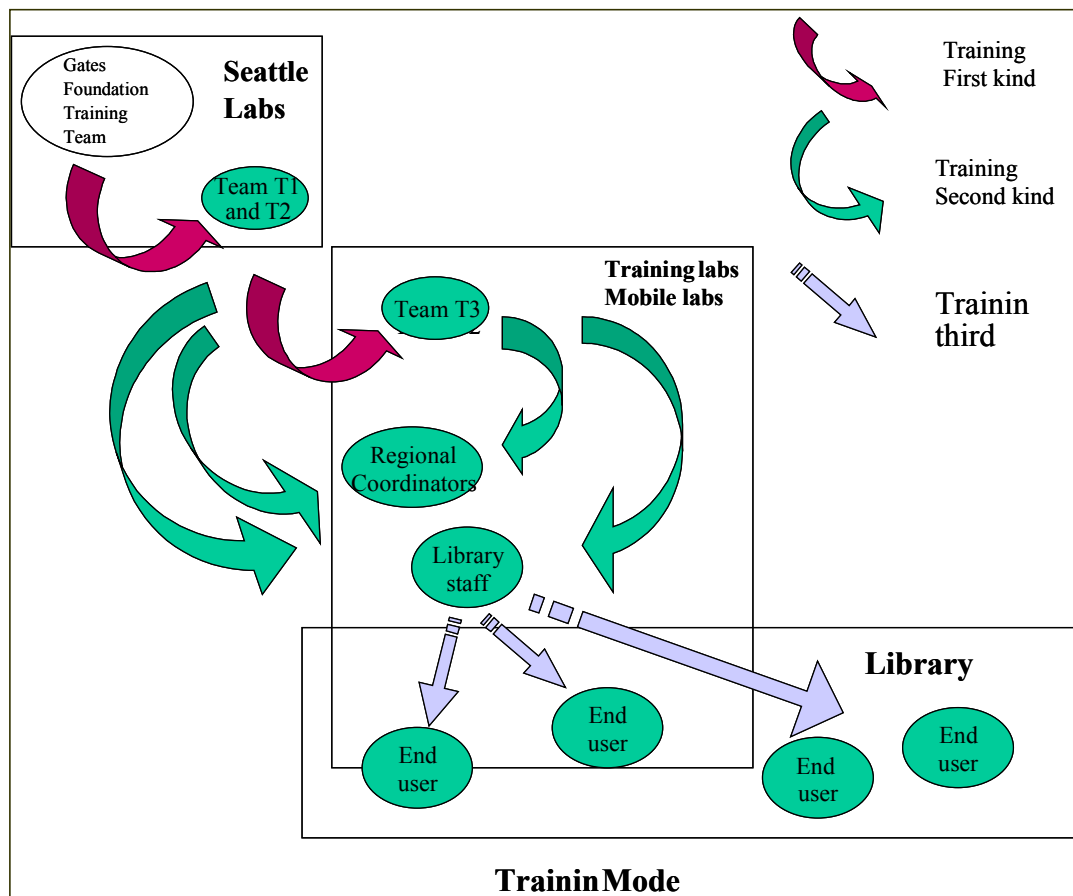
<sup>1</sup> From here on, the Directorate of Libraries, Archives and Museums will be referred to as DIBAM.

## 1. The transformation of Chilean Public Libraries

The Chilean Public Libraries are an assorted array and are located in the most unbelievable places of our diverse geography. Many of our libraries are modest and small. Our capital city, Santiago, still awaits a central public library, a common sight in other countries. Nevertheless, in the last decade, the Subdirectorate of Public Libraries, a unit under the supervision of DIBAM, has led a process of openness and transformation among the public libraries of the country towards the community. The Public Library System of Chile expands throughout all the national territory and the islands (Easter Island, and the islands of Chiloe and Juan Fernandez), and is present in all regions, in 82% of the municipal districts of the country, offering a wide variety of services to the community. Despite the fact that many of our libraries are located in humble buildings and even houses, they offer a wide variety of services to the community who take active participation in them.

In August 2001, the President of Chile, Mr. Ricardo Lagos Escobar, announced the beginning of one of the biggest transformations of the Chilean public libraries: DIBAM would receive a grant of \$9.2 million dollars from the Bill & Melinda Gates in order to finance nearly 1800 computers to equip 368 public libraries located from Visviri, in the north of Chile, to Puerto Williams, our southernmost point, 17 regional computer training laboratories, and four laptop labs equipped with 11 laptops each, in addition to the wiring for the Internet connection, the installation of the computers and training for the library staff. That was how the **BiblioRedes: Abre tu Mundo Project** was born. The main objective of the BiblioRedes Project is to contribute to close the gap of the digital divide in Chile by offering public access to the ICTs and training in computer literacy, free of charge, to the community.

A group of trainers from DIBAM underwent an intensive training program in Seattle, United States, and they trained the rest of the team in Chile. The whole team of 25 trainers, spread throughout de nation, was responsible for training the staff of the 368 libraries that were waiting to receive the technological equipment in their libraries. The latter officially began in April 2001 before the computers were installed in the libraries, with the workshops "*Before Your Computer Arrives*" where the project was explained in full detailed to the library staffs and where they were able to see a sample of the equipment they would receive, as most of the library staff present at these workshops had never seen nor used a computer before. The training program can be seen in the following diagram:



Up to this year, four of the six training cycles have been carried out. A training cycle is made up of two phases: training in the regional training labs and on-site training. During the first phase, we gather groups of 10 people, one representative per library, in each of the 17 regional labs. The training is one week long, about 40 hours of classes. Then, each library is visited during the second training phase for a period of two days. Contents dealing with management, training strategies, and planning are covered during the training, but undoubtedly, the technological contents are the most important for staff and the ones that take up the most time, considering that in some of the groups, the trainers had to start from the basics (hardware, keyboard, mouse, etc.). Unquestionably, the training cycles are a great opportunity of professional development for library staff; however, we soon noticed that the training time was not enough to tend to all the questions that were left; that is, we still had not answered the initial questions. We had to figure out a way to continue the training process and support for the library staffs, for the fear factor and the limited knowledge of some of them, made this an urgent need. We still had a great challenge before us, and the rapid transformation taking place in the libraries, pushed us to provide answers at the same rapid pace.

## 2. The transformation of lifelong learning

Today, education is also undergoing changes as new procedures, methodologies and models become available, especially with the use of the new technologies of information and communication and particularly with the Internet. As the need for continuing education and professional development developed into a more urgent need, distance learning became a successful answer to meet this need. Distance learning, which can be defined as an educational process in which a significant part of the teaching is conducted by someone removed in space and/or time from the learner, has its modern roots in education by posted mail. This kind of education provided an educational opportunity for people who lived away from formal, traditional education and training centers. However, distance education itself has undergone a major transformation with the inclusion of technology, thus, giving way to an innovative form of education: e-learning.

In 2001, the Commission on Technology and Adult Learning, defined e-learning as the delivery of educational contents or learning experiences made possible by electronic means, such as:

- CD-ROMs and CBT (Computer Based Training)
- Videoconference
- Educational Satellite Television
- Virtual Educational Networks
- WBT (Web Based Training)
- Etc.

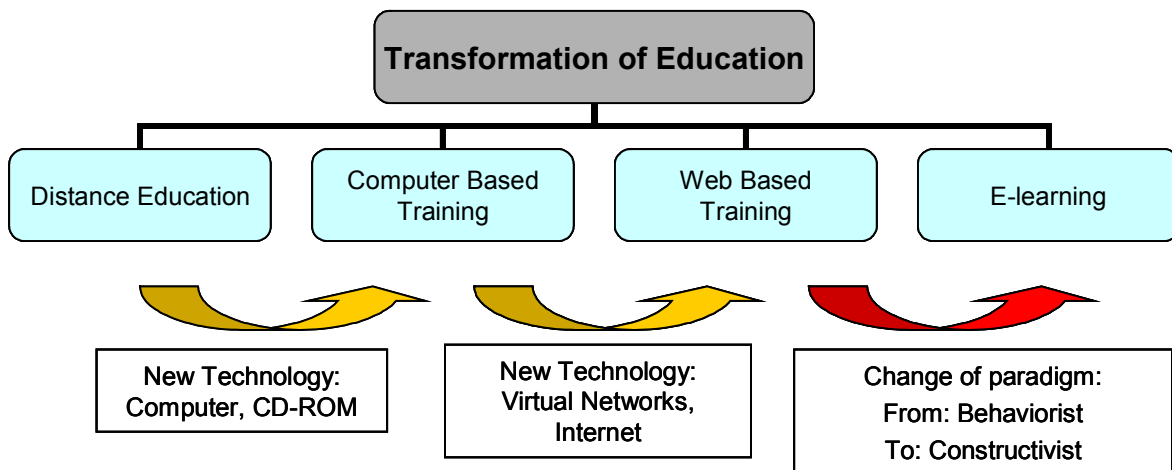
In Chile, the National Service of Training and Employment (SENCE), a government organization, has defined e-learning as “training activities that use, in an integrated manner, informatics resources of communication and production in the process of a methodology of development of the teaching-learning process, which will have a means of transmission the use of public electronic communication networks, such as the Internet, or private networks (Intranet or Extranet)”.<sup>2</sup>

The way education has evolved, particularly from distance education into e-learning, has been a bit more slower in Latin America than in other parts of the world, perhaps, because culturally speaking we value traditional education more. The fact of having a teacher before us delivering information and knowledge inspires respect, credibility and seriousness; characteristics that make us believe in and value traditional education. Thus, the transformation of education has not only involved the inclusion of high tech equipment; it has involved a change in paradigms. This transformation involves taking an even closer look at the learning process and theories, the way people learn, the way people can “build” their learning and knowledge (learning theory known as *constructivism*) as they are guided by a teacher, who becomes a facilitator of learning. To understand the change from distance education to e-learning, let us look at the following diagram<sup>3</sup>:

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<sup>2</sup> SENCE Study: Increase and Promotion of Labor Training through E-learning, available at [www.sence.cl](http://www.sence.cl)

<sup>3</sup> Diagram originally developed by Sonia Zavando for the Continuing Education Program in Technology for Management of the University of Chile’s School of Administrative and Economic Sciences.



The advantages that e-learning provides are many. It is important to point out that e-learning can be delivered synchronically (real-time communication), asynchronously (communication during the student's time) or in a blended mode, which are modes that adapt to the needs of different types of students. No less important are its reach, as it allows for a large number of people to be trained, and its flexibility in access time as well as in learning styles of the student. Despite all of this, e-learning is yet to be a widely used form of obtaining education and training in Latin America.

In Chile, our challenge was to figure out how to combine the new technology available at the public libraries, the skills acquired by library staff and e-learning in order to provide training and professional development opportunities for our public library staff. We still had many unanswered questions.

### 3. The experience of Chilean Public Libraries

#### a) New trends in training

Traditional training set up is generally made up of a speaker or teacher who delivers information to a group of people, many of whom may not understand exactly what that information is, but who take notes of everything the teacher says. In addition to this, we Chileans are famous for being polite, or perhaps it is a matter of shyness, which generally means we do not ask too many questions, especially not in a class. Given that the DIBAM has a limited budget and that our public libraries are administratively dependant of their local governments, the training opportunities are not many. With great effort, our Regional Coordinations (regional representatives of the Subdirectorate of Public Libraries) organize training sessions for their library staffs, hoping that they are allowed to attend. However, these courses follow the same traditional line of other training sessions.

With the arrival of BiblioRedes, the frequency of training opportunities as well as their planning began to change. Firstly, the BiblioRedes training team set a precedent in the “*Before Your Computer Arrives*” workshops as well as in the other training cycles by introducing new methodologies, games, group work, a lot of discussion and motivating self-learning. That is, little by little, the flexibility of our program and the roles of guide and facilitator that our trainers played were changing the traditional way in which the library staffs were trained. Each person was becoming responsible for their own learning process and breaking down the barriers of fear and lack of confidence in their own abilities since the learner is at the center of the training.

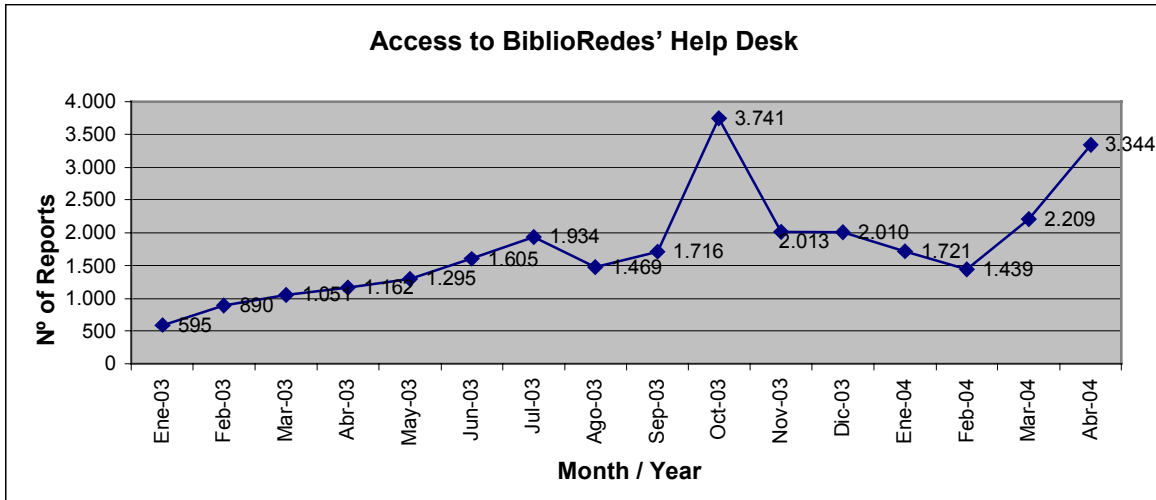
### **b) First steps in virtual communication**

For most of the groups during the first training cycle (carried out between July and November, 2002), we decided to teach the library staffs to create and use e-mail accounts and to communicate using instant messenger services, MSN Messenger in our case. This was definitely a revolution for our library staffs because they would be able to communicate with their peers in their regions and the entire country, considering that many of our libraries do not have telephones. The first “virtual communication sessions” took place in the regional labs and among the same people of each group. Gradually, this new form of communication quickly became widely used by the library staffs in order to exchange information, clear up doubts, ask each other questions about the contents of the training sessions as well as library science topics, but most of all, we began to see the tendency to learn on-line. As time went by, people with more abilities to learn technology began tutoring their peers; this was something completely unplanned, but we let it follow its flow. Likewise, the BiblioRedes training team used the same system to communicate with library staff in order to ask and answer questions.

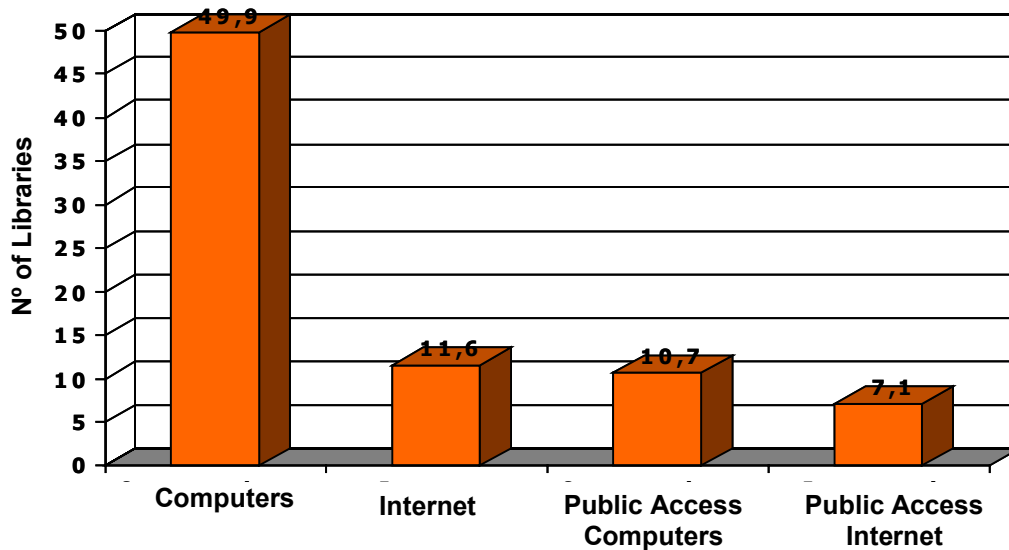
The BiblioRedes project hired the services of an excellent Help Desk which are available to all 368 public libraries and the training labs connected to our network. The help desks provides support, information and answers questions related to software, hardware, Internet connectivity, peripheral devices and insurance policy of the equipment. Library staffs may contact the Help Desk by telephone, e-mail or MSN messenger. In the beginning, this service was underutilized by the libraries, and the number of contacts was very low (when perhaps it should have been otherwise). However, this could have been for lack of knowledge, fear or simply for not having a telephone at the library, as is the case of a large percentage of our libraries. However, the e-mail and MSN Messenger have become vital communication tools between our libraries and technicians of the Help Desk, and this can be appreciated in the increase of contacts<sup>4</sup> made to the Help Desk in the following graph:

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<sup>4</sup> During 2003, there was an average of 3.2 reports made per library per month. Thus far this year, we have reached an average of 5.7 reports.



Another no less important achievement has been seen in the communication maintained between the libraries and our Regional Coordinators' Offices. Because many of our libraries do not have telephones and are located very far from the regional capitals, the communication used to be scarce or, at least, difficult before the arrival of the computers. The following graph shows the technology available in our libraries before the implementation of the BiblioRedes Project:



The statistical system of the libraries used to be done by pen and paper and was sent to the Regional Coordinators' Offices by conventional mail, an expensive and slow process. Today, it is nothing new to see library staff keep their statistics in Excel spreadsheets and send them by e-mail; another advantage of the new way of communication that has been implemented in our libraries.



### **c) Approaching e-learning**

Because the training process originally planned by BiblioRedes was composed only of classroom training only, a process which is both time consuming and expensive, we had to think about how to integrate better or more explicitly the technology available at the libraries and the skills acquired by the staff. One of our greatest concerns was to be able to meet the training needs and the different levels of competencies of the staff of 368 public libraries of the BiblioRedes network throughout the country. For the training sessions in the regional training labs only was staff member per library and it was that person's responsibility to treat the rest of the staff, with the help of a BiblioRedes trainer during the 2-day library visit. Moreover, during 2003 we set ourselves the goal to train 70.000 people from the community in computer literacy; therefore, updating the knowledge of the library staff that had already been trained in addition to the new staff that was coming into the libraries was a vital need.

In order to make sure the training chain was successful we implemented, unintentionally at first, a system combining CBT (Computer Based Training) and WBT (Web Based Training) as a preview to e-learning. Seeing that the library staff has been acquiring greater knowledge, their needs for information have increased. Due to this fact, we copied a series of contents in CD-ROMs, and we asked them to study independently the technological contents not covered in class with them, using the tools they already knew to ask each other questions or to the BiblioRedes trainer. In this way, library staff had the opportunity to share information about the applications they were studying. Little by little and throughout the country, we began to see how people began to use another language, a more technological one, and others began making advances.

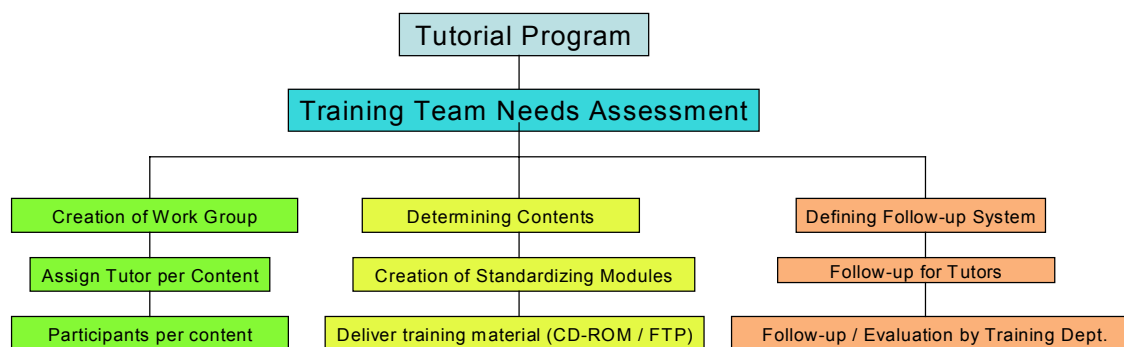
Despite the achievements of this unplanned and spontaneous experience, this first approach to e-learning was not free from difficulties. One of the biggest obstacles of this process is the lack of confidence of the library staff in their newly acquired skills. Many of the people have demonstrated great advancement in their knowledge and skills if we think that before the project arrived most libraries, technology was a distant reality. However, and despite the fact that they all have done a great job training their community, we still have not been able to eliminate the fear factor 100%. We have had difficulty breaking down the barrier of having to rely on an *expert* on the subject of technology or a technological leader, in this case on their BiblioRedes trainer. Because of this, the conventional classroom training is still highly valued and is the space in which most of the contents are covered and questions are answered. Another important factor is the little time free available that library staff has to dedicate to independent learning, especially if we consider that nearly 30% of our libraries are single-staffed and must provide and/or supervise all the services offered to the community.

### **d) New e-learning experiences**

In 2004 we have begun working at the same rapid pace as the transformations have been taking place in our libraries. With the computer literacy goal accomplished and surpassed

by our libraries, this year we had to set new goals for ourselves: to offer advanced training and create local content. In order to continue with training chain and transferring knowledge to the library staffs, the Training Department of the BiblioRedes Project, after a thorough discussion, decided to implement a tutorial program among our own BiblioRedes training team.

The first part of our tutorial “e-learning” program was implemented among the BiblioRedes training team (a total of 36 trainers) as part of a pilot tutoring program in Office applications and web page construction, to be carried out in a four-month period. At the end of this program we expect all trainers to have similar competencies in the contents. The following diagram shows a conceptual map of the program:



First, a very detailed needs assessment test was applied to the entire group of trainers. In parallel and based on the assessment, the contents and the levels were determined. Once the results of the assessment were obtained and analyzed, the people who obtained 100% in any given application were assigned as tutors of that particular application (no more than 2 contents per tutor); a group of trainees (no more than 6 trainees) was also assigned to each tutor and a specific time period to cover the content was established. The responsibility of the tutors is to promote independent learning, communication and exchange of information among his or her assigned group, using the technology available and breaking the barriers of space and time; therefore, the tutor becomes a facilitator and mentor more than a traditional teacher.

Although this experience is not strictly e-learning since there is no LMS (Learning Management System) platform, we are set out to promote the use technology as follows: contents and educational material delivered in CD-ROM and FTP (file transfer) through our Intranet, use of the Internet to access different links with information related to the contents, e-mail and MSN Messenger to communicate. The communication between tutors and learners is generally asynchronous since each trainee studies at his or her own pace and during his or her own time and may ask questions through e-mail. However, it is also synchronous because, thanks to the web cams available at each library and lab, the tutors can set up video-chat sessions with one of the trainees at a time using the MSN Messenger or schedule chat sessions with the group. Moreover, each tutor is responsible for managing

the learning process and progress of the trainees, by contacting them and reminding them to keep up with the dates set for exercises and evaluations and/or by motivating more participation in chat sessions. In this case, the importance falls into the concept of learning community, since it is through these communication channels that discussions are generated as well as the assimilation of contents and transfer of knowledge among peers. Therefore, technology becomes a means or a tool in the learning process.

As shown in the diagram above, the evaluation or follow-up process is very important for us; therefore, a battery of instruments will be used during specific moments. At the end of each established period per content, the BiblioRedes Training Department evaluates the learners' attainment of the skills and objectives of the module. Another essential part of the follow-up process is obtaining feedback from the participants. The Training Department designed a questionnaire to be answered by tutors as well as trainees in order to gather their feedback and suggestions. This questionnaire was applied half way through the entire process, and an evaluation will be applied at the end of the process. Similarly, a separate form will be sent at the end of the entire tutoring process in order for the trainees to evaluate their tutor's performance. The idea behind this evaluation section is to determine the success or difficulties of the program and the changes that can be made in order to replicate the process in the libraries with the staff.

As a result of the midpoint evaluation, we have encountered some of the same problems that were present when library staff and the BiblioRedes trainers spontaneously implemented a similar experience. One of the biggest obstacles is the lack of free time the BiblioRedes trainers have in order to perform the duties of a tutor and the rest of them to study, as learners. This also can also be added to the fact that, perhaps, not all persons have the same study habits and/or the ability to organize his or her time appropriately or to study independently. Consequently, we have decided to implement a few changes in the program. In order to motivate the team to participate, we have decided to extend the time period per content and the program in general; additionally, the BiblioRedes Training Department will directly support the tutors. Furthermore, we are undergoing negotiations with Fundación Chile (representatives of the ICDL Exam) in order for the participants (both tutors and trainees) to take the exam, which serves as an incentive and as a way of measuring the attainment of skills and objectives.

#### **4. Conclusions**

Despite the difficulties we may face, we cannot desist in the search for solutions to the demands for professional development made by library staffs. The transformations that are taking place in our society affect and modify directly the way we get trained, and, at the same time, it obligates us to constantly update our knowledge. The library staffs need and must be updated in terms of these transformations, especially due to the technological revolution of which they are a part. The great challenge is how to train a large number of people and provide constant support when there are budget restrains and barriers of time and geographic distance. Well, e-learning seems to be the answer we are looking for.

The Chilean Public Libraries continue making efforts in order to provide opportunities of greater development to library staffs. Therefore, through the BiblioRedes Project, 80 people (most of them library staff) are currently enrolled in the course Searching on Internet as part of the Advanced Computer Literacy Program, which is 100% online, asynchronous mode, and whose objectives are the following:

- (1) To know the formats of Information and the topology of Internet
- (2) To acquire knowledge and skills to find information on the Internet.

Once the course is finished, the learners will receive a Certificate from ARCIS University.<sup>5</sup> Additionally, we are constantly searching for strategic partnerships to develop and/or offer e-learning courses for professional development of our library staffs. Consequently, we have signed an agreement with Fundacion Chile, the Chilean Association of Municipalities and Doxa Enterprises to train Municipal personnel, including library staff, in ICDL Exam contents through e-learning and to have them take the exam. In these moments we are in the planning stage in order to begin a pilot program, which will later be extended to all districts where there are public libraries.

We are aware that introducing this kind of training system into our libraries involves altering our traditional vision of education and even our working style and study habits. However, the possibility of using e-learning to promote the professional development of our library staffs and its benefits are greater than the problems we may face. In a country with such geographical diversity as ours, this system is beneficial for anyone who has access to a computer in any of our 368 public libraries connected to the BiblioRedes network throughout the country. This innovative experience in the Chilean Public Libraries is only the beginning in a long chain of programs and changes that libraries worldwide are undergoing.

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<sup>5</sup> Course offered at <http://www.biblioredevalua.cl/moodle/> and designed by [www.educactiva.cl](http://www.educactiva.cl).